



INTERBRIDGES SITE, NEW BRIGHTON ROAD, EMSWORTH

Mixed Use Development

Technical Note

**Prepared on behalf of Nash and
Partners**

NASH/16/3415/TN01

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1 INTRODUCTION

- 1.1.1 RGP has been commissioned by Nash and Partners to provide Highway and Transport advice regarding a mixed-use development at the Interbridges Site, New Brighton Road, Emsworth.
- 1.1.2 The site is located to the east of Emsworth station on New Brighton Road between the overbridges for the A27 to the north and railway line to the south.
- 1.1.3 The site has been the subject of previous planning permissions which have included the following:
- (i) 02/54901/003: Outline application of 7 B1(b) and (c) and B2 units including commuter car parking and signalised junction with New Brighton Road;
 - (ii) 05/54901/005: Approval of reserved matters regarding 02/54901/003. Scheme was amended to 2,281sqm;
 - (iii) 07/54901/007: 12 X Industrial units (1,822.6sqm) B1(b&c) and 3 x office units (395sqm) (B1a);
 - (iv) APP/10/00912: Extension to the implementation of 07/54901/007; and
 - (v) APP/16/00295: Veterinary practice, 4 x business units (2 x industrial units (b1 b&c land uses and 2 x office units (b1a land use)), parking and open storage yard.
- 1.1.4 The site access has been the subject of a S278 agreement following its initial approval in 2002 and subsequent approval associated with the planning application in 2007. Work relating to the access has already started on site therefore the 2007 proposal has commenced on site and the planning permission has therefore been implemented.
- 1.1.5 The proposals also include the provision of a private carpark with 24 spaces for the use of the Railway Station, covered as part of a S106. The use of the car park needs to be considered as part of the operation of the wider site.
- 1.1.6 This Technical Note has been produced in response to the initial comments received from Hampshire County Council (HCC) as Highway Authority. HCC requested further evidence to support planning application APP/16/00295. Details of these comments are attached hereto at **Appendix A**.

1.2 Scope of Report

1.2.1 This Transport Assessment includes the following sections:

- (i) Section 2: Trip Rate assessment;
- (ii) Section 3: Permitted development and site history;
- (iii) Section 4: Junction assessment; and
- (iv) Section 5: Summary and Conclusions.

2 TRIP RATE ASSESSMENT - PERMITTED LAND USE

2.1.1 This section considers the traffic generation for the most recent permitted scheme comprising 12 x Industrial units (1,822.6sqm) B1 (b&c) and 3 x office units (395sqm) (B1a) on the site (planning application Ref: 07/54901/007).

2.1.2 The TRICS database (version 7.3.3) has been reviewed to assess the impact of the permitted operations of the site, with reference to the comments raised by the planning officers. First principle assessments have also been undertaken in instances where the TRICS database has not been applicable e.g. Railway Station car park.

2.2 Industrial and Office use

2.2.1 The comparison requested by HCC related to the permission of the application ref: 07/54910/007, which was for 1,822.6sqm of B1 (b&c) industrial units and 395sqm of B1 (a) office.

2.2.2 The comments from the Highway Officer at HCC, dated 17th December 2007 and attached hereto at **Appendix B**, advise that the 2007 application was further to existing permissions on the site and the slight increase in the scale of the scheme would not alter the original views of the Highway Authority.

2.2.3 Detailed trip rate assessments could not be found in the available history on Havant Borough Council's (HBC) planning portal, therefore the TRICS database (version 7.3.3) was reviewed for B1 industrial units and B1 (a) office units.

2.2.4 The following parameters were therefore considered for the two investigations

- (i) Land Use – Employment: Industrial Estate or Office.
- (ii) Regions – England (excluding Greater London, Ireland, Wales and Scotland).
- (iii) Date Range – 2008 Onwards.
- (iv) Count Type – Manual.
- (v) Selected Days – Weekdays.
- (vi) Location – Edge of Town and Suburban
- (vii) Scale – 0 - 5000sqm

- 2.2.5 Full outputs from this assessment are attached hereto at **Appendix C** whilst the vehicular trip rates for the two land uses are summarised in **Figure 2.1**.

Trip Rate Summary (B1 Industrial Units per 100sqm)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	0.703	0.374	1.077
PM Peak (1700 - 1800)	0.193	0.477	0.67
Daily	5.233	5.13	10.363
Traffic Generation (1,822.6 sqm B1 Industrial Unit)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	13	7	20
PM Peak (1700 - 1800)	4	9	12
Daily	95	93	189
Trip Rate Summary (B1(a) Office per 100sqm)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	2.295	0.299	2.594
PM Peak (1700 - 1800)	0.192	2.228	2.42
Daily	8.678	8.945	17.623
Traffic Generation (395sqm B1(a) Office)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	9	1	10
PM Peak (1700 - 1800)	1	9	10
Daily	34	35	70

Figure 2.1: Trip Generation assessment – Industrial and Office

- 2.2.6 The total traffic generation for the permitted scheme has been presented in **Figure 2.2**.

Traffic Generation (Total Industrial and Office Development)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	22	8	30
PM Peak (1700 - 1800)	4	17	22
Daily	130	129	258

Figure 2.2: Total Industrial and Office development – TRICS assessment for 07/54901/007

- 2.2.7 The commercial element of the scheme is therefore considered to have the capacity to generate 30 two-way vehicle movements during the AM peak hour and 22 two-way vehicle movements during the PM peak hour. Over the course of a typical day the site would be expected to generation 258 two-way vehicle movements.
- 2.2.8 The split of HGV traffic is unknown as this is dependent upon the end user of each individual unit however it could be assumed that at least 10% of daily trips (26 two-way vehicle movements) could be associated with HGVs.

2.3 Commuter car park

2.3.1 An agreed element of all schemes was the inclusion of a 24-space commuter car park located to the south of the proposed junction to the site.

2.3.2 No traffic generation assessments or trip information is available for this operation and the TRICS database includes no comparable land uses. As a result, a first principles assessment has been undertaken utilising a number of educated assumptions. This includes:

- (i) Commuter car parks usually fill up prior to 8am. For robustness it is considered that 6 spaces would become occupied between 8am-9am, generating 6 arrivals;
- (ii) During the PM peak hour (5pm-6pm) it is considered that half of the parking spaces would be vacated by commuters, generating 12 departures; and
- (iii) Commuter car parks are also regularly used as pick-up and drop-off locations therefore some of the generated traffic would be associated with this operation.
 - a) During the AM peak hour it is considered 6 vehicles would visit the site generating 12 two-way vehicle movements.
 - b) During the PM peak hour 12 vehicles would visit the site generating 24 two-way vehicle movements.

2.3.3 Using the assumptions presented above **Figure 2.3** presents the first principles assessment of peak hour traffic generated by the commuter car park.

Traffic Generation (Commuter Car park – 24 spaces)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	12	6	18
PM Peak (1700 - 1800)	12	24	36

Figure 2.3: Commuter Car Park: First Principles Peak hour traffic generation

2.4 Net Traffic Generation

2.4.1 The permitted scheme includes both the commercial use of 15 units, the outputs of which are presented in **Figure 2.2**. The site also included the operation of the commuter car park, the first principle assessment of which is summarised in **Figure 2.3**.

Traffic Generation (Permitted Scheme)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	34	14	48
PM Peak (1700 - 1800)	16	41	58

Figure 2.4: Net Peak Hour Traffic Generation – Commercial and Commuter Car Park

- 2.4.2 The initial scheme is therefore considered to have the capacity to generate 48 two-way vehicle movements during the AM peak hour and 58 two-way vehicle movements during the PM peak hour.

3 TRIP RATE ASSESSMENT - PROPOSED DEVELOPMENT

- 3.1.1 The proposed development, which is the focus of this submission, is for c. 201sqm of B1(a) Office, c.306sqm of B1(b&c) Industrial use and c.936sqm of veterinary use. This is all in addition to the commuter car park, discussed in **Section 2.3** of this report.

3.2 Office and Industrial Use

- 3.2.1 **Figure 3.1** presents the traffic generated by the proposed office and industrial units using the information provided in **Figure 2.1** and in **Appendix C**, whilst **Figure 3.2** presents these uses as a total impact.

Traffic Generation (306 sqm B1 Industrial Unit)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	2	1	3
PM Peak (1700 - 1800)	1	1	2
Daily	16	16	32
Traffic Generation (201sqm B1(a) Office)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	5	1	5
PM Peak (1700 - 1800)	0	4	5
Daily	17	18	35

Figure 3.1: Traffic Generation assessment – Industrial and Office

Traffic Generation (Total Industrial and Office Development)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	7	2	9
PM Peak (1700 - 1800)	1	6	7
Daily	33	34	67

Figure 3.2: Total Industrial and Office development – TRICS assessment for part of APP/16/00295

- 3.2.2 The proposed operation for these 4 units would generate 9 and 7 two-way vehicle movements during the AM and PM peak hours respectively and a total of 67 two-way vehicle movements on a daily basis.

3.3 Veterinary Use - Existing

- 3.3.1 The proposed veterinary practice (Downland Veterinary Practice) is currently operating at 71, Havant Road, Emsworth, with vehicular access to the site is via Park Crescent.
- 3.3.2 The purpose of the relocation is to facilitate the continued growth of both the veterinary practice but also the main administration centre for the Veterinary company, which currently supports the Practice's 7 other clinics.

- 3.3.3 Whilst the proposed scheme would enable this expansion there is data associated with the current practice's existing traffic movements which need to be considered.
- 3.3.4 The existing facility is c. 265sqm in size and has 4 consulting rooms. It also employs a total of 50 staff of which circa 20 staff are in each day. The practice is open from 08:00-18:45 Mon-Fri and 08:30-12:30 on Saturday and the site also includes hospitalisation and emergency cases that are outside of these hours.
- 3.3.5 Travel surveys were undertaken for a week from the 6th May to 13th May 2016 for both clients and staff to complete, the summary of which is included in **Appendix D**.
- 3.3.6 During this time 28 staff surveys were completed of circa 50 members available resulting in a response rate of 56%.
- 3.3.7 Their current and future travel behaviours were surveyed and outlined in **Figure 3.3**.

Method of Travel Staff	Current Location		Proposed Location	
	No.	%	No.	%
Walk	1	3.6%	-	-
Cycle	-	-	3	10.7%
Bus	-	-	-	-
Park & Ride	-	-	-	-
Train	-	-	1	3.6%
Motorcycle	-	-	-	-
Taxi	-	-	-	-
Car Share (driver)	3	10.7%	3	10.7%
Car Share (passenger)	1	3.6%	2	7.1%
Drive Alone	23	82.1%	19	67.9%
Total	28	100%	28	100%

Figure 3.3: Method of Travel to Work – Staff (Current and Proposed Veterinary Site)

- 3.3.8 The results of the survey confirm that at both locations staff generally travel to the site by private car, however the relocated site would see a reduction in the percentage of vehicle movements from 82.1% to 67.9% as options such as cycling and taking the train become more realistic.
- 3.3.9 Surveys were also completed by visitors to the site with 326 responses received. The site currently accommodates between 120-140 visitors on a typical week day therefore a response rate of circa 45% is understood to have been achieved during the week of the survey.

Method of Travel Visitors	Current Location		Proposed Location	
	No.	%	No.	%
Walk	15	4.6%	26	8.0%
Cycle	-	-	-	-
Bus	1	0.3%	1	0.3%
Park & Ride	-	-	2	0.6%
Train	1	0.3%	2	0.6%
Motorcycle	-	-	1	0.3%
Taxi	7	2.1%	6	1.8%
Car Share (driver)	35	10.7%	35	10.7%
Car Share (passenger)	20	6.1%	17	5.2%
Drive Alone	247	75.8%	236	72.4%
Total	326	100%	326	100%

Figure 3.4: Method of Travel to Work – Visitors (Current and Proposed Veterinary Site)

3.3.10 The results from the visitor survey, demonstrated in **Figure 3.4**, show that the proposed relocation of the site would reduce the number of single person vehicle movements associated with visitors to the site, as compared to currently, with a suggested reduction of 3.4%.

3.3.11 A first principles assessment is therefore proposed, upon which to base the existing traffic generation and therefore upon which to base a proposed traffic generation. Using the current information supplied by the client (**Appendix D**) the site currently operates as follows:

- (i) The site has 4 consultation rooms;
- (ii) Between 9am-1pm and 2pm-7pm consultations take place;
- (iii) A consultation lasts between 10-20 minutes with each consulting room seeing c. 4 patients per hour.

3.3.12 Based on this element alone, the existing site would generate 144 consultations in a day and with 75.8% of visitors travelling by car (**Figure 3.4**). It is considered that this would equate to 218 two-way vehicle movements associated with visitors associated with consultations.

3.3.13 In addition to this the site also accommodates:

- (i) 20 staff per day of which 16 drive alone (82.1% based on **Figure 3.3**) to site. The majority of the day's staff arrive before the animal hospital opens at 8am;
- (ii) The hospital opens at 8am to book in the day's operations (10-15 per day);

- (iii) Animals which require a hospital visit require both a drop off and collect (as opposed to waiting on site) therefore 2 sets of arrivals and departures are recorded. 45 two-way vehicle movements could be recorded (75.8%) on days with a high number of operations.
- (iv) Lunch takes places between 1-2pm although visits to the site during this time continue with payments and animal collections occurring. This results in a further c. 6 visitors to the site or 9 two-way vehicle movements.
- (v) The site closes after 7pm for visitors although is staffed throughout the night.

3.3.14 Based on the first principles assessment **Figure 3.5** presents an anticipated traffic generation of the existing site.

Traffic Generation (First Principles Vet Surgery)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	21	15	36
PM Peak (1700 - 1800)	17	25	42
Daily (0700-2000)	152	152	304

Figure 3.5: Existing Veterinary Practice Traffic Generation – First Principle Assessment

3.4 Veterinary Use - Proposed

3.4.1 Using the existing site's information, a first principles assessment has also been undertaken for the proposed scheme and assumes the following:

- (i) The site has 6 consultation rooms;
- (ii) Between 9am-1pm and 2pm-7pm consultations take place;
- (iii) A consultation lasts between 10-20 minutes with each consulting room seeing c. 4 patients per hour.

3.4.2 Based on this element alone the proposed site would generate 216 consultations in a day and with 72.4% of visitors travelling by car (**Figure 3.4**) it is considered that this would equate to 312 two-way vehicle movements associated with visitors associated with consultations.

3.4.3 In addition to this the site will also see an increase in staff, visitors to the site and operations. This increase is assumed as follows:

- (i) 30 staff per day of which 20 drive alone (67.9% based on **Figure 3.3**) to site. The majority of the day's staff arrive before the animal hospital opens at 8am;

- (ii) The hospital opens at 8am to book in the day's operations (up to 20 per day);
- (iii) Animals which require a hospital visit require both a drop off and collect (as opposed to waiting on site) therefore 2 sets of arrivals and departures are recorded. 58 two-way vehicle movements could be recorded (72.4%) on days with a high number of operations.
- (iv) Lunch takes places between 1-2pm although visits to the site during this time continue with payments and animal collections occurring. This results in a further c. 15 visitors to the site or 22 two-way vehicle movements.
- (v) It is expected that the site would continue to operate until 7pm for visitors although it would be staffed throughout the night.

3.4.4 Based on the first principles assessment **Figure 3.6** presents an anticipated traffic generation of the existing site.

Traffic Generation (First Principles Vet Surgery - proposed)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	28	17	45
PM Peak (1700 - 1800)	26	32	58
Daily (0700-2000)	216	216	432

Figure 3.6: Proposed Veterinary Practice Traffic Generation – First Principle Assessment

3.4.5 The reality however is that the vet's surgery is already in operation in the Emsworth area. The findings of the surgery also confirm that clients are unlikely to travel more than 3 miles, 5 at the most, to access a surgery.

3.4.6 The existing and proposed sites are c. 1 mile apart therefore the majority of existing clients would remain and would continue to be accommodated on the network no matter whether the site expanded.

3.4.7 To take this into account it is assumed that a minimum of 20% of existing trips to the site already utilise Horndean Road to reach the existing clinic and are therefore already included as part of the baseline traffic assessments. **Figure 3.7** therefore presents the amended traffic generation.

Traffic Generation (First Principles Vet Surgery – excluding 20% existing movements)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	22	14	36
PM Peak (1700 - 1800)	21	26	46
Daily (0700-2000)	173	173	346

Figure 3.7: Proposed Veterinary Practice Traffic Generation – First Principle Assessment excluding 20% existing movements

3.5 Veterinary Use - TRICS

3.5.1 Detailed trip rate assessments could not be found in the available history on Havant Borough Council's (HBC) planning portal therefore the TRICS database was reviewed for B1 industrial units and B1(a) office units.

3.5.2 The following parameters were therefore considered for the two investigations

- (i) Land Use – Health - Veterinary.
- (ii) Regions – England (excluding Greater London, Ireland, Wales and Scotland).
- (iii) Date Range – 2008 Onwards.
- (iv) Count Type – Manual.
- (v) Selected Days – Weekdays.
- (vi) Location – Edge of Town and Suburban

3.5.3 The full outputs of the TRICS assessment are attached at **Appendix E** and summarised in **Figure 3.8**.

Trip Rate Summary (Veterinary Practice per 100sqm)			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	2.76	1.699	4.459
PM Peak (1700 - 1800)	2.123	2.972	5.095
Daily (0700-2000)	31.422	31.739	63.161
Traffic Generation (936sqm of Veterinary Practice (D1))			
	Arrivals	Departures	Two Way
AM Peak (0800 - 0900)	26	16	42
PM Peak (1700 - 1800)	20	28	48
Daily (0700-2000)	294	297	591

Figure 3.8: Proposed Veterinary Practice Traffic Generation – TRICS Assessment

3.6 Net Traffic Generation

3.6.1 This report has considered two options with regard to the proposed veterinary surgeries operation, in addition to reviewing the existing operation of the veterinary practice.

3.6.2 Accordingly **Figure 3.9** presents the traffic generation for both options.

Traffic Generation (First Principles vet assessment)		
	AM peak hour – Two-way	PM Peak hour – Two-way
Commuter Car Park	18	36
Commercial Units	9	7
Proposed Vet – First Principles and 20%	36	46
Total	63	89
Traffic Generation (TRICS Vet assessment)		
	AM peak hour – Two-way	PM Peak hour – Two-way
Commuter Car Park	18	36
Commercial Units	9	7
Proposed Vet - TRICS	42	48
Total	69	91

Figure 3.9: Net Traffic Generation

- 3.6.3 For the purposes of assessing the proposed scheme it is of note that both options result in similar peak hour flows however the TRICS assessment presents the optimum traffic generation for the proposed scheme and is used for the updated LINSIG assessment.

4 PERMITTED LOCAL DEVELOPMENT

4.1.1 The correspondence with HCC requested that committed schemes were included as part of the future assessment of the junction in 2021.

4.1.2 Following further discussion with HCC it was agreed that the following 3 permitted developments should be included.

- (i) Hampshire Farm – 10/74014/000 (Outline 280 dwellings and doctor surgery)
- (ii) Land West of Horndean Road - APP/14/00547 (Outline 125 dwellings)
- (iii) Coldharbour Farm Way – APP/14/00360 (53 dwellings)

4.1.3 All three of these applications included flow assessments onto the local road network enabling the extraction of vehicle movements along Horndean Road, past the proposed development site.

4.1.4 **Figure 4.1** presents the summarised findings for the peak hours including northbound and southbound flows.

Horndean Road	AM Peak Hour		PM Peak Hour	
	Northbound	Southbound	Northbound	Southbound
Hampshire Farm – Residential and Doctors Surgery	48	48	54	46
Horndean Road – Mitigated Forecast Distribution	10	29	22	17
Coldharbour Way – Phase 2	5	10	12	7
Total	63	87	88	70

Figure 4.1: Committed Schemes – Peak hour movements on Horndean Road

4.1.5 The total presented in **Figure 4.1** has been added to the 2021 growth factors provided by TEMPRO as part of the final junction assessment, reviewed in **Section 5** of this report.

5 JUNCTION ASSESSMENT

5.1 Historic Assessments

RPF Associates Ltd – Original assessment

- 5.1.1 The agreed access design was made based on the outputs from a LINSIG model, produced by RPF Associates Ltd and attached hereto at **Appendix F** and summarised in **Figure 5.1**.

Arm	Mean Max. Q (PCU)	Delay Per PCU. (S)	Deg. Sat (%)
RPF Associates (Original Assessment) Post Development – AM Peak - 2008			
Southbound (Ahead/Left)	8.8	16.4	59.6%
Northbound (Ahead/Left)	9.4	11.6	61.0%
Site Access (Right/Left)	0.8	39.6	20.2%
RPF Associates (Original Assessment) Post Development – PM Peak – 2008			
Southbound (Ahead/Left)	12.1	19.6	72.4%
Northbound (Ahead/Left)	5.4	9.2	42.8%
Site Access (Right/Left)	1.8	44.0	40.5%

Figure 5.1: Original Assessment – RPF Associates – Peak Hours 2008

- 5.1.2 The basis for this data was:

- (i) Collection of traffic survey data was used as the basis for the baseline passenger car units (PCU) data;
- (ii) A tidal flow of vehicles was observed with the majority of vehicles travelling northbound in the morning peak hour and southbound in the evening peak hour;
- (iii) No traffic generation data was provided but consideration was given to the number of parking spaces in the commuter car park and for each unit in the development, as well as an allowance for deliveries.

- 5.1.3 When considering the results presented in **Figure 5.1** it is noted that the longest queue length was observed for southbound traffic during the PM peak hour; where a queue length of 13 passenger car units (PCU) was recorded.

- 5.1.4 The longest delays recorded for the junction were to be accommodated within the development site, clear of the public highway and the Degree of Saturation was well below 90%; a point where the junction is considered to be at capacity.

Telent

5.1.5 This information was then utilised subsequently by TELENT to produce updated junction assessments based on 2 scenarios:

- (i) 2016 Development (Original Proposal)
- (ii) 2021 Traffic Growth (Original proposal + 10% growth)

5.1.6 The basis for this data was:

- (i) Collection of traffic survey data in January 2016 (Alpha Consultants) was used as the basis for the baseline pcu data;
- (ii) Assumed that the development traffic would be split 50/50 in and out of the site;
- (iii) No traffic generation data was provided but consideration was given to the number of parking spaces in the commuter car park and for each unit in the development, as well as an allowance for deliveries;
- (iv) No pedestrian movement data was used therefore 2 scenarios were considered for both 2016 and 2021; with the pedestrian phase on every cycle and the pedestrian phase every other cycle; and
- (v) The 2021 assessment assumed a 10% growth in traffic.

5.1.7 The outputs from TELENT are attached hereto at **Appendix G** and summarised in **Figure 5.2** for the 2016 baseline and **Figure 5.3** for the 2021 forecasted assessment.

Arm	Mean Max. Q (PCU)	Delay Per PCU. (S)	Deg. Sat (%)
Telent (Every Ped Phase) – AM Peak – 2016			
Southbound (Ahead/Left)	15.8	19.0	64.8%
Northbound (Ahead/Left)	13.3	26.3	66.7%
Site Access (Right/Left)	1.3	65.0	29.4%
Telent (Every Ped Phase) – PM Peak – 2016			
Southbound (Ahead/Left)	9.5	15.4	46.4%
Northbound (Ahead/Left)	18.8	25.4	76.7%
Site Access (Right/Left)	3.0	78.7	58.7%
Telent (Every Other Ped Phase) – AM Peak – 2016			
Southbound (Ahead/Left)	15.8	17.5	66.2%
Northbound (Ahead/Left)	13.2	21.9	65.6%
Site Access (Right/Left)	1.0	48.2	23.0%
Telent (Every Other Ped Phase) – PM Peak – 2016			
Southbound (Ahead/Left)	9.5	13.8	47.0%
Northbound (Ahead/Left)	18.6	20.9	74.3%
Site Access (Right/Left)	2.2	55.4	46.5%

Figure 5.2: Telent – Peak Hours 2016 and two pedestrian phases

- 5.1.8 When considering the results presented in **Figure 5.2** it is noted that the longest queue length was observed for northbound traffic during the PM peak hour; where a queue length of 19 passenger car units (PCU) was recorded as part of both pedestrian scenarios. This was a reversal of flows when compared to the RPF Associates findings as well as an increase of 6 vehicles.
- 5.1.9 The longest delays recorded for the junction were to be accommodated within the development site, clear of the public highway and the Degree of Saturation was well below 90%; a point where the junction is considered to be at capacity.

Arm	Mean Max. Q (PCU)	Delay Per PCU. (S)	Deg. Sat (%)
Telent (Every Ped Phase) – AM Peak – 2021			
Southbound (Ahead/Left)	18.7	20.9	71.1%
Northbound (Ahead/Left)	17.3	37.6	82.3%
Site Access (Right/Left)	1.5	65.9	32.3%
Telent (Every Ped Phase) – PM Peak – 2021			
Southbound (Ahead/Left)	11.2	10.6	51.8%
Northbound (Ahead/Left)	25.2	21.4	89.1%
Site Access (Right/Left)	3.4	2.5	64.6%
Telent (Every Other Ped Phase) – AM Peak – 2021			
Southbound (Ahead/Left)	18.8	19.4	72.7%
Northbound (Ahead/Left)	17.0	31.1	80.3%
Site Access (Right/Left)	1.3	49.5	25.3%
Telent (Every Other Ped Phase) – PM Peak – 2021			
Southbound (Ahead/Left)	11.2	14.9	52.2%
Northbound (Ahead/Left)	24.3	29.7	86.0%
Site Access (Right/Left)	2.7	58.1	51.2%

Figure 5.3: Telent – Peak Hours 2021 and two pedestrian phases

- 5.1.10 **Figure 5.3** presents the future growth of the local highway network and the proposed development site. The longest recorded queue length was for northbound traffic again, during the PM peak hour. During the 'every pedestrian phase' scenario, a queue of 26 passenger car units (PCU) was recorded, an increase of 7 vehicles when compared to the Telent 2016 data.
- 5.1.11 The longest delays recorded for the junction were to be accommodated within the development site, clear of the public highway, as has been the case throughout.
- 5.1.12 The Degree of Saturation for the northbound arm during the 'every pedestrian phase scenario' in the PM peak hour is close to 90%; a point where the junction is considered to be at capacity. The junction does not however exceed this threshold and the Degree of Saturation is reduced when the more realistic 'every other pedestrian phase' scenario is reviewed.

5.2 Current Assessment

- 5.2.1 Further to the assessments above RGP has undertaken an updated review of the proposed scheme to ensure both consistency with regard to the proposed junctions operation, and to enable a comparison between the 2016 and 2021 outputs.
- 5.2.2 Automatic Traffic Count (ATC) data was obtained 21st January 2016 by Alpha Consultants on behalf of TELENT to support their most recent assessment (**Appendix H**).

- 5.2.3 The findings of the ATC are presented below in **Figure 5.4**, which includes both the observed vehicle numbers and PCU information.

B2148 Horndean Road	AM Peak hour		PM Peak hour	
	Northbound	Southbound	Northbound	Southbound
Actual Vehicles	496	733	709	498
Pcu	506	745	712	507

Figure 5.4: ATC data

- 5.2.4 The ATC data highlighted that the tidal flow currently observed along Horndean Road was the opposite to that used by RPF Associates Ltd in 2008, with roughly 60% of traffic travelling southbound during the AM peak hour and northbound during the PM peak hour.
- 5.2.5 This tidal flow (60/40) was then applied to the proposed scheme and operation of the junction and pedestrian phasing was considered for every signal rotation as the Telent data has shown little difference between the 'every' and 'every other' assessments.
- 5.2.6 **Appendix I** presents the outputs for both the originally agreed scheme (15 commercial units and commuter car park) and the proposed veterinary scheme (including 4 commercial units and commuter car park). **Figure 5.5** presents the baseline for the proposed veterinary scheme in 2016 only.

Arm	Mean Max. Q (PCU)	Delay Per PCU. (S)	Deg. Sat (%)
RGP – AM Peak – 2016			
Southbound (Ahead/Left)	15.8	21.7	71.7%
Northbound (Ahead/Left)	7.2	12.4	44.0%
Site Access (Right/Left)	0.6	50.6	14.5%
RGP – PM Peak – 2016			
Southbound (Ahead/Left)	8.6	16.4	48.3%
Northbound (Ahead/Left)	12.2	14.9	61.4%
Site Access (Right/Left)	1.6	54.7	34.3%

Figure 5.5: RGP 2016 Baseline – Proposed Veterinary Scheme

5.3 2021 Assessment

- 5.3.1 To enable an assessment for 2021, this updated assessment reviewed TEMPRO to find the growth factor to 2021 for the Emsworth area, the results of this are presented below in **Figure 5.6**. In addition to this **Figure 5.6** also include the committed schemes, requested for inclusion by HCC. TEMPRO outputs are attached hereto in **Appendix J**.

	AM Peak hour		PM Peak hour	
	Northbound	Southbound	Northbound	Southbound
TEMPRO Growth Factor	1.0909		1.0959	
B2148 (pcu)	552	813	780	556

Committed schemes (pcu)	63	87	88	70
2021 Baseline (pcu)	615	900	868	626

Figure 5.6: 2021 Baseline calculation

- 5.3.1 **Appendix I** presents the outputs for the 2021 projection for the proposed veterinary scheme based on the TRICS outputs shown in the lower half of **Figure 3.9** (including 4 commercial units and commuter car park).

Arm	Mean Max. Q (PCU)	Delay Per PCU. (S)	Deg. Sat (%)
RGP – AM Peak – 2021 + Committed Dev			
Southbound (Ahead/Left)	22.8	29.7	86.1%
Northbound (Ahead/Left)	9.5	13.8	53.1%
Site Access (Right/Left)	0.6	50.6	14.5%
RGP – PM Peak – 2021 + Committed Dev			
Southbound (Ahead/Left)	11.6	18.4	59.3%
Northbound (Ahead/Left)	17.2	18.4	74.4%
Site Access (Right/Left)	1.6	54.7	34.3%

Figure 5.7: RGP 2021 + Committed Development – Proposed Veterinary Scheme

5.4 Net Change

- 5.4.1 To enable a clear review of the proposed scheme, it's growth, and the originally approved junction **Figures 5.8** and **5.9** present the AM and PM peak hour LINSIG outputs for comparison.

Arm	Mean Max. Q (PCU)	Delay Per PCU. (S)	Deg. Sat (%)
RPF Associated Original – 2008 AM Peak Hour			
Southbound (Ahead/Left)	8.8	16.4	59.6%
Northbound (Ahead/Left)	9.4	11.6	61.0%
Site Access (Right/Left)	0.8	39.6	20.2%
RGP –2016 Baseline (Veterinary) - AM Peak Hour			
Southbound (Ahead/Left)	15.8	21.7	71.7%
Northbound (Ahead/Left)	7.2	12.4	44.0%
Site Access (Right/Left)	0.6	50.6	14.5%
RGP – 2021 + Committed Dev +Vets – AM Peak Hour			
Southbound (Ahead/Left)	22.8	29.7	86.1%
Northbound (Ahead/Left)	9.5	13.8	53.1%
Site Access (Right/Left)	0.6	50.6	14.5%

Figure 5.8: AM Peak Hour Review

Arm	Mean Max. Q (PCU)	Delay Per PCU. (S)	Deg. Sat (%)
RPF Associated Original – 2008 PM Peak Hour			
Southbound (Ahead/Left)	12.1	19.6	72.4%
Northbound (Ahead/Left)	5.4	9.2	42.8%
Site Access (Right/Left)	1.8	44.0	40.5%
RGP – 2016 Baseline (Veterinary) - PM Peak Hour			
Southbound (Ahead/Left)	8.6	16.4	48.3%
Northbound (Ahead/Left)	12.2	14.9	61.4%
Site Access (Right/Left)	1.6	54.7	34.3%
RGP – 2021 + Committed Dev +Vets – PM Peak Hour			
Southbound (Ahead/Left)	11.6	18.4	59.3%
Northbound (Ahead/Left)	17.2	18.4	74.4%
Site Access (Right/Left)	1.6	54.7	34.3%

Figure 5.9: PM peak Hour Review

- 5.4.2 When comparing the originally approved scheme from 2008 against the updated proposal for 2016 and 2021 it is firstly of note that the north/south flows, which were observed to be tidal as part of the recent ATC results, have switched. Southbound traffic is now more prominent during the AM peak hour and northbound traffic is more prominent during the PM peak hour. As a result; the flow of traffic, queue lengths, and Degrees of Saturation have swapped between the 2008 and current data.
- 5.4.3 Second to this is the acknowledgement that the assessments all assumed that a pedestrian phase would occur on every cycle of the signals, however in reality the frequency of pedestrian use of the junction is unlikely to be this frequent. The information presented, in terms of queue length, delay and saturation, is therefore considered to provide a robust assessment of the signalised junction.
- 5.4.4 In terms of longest queue length, the original junction assessment accepted a queue of 10 PCU lengths travelling northbound in the AM peak hour and 13 PCU lengths travelling southbound in the PM peak hour. By 2021 the updated scheme is expected generate a maximum queue length of 23 PCU associated with southbound traffic during the AM peak hour and 18 PCU lengths during the PM peak hour travelling northbound.
- 5.4.5 The impact of these proposals on north and southbound traffic would result in an additional 8 PCU lengths in a northbound direction and 10 PCU lengths in a southbound direction.

- 5.4.6 The longest delays recorded for the junction are accommodated within the development site, clear of the public highway, and there is very little difference between the 2016 and 2021 assessment.
- 5.4.7 The Degree of Saturation for both the AM and PM peak hours are below 90%; a point where the junction is considered to be at capacity therefore the proposals are acceptable. It is also noted that the outputs for the PM peak hour, comparing the 2008 to 2021 data is reasonably similar.

6 SUMMARY AND CONCLUSIONS

6.1.1 This Technical Note has reviewed the operation of the junction for the site known as Interbridges Site, New Brighton Road, Emsworth. The originally approved junction accommodated traffic associated with a previous planning permission for predominantly commercial use (industrial and office units) whilst the current proposal would serve some commercial provision as well as a veterinary surgery.

6.1.2 The conclusions of the report are as follows:

- (i) The proposed scheme at 2021 is expected to result in an increase in the length of queues associated with the growth in background traffic on the network as well as the proposed scheme. However, the actual operation of the junction, with fewer pedestrian crossing cycles, would not result in this forecasted level of queuing traffic actually being reached;
- (ii) The largest delay in traffic for all the assessments is for less than a minute and is accommodated within the proposed development site, clear of the public highway;
- (iii) The Degree of Saturation for the junction, at all stages, is below 90% and therefore the junction is considered to be operational and not at full capacity; and
- (iv) Therefore, the approved junction continues to be acceptable in terms of its capacity to accommodate the proposed scheme.

6.1.3 In view of this Technical Note, Hampshire County Council is respectfully asked to confirm that the existing junction is still fit for purpose and therefore acceptable to support the proposed scheme from a highways and transportation perspective.

APPENDIX A



Hampshire County Council

Economy, Transport and Environment Department
Elizabeth II Court West, The Castle
Winchester, Hampshire SO23 8UD

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0845 603 5633 (Roads and Transport)
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Head of Planning
Havant Borough Council
Civic Offices
Civic Centre Road
HAVANT
Hampshire
PO9 2AX

Enquiries to	Holly Drury	My reference	HD 6-3-13-89 (APP1154)
Direct Line	01962 826996	Your reference	APP/16/00295
Date	24th May 2016	Email	holly.drury@hants.gov.uk

For attention of Mrs D Haywood

Dears Sirs

Land at Interbridges Site, New Brighton Road, Emsworth – Veterinary practice, 4No. business units, parking and open storage yards.

Thank you for the opportunity to comment on the above application.

This response relates only to the main access to the site via the B2148. Due to the size of the application all other matters will be dealt with by our agent at Havant Borough Council.

The principle of the site access has previously been agreed through the application 07/54901/007. S278 approval for the proposed access has previously been granted on the 8th March 2010 and a S278 agreement entered into. However the design check has now expired and therefore a revised detailed design check is required before the Highway Authority can agree to the principle of the junction.

The applicant has been in discussion with HCC regarding the requirements of this prior to the submission of this application however no formal submission has been made to the Highway Authority to undertake a review of the proposed junction. This would include additional information including new traffic surveys and revised modelling to take into consideration the change of uses proposed and current traffic flows. New growth factors to account for background growth and committed development will also need to be applied. A check of the layout to ensure it complies with current design standards is required and amendments made as necessary.

Until this work has been undertaken and the information submitted the

Director of Economy, Transport and Environment
Stuart Jarvis BSc DipTP FCIHT MRTPI

Highway Authority I am unable to provide a positive recommendation to this application.

Recommendation

I am not in a position to provide a positive recommendation on these proposals from a highways and transport perspective until the following information has been submitted to my satisfaction:

- Traffic count on the B2148
- Updated traffic growth figures to 2021 including committed development
- Updates forecast trip generation and distribution for the proposed development
- Revised modelling to take into considered updated data.
- Revised drawings of the access proposals if required.

If you are minded to determine the application before this additional information is submitted, I would request that the application is refused for the following reasons:

- In the opinion of the Planning Authority the proposal involves development that cannot be reconciled with the National Planning Policy Framework in that the significant movements generated could not be accommodated adequately on the existing transport network. This would result in a severe impact on the road safety and operation of the local transport network contrary to the NPPF and DM12 of the Havant Borough Council Core Strategy.

Reason: In the interest of highway safety.

Yours faithfully



Ben Clifton
Team Leader – Highways Development Planning

CC. Peter Marshall – Havant Borough Council Highways Development Planning.

APPENDIX B



Hampshire County Council

CONSULTS

Environment Department

The Castle, Winchester

Hampshire SO23 8UD

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Havant Borough Council

Civic Offices

Civic Centre Road

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Hampshire

PO9 2AX

HAVANT BOROUGH
COUNCIL

02 JAN 2008

RECEIVED

Enquiries to

Tim Bright

Direct Line

01962 857819

Date

17 December 2007

My reference

TB/6/3/13/89

Your reference

07/54901/007

E-mail

tim.bright@hants.gov.uk

For the attention of Chris Elphick

Dear Sirs

07/54901/007 Development comprising 12 No. industrial units (1822.6 sqm) within B1 (b & c), 3 No. office units (94.6 sqm), open storage and the provision of a commuter car park, with a new access to New Brighton Road – Interbridges Site, New Brighton Road, Emsworth

I am writing to you with regards to the above planning application which has been submitted for highway consultation.

The application proposes the development of industrial units, office units, open storage and the provision of a new commuter car park on land located at the Interbridges Site, Emsworth.

The Interbridges East Site has an existing outline planning consent 02/54901/003 granted in December 2002. The application was for industrial units totalling 2090.5 sqm. In addition to this a Section 106 Agreement was signed which secured:

- A section 278 agreement to secure a traffic signal control junction to the site.
- A footpath through the site.
- Replacement of pedestrian railings.
- Provision of a twenty four space commuter car park to be operated by a third party and not the local authority.



Certificate No FS 21845

A subsequent planning application was approved on 4 January 2006, this varied the size of the scheme to a total of 2281 Sqm in ten units.



INVESTOR IN PEOPLE

Director of Environment

Alison Quant BSc MSc MRTPI

V706131

info@hants.gov.uk recycling@hants.gov.uk

waste@hants.gov.uk roads@hants.gov.uk transport@hants.gov.uk

Under the terms of the Highway Development Control Agency Agreement application of this nature would normally be dealt with by our agents at your authority. It is noted however that an element of highway works have been proposed and as such it has been submitted to the County for comment. It is expected that any comments with regards to the onsite layout and parking allocation will come from our agents at your authority.

The junction design at the site access and New Brighton Road is shown on drawing 1208/10. This design was considered by the Highway Authority in 2001/2002. the signal scheme as shown on the drawing shows the concept of an acceptable traffic signal controlled junction in this location. This was confirmed in writing to Havant Borough Council in February 2002 as part of outline planning application 02/54901/003.

Before any works may take place in the highway it will be necessary for the applicant to undergo a design check procedure. Throughout this procedure the design will need to be refined to ensure its ultimate acceptability to the Highway Authority. It will also need to tie in with the potential redevelopment of Interbridges West which has been identified also within the Local Plan.

New Public Footpath

It is noted that as with the previous planning application a new public footpath has been proposed from Seagull Lane Footpath to New Brighton Road. Whilst the details of this will need to be agreed prior to commencement, the County would like to ensure that the footpath is provided to a minimum width of 1.8m. As such a planning consent will need to be provided to this effect.

As with most industrial developments the Highway Authority would not look to adopt the internal access road. As such it will be necessary for a condition to be placed within the planning consent to ensure that the applicant maintains this footpath link thereafter.

Traffic Generation

It is noted that the proposed development is to differ slightly from that previously granted planning consent. The difference shown is a reduction in the industrial use on site from 2090.5 sqm to 1822 sqm and an office provision of 346.6 sqm.

Alongside this application the applicant is proposing a signalised T junction on New Brighton Road. A signalised junction will provide more than adequate capacity for the minor increase in traffic generation over the previous proposals.

Recommendation

I can confirm that the County has no objections to this planning application been granted. This is provided the applicant enters into a Section 106 Agreement with the County to secure the following:

- Development shall not commence until the new signalised access as shown indicatively on drawing 1208/10 has been approved and subsequently constructed to the satisfaction of the local Highway Authority.

I would also be grateful if the following conditions could be placed within the planning consent.

- Prior to commencement the applicant shall submit for approval details of the Public Footpath to be constructed through the site, as shown indicatively on drawing 0839/SK-10 G.
- The applicant shall maintain the proposed right of way through the application site for perpetuity, as shown indicatively on drawing 0839/SK-10 G.
- Prior to commencement the applicant shall submit a Construction Traffic Management Plan for the approval of the Local Planning Authority and thereafter implemented for the duration of the development.

If you have any questions, please feel free to contact Tim Bright on (01962) 857819.

Yours faithfully



Head of Highways Development Control

cc:- Havant Borough Council - Peter Marshall

APPENDIX C

RGP Mill Pool House Godalming

Licence No: 728001

Calculation Reference: AUDIT-728001-161102-1106

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : D - INDUSTRIAL ESTATE
 VEHICLES

Selected regions and areas:

04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	2 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	Gross floor area
Actual Range:	2559 to 4425 (units: sqm)
Range Selected by User:	708 to 5000 (units: sqm)

Public Transport Provision:

Selection by:	Include all surveys
---------------	---------------------

Date Range:	01/01/08 to 22/10/15
-------------	----------------------

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Commercial Zone	1
Residential Zone	1
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

RGP Mill Pool House Godalming

Licence No: 728001

Filtering Stage 3 selection:**Use Class:**

B1 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000 1 days

20,001 to 25,000 1 days

25,001 to 50,000 2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

75,001 to 100,000 1 days

125,001 to 250,000 2 days

250,001 to 500,000 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 2 days

1.6 to 2.0 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1	CA-02-D-03	IND. ESTATE	CAMBRIDGESHIRE
	SAVILLE ROAD		
	WESTWOOD		
	PETERBOROUGH		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Gross floor area:	4425 sqm	
	Survey date: THURSDAY	22/10/09	Survey Type: MANUAL
2	CA-02-D-04	INDUSTRIAL ESTATE	CAMBRIDGESHIRE
	LINCOLN ROAD		
	PETERBOROUGH		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Gross floor area:	4133 sqm	
	Survey date: TUESDAY	02/12/14	Survey Type: MANUAL
3	GM-02-D-07	BUSINESS PARK	GREATER MANCHESTER
	VULCAN STREET		
	OLDHAM		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	4400 sqm	
	Survey date: THURSDAY	22/10/15	Survey Type: MANUAL
4	WO-02-D-01	INDUSTRIAL ESTATE	WORCESTERSHIRE
	SANDY LANE		
	STOURPORT-ON-SEVERN		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	2758 sqm	
	Survey date: FRIDAY	23/05/14	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	3879	0.084	4	3879	0.019	4	3879	0.103
07:30 - 08:00	4	3879	0.342	4	3879	0.058	4	3879	0.400
08:00 - 08:30	4	3879	0.374	4	3879	0.187	4	3879	0.561
08:30 - 09:00	4	3879	0.329	4	3879	0.187	4	3879	0.516
09:00 - 09:30	4	3879	0.335	4	3879	0.226	4	3879	0.561
09:30 - 10:00	4	3879	0.296	4	3879	0.180	4	3879	0.476
10:00 - 10:30	4	3879	0.251	4	3879	0.245	4	3879	0.496
10:30 - 11:00	4	3879	0.251	4	3879	0.271	4	3879	0.522
11:00 - 11:30	4	3879	0.284	4	3879	0.258	4	3879	0.542
11:30 - 12:00	4	3879	0.213	4	3879	0.296	4	3879	0.509
12:00 - 12:30	4	3879	0.232	4	3879	0.284	4	3879	0.516
12:30 - 13:00	4	3879	0.290	4	3879	0.219	4	3879	0.509
13:00 - 13:30	4	3879	0.187	4	3879	0.238	4	3879	0.425
13:30 - 14:00	4	3879	0.226	4	3879	0.148	4	3879	0.374
14:00 - 14:30	4	3879	0.316	4	3879	0.238	4	3879	0.554
14:30 - 15:00	4	3879	0.251	4	3879	0.258	4	3879	0.509
15:00 - 15:30	4	3879	0.219	4	3879	0.303	4	3879	0.522
15:30 - 16:00	4	3879	0.200	4	3879	0.277	4	3879	0.477
16:00 - 16:30	4	3879	0.148	4	3879	0.258	4	3879	0.406
16:30 - 17:00	4	3879	0.129	4	3879	0.296	4	3879	0.425
17:00 - 17:30	4	3879	0.122	4	3879	0.329	4	3879	0.451
17:30 - 18:00	4	3879	0.071	4	3879	0.148	4	3879	0.219
18:00 - 18:30	4	3879	0.064	4	3879	0.155	4	3879	0.219
18:30 - 19:00	4	3879	0.019	4	3879	0.052	4	3879	0.071
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			5.233			5.130			10.363

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP* FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	2559 - 4425 (units: sqm)
Survey date date range:	01/01/08 - 22/10/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
07:30 - 08:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
08:00 - 08:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
08:30 - 09:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
09:00 - 09:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
09:30 - 10:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
10:00 - 10:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
10:30 - 11:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
11:00 - 11:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
11:30 - 12:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
12:00 - 12:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
12:30 - 13:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
13:00 - 13:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
13:30 - 14:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
14:00 - 14:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
14:30 - 15:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
15:00 - 15:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
15:30 - 16:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
16:00 - 16:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
16:30 - 17:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
17:00 - 17:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
17:30 - 18:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
18:00 - 18:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
18:30 - 19:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	2559 - 4425 (units: sqm)
Survey date date range:	01/01/08 - 22/10/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	3879	0.006	4	3879	0.006	4	3879	0.012
07:30 - 08:00	4	3879	0.026	4	3879	0.006	4	3879	0.032
08:00 - 08:30	4	3879	0.039	4	3879	0.026	4	3879	0.065
08:30 - 09:00	4	3879	0.039	4	3879	0.039	4	3879	0.078
09:00 - 09:30	4	3879	0.019	4	3879	0.039	4	3879	0.058
09:30 - 10:00	4	3879	0.026	4	3879	0.006	4	3879	0.032
10:00 - 10:30	4	3879	0.045	4	3879	0.026	4	3879	0.071
10:30 - 11:00	4	3879	0.013	4	3879	0.052	4	3879	0.065
11:00 - 11:30	4	3879	0.019	4	3879	0.013	4	3879	0.032
11:30 - 12:00	4	3879	0.006	4	3879	0.013	4	3879	0.019
12:00 - 12:30	4	3879	0.019	4	3879	0.019	4	3879	0.038
12:30 - 13:00	4	3879	0.032	4	3879	0.013	4	3879	0.045
13:00 - 13:30	4	3879	0.013	4	3879	0.019	4	3879	0.032
13:30 - 14:00	4	3879	0.006	4	3879	0.006	4	3879	0.012
14:00 - 14:30	4	3879	0.032	4	3879	0.006	4	3879	0.038
14:30 - 15:00	4	3879	0.006	4	3879	0.013	4	3879	0.019
15:00 - 15:30	4	3879	0.019	4	3879	0.013	4	3879	0.032
15:30 - 16:00	4	3879	0.019	4	3879	0.026	4	3879	0.045
16:00 - 16:30	4	3879	0.000	4	3879	0.006	4	3879	0.006
16:30 - 17:00	4	3879	0.006	4	3879	0.013	4	3879	0.019
17:00 - 17:30	4	3879	0.019	4	3879	0.006	4	3879	0.025
17:30 - 18:00	4	3879	0.006	4	3879	0.013	4	3879	0.019
18:00 - 18:30	4	3879	0.006	4	3879	0.013	4	3879	0.019
18:30 - 19:00	4	3879	0.000	4	3879	0.006	4	3879	0.006
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.421			0.398			0.819

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	2559 - 4425 (units: sqm)
Survey date date range:	01/01/08 - 22/10/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
07:30 - 08:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
08:00 - 08:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
08:30 - 09:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
09:00 - 09:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
09:30 - 10:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
10:00 - 10:30	4	3879	0.006	4	3879	0.006	4	3879	0.012
10:30 - 11:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
11:00 - 11:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
11:30 - 12:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
12:00 - 12:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
12:30 - 13:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
13:00 - 13:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
13:30 - 14:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
14:00 - 14:30	4	3879	0.006	4	3879	0.006	4	3879	0.012
14:30 - 15:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
15:00 - 15:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
15:30 - 16:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
16:00 - 16:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
16:30 - 17:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
17:00 - 17:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
17:30 - 18:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
18:00 - 18:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
18:30 - 19:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.012			0.012			0.024

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP* FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	2559 - 4425 (units: sqm)
Survey date date range:	01/01/08 - 22/10/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
07:30 - 08:00	4	3879	0.006	4	3879	0.000	4	3879	0.006
08:00 - 08:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
08:30 - 09:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
09:00 - 09:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
09:30 - 10:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
10:00 - 10:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
10:30 - 11:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
11:00 - 11:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
11:30 - 12:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
12:00 - 12:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
12:30 - 13:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
13:00 - 13:30	4	3879	0.000	4	3879	0.013	4	3879	0.013
13:30 - 14:00	4	3879	0.006	4	3879	0.000	4	3879	0.006
14:00 - 14:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
14:30 - 15:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
15:00 - 15:30	4	3879	0.006	4	3879	0.000	4	3879	0.006
15:30 - 16:00	4	3879	0.000	4	3879	0.006	4	3879	0.006
16:00 - 16:30	4	3879	0.000	4	3879	0.006	4	3879	0.006
16:30 - 17:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
17:00 - 17:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
17:30 - 18:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
18:00 - 18:30	4	3879	0.000	4	3879	0.000	4	3879	0.000
18:30 - 19:00	4	3879	0.000	4	3879	0.000	4	3879	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.018			0.025			0.043

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP* FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	2559 - 4425 (units: sqm)
Survey date date range:	01/01/08 - 22/10/15
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

APPENDIX D

Site: Interbridges / New Brighton Road,
Emsworth, Hampshire

Travel Statement

1. Introduction:

Development Contact Details	
Name of Organisation	Downland Veterinary Group
Address	Interbridges Site New Brighton Road Emsworth
Postcode	TBC (New Development)
Contact Name	Ben Trimmer
Contact Number	01243 377141

2. Development Details:

Operating Hours	
Monday to Friday	08:00 – 18:45
Saturday	08:30 – 12:30
Sunday	Closed

On-site Parking Spaces			
Total Number of Vehicle Spaces		39	
Staff Spaces	29	Visitor Spaces	10
Additional information on car parking (e.g. disabled parking, priority parking for car sharing, senior management, etc.)		10 Visitor Spaces include 2 Disabled Parking Spaces. There are also 2 motorcycle parking spaces in addition to the 29 spaces available for staff.	

On-site Cycle Parking Spaces			
Total Number of cycle spaces		3 'Sheffield Stands'	
Staff Spaces		Visitor Spaces	
Additional information on cycle parking (e.g. shelter, CCTV monitored, etc.)		The cycle parking (Sheffield Stands) can be used by both staff and visitors. The three stands will allow for at least 6 cycles to be safely parked.	

3. Travel Data:

Staff and visitors were asked to complete a survey to establish which method of transport they use to travel to the veterinary practice in its current location and which method of transport they propose to use to travel to the veterinary practice in its proposed new location.

The practice has approximately 120 -140 visitors each week day and approximately 20 staff working on each week day including Receptionists, Veterinary Surgeons, Veterinary Nurses, Animal Care Assistants, Management, Administration Staff and Cleaners.

The survey was completed between Friday 6th May and Friday 13th May 2016. The total number of responses and details are shown below:

Current location:

Staff						
Total Number of Staff	28					
Mode of Transport – absolute number for each mode	Walk	1	Cycle		Bus	
	Park and Ride		Train		Car Share (driver)	3
	Taxi		Drive Alone	23	Car Share (passenger)	1
	Motorcycle		Other			

Visitors						
Total Number of Visitors	326					
Mode of Transport – absolute number for each mode	Walk	15	Cycle		Bus	1
	Park and Ride		Train	1	Car Share (driver)	35
	Taxi	7	Drive Alone	247	Car Share (passenger)	20
	Motorcycle		Other			

Proposed location:

Staff						
Total Number of Staff	28					
Mode of Transport – absolute number for each mode	Walk		Cycle	3	Bus	
	Park and Ride		Train	1	Car Share (driver)	3
	Taxi		Drive Alone	19	Car Share (passenger)	2
	Motorcycle		Other			

Visitors						
Total Number of Visitors	326					
Mode of Transport – absolute number for each mode	Walk	26	Cycle		Bus	1
	Park and Ride	2	Train	2	Car Share (driver)	35
	Taxi	6	Drive Alone	236	Car Share (passenger)	17
	Motorcycle	1	Other			

4. Travel Plan Objectives:

This travel strategy is being implemented to meet the following objectives over a three year period:

Objectives	(Tick)
Promote sustainable travel and health lifestyles to staff and visitors	✓
Improve access for staff and visitors travelling by foot, cycle and public transport	✓
Reduce local or on site congestion	✓
Help to relieve car parking pressures	✓
Reduce parking	✓
Reduce CO2 emissions	✓

5. Targets:

The following target measures are to be implemented to assess achievement of objectives:

Targets	
Target based on objective	Measure of target
Reduce single car usage amongst staff by 10%	Follow up travel survey after 12 months
Increase use of cycles by 10%	Follow up travel survey after 12 months

6. Action Plan:

To meet the objectives we will deliver the following measures over the next year:

Measures	To Do	Complete
Display local travel information leaflets	✓	
Display leaflets or posters on active travel initiatives (e.g. cycle training, healthy walks, etc.)	✓	
Create site specific 'Travel' notice board	✓	
Use website to advertise all travel options to your site	✓	
Use website/newsletters/emails/social media to promote the benefits of sustainable travel to staff and visitors	✓	
Install new cycle parking on site	✓	

7. Contacts:

Contacts				
Travel Champion	Name	Lia Boddington	Position	Client Services Manager - DVG
	Email		Phone	01243 377141
Senior Manager Support	Name	Ben Trimmer	Position	Managing Director - DVG
	Email	Benjamin.trimmer@hotmail.com	Phone	01243 377141

Design Statement for The Savoy Latham Partnership Ltd

Site at Interbridges

New Brighton Road

Emsworth

Hampshire

The Site

The site extends to 0.84 hectares in area and is situated in a plot of land to east of the New Brighton Road, being north of the main south coast railway line and south of the A27(M), in Emsworth on the Havant/Chichester border.

Planning History

The site has Planning Permission for construction of 15 commercial units falling within use classes B1 (B, C) granted in July 2012 totalling 2217 sq m.

This permission encompasses the construction of the site access and provision of a commuter car park and public footpath through the site prior to commencement of any development

A subsequent permission was given in April 2015 to Scottish and Southern Electric for a sub-station on part of the rear of the site.

Proposed Scheme

This application is for an alteration to the approved scheme to provide for 4 no. B1 industrial units together with a new headquarters building for the Downland Veterinary Group (DVG), with associated parking. In addition there is a car park under the S.106 agreement for the use of the railway station to be operated by a third party, also there are 2 yard areas.

The Downland Veterinary Group have been based in Emsworth since the 1970s and have built a strong reputation for the work that they do. The veterinary industry has changed greatly over the past 10-15 years and we now see much greater competition. Client needs have changed and all recent surveys show that most clients will not travel more than 3 miles, 5 at most, to visit a veterinary practice. For this reason it is vital for their business that they stay in the immediate area.

They have explored the town for other options but found nothing suitable. Sites have also been considered in Bosham and three in Havant, but again these did not meet their requirements.

Emsworth is the main administration centre for the group but is also the centre for advanced surgical, laparoscopic and endoscopic procedures.

The practice started in 1946 in Chichester, later expanding to Bognor Regis and then Emsworth in the 1970s. In the 1990s Leigh Park and Barnham were opened, Denmead in 2011, the Stubbington Ark in 2013 and Bordon in 2015. They now have 8 clinics, operating as a 20 full time vet equivalent group. In 2016 they will be opening a new clinic in Hampshire and they are currently in talks with 2 other practices about acquisition of their clinics. Emsworth is the centre pin for the group as it is the main administration centre and the additional sites they have in their business plan will feed more work into Emsworth for both advanced surgical and medical techniques, hospitalisation and emergency cases. The clinic has been extended twice in the last 20 years but with the growth they have seen over the last 5 years they have now reached capacity.

If the group headquarters is to stay in Emsworth, which is their wish, this site provides the only opportunity.

Staffing

- 13 Vets, including managing Director (7 full time, 6 part time)
- 7 Reception staff (all part time)
- 17 Registered Veterinary Nurses (11 Full time, 6 part time)
- 1 Nursing Manager
- 1 Deputy Head Nurse (Part time)
- 5 Animal Care Assistants (Full time)
- 1 Business manager (Full time)
- 1 Finance Manager (Full time)
- 2 Administration assistants (Part time)
- 1 Cleaner (Part time)

Total approximately 50

With the growth over the next 5 years the following staff additions will be required:

- 4/5 Vets (Full time)
- 4 Reception Staff (Part time)
- 6-7 Registered Veterinary Nurses (Full time)
- 5 Animal Care Assistants (Full time)
- 2 Cleaner (Part time)

Total 21-22

Design Scale

The buildings in the proposed scheme have an overall height of some 7m which is in line with the previous consented height. There are no issues with regards to overlooking taking into account the location of the site between the A27(M) and main south coast railway line.

The scale of the proposed buildings will sit comfortably within the site.

We have taken into account access arrangements to the site with regards to ease of access to the units and parking.

Layout and Access

The New Buildings replace a series of B1 (and B2 Units?) totalling 2217 sq. m; the proposed Veterinary Practice building has footprint of 501sq. m. and a gross internal floor area of 936 sq.m. The four B1 Units have a gross internal floor area of 507sq.m.

The site entrance rises between a landscaped retaining wall and embankment, beyond this and the car park the site opens with the first four stepped units providing attractive and interesting elevations, reducing the immediate impact. In addition, as with the previous application, the new footpath is shown along the southern boundary of the development under the retained mature trees to link with Seagull Lane to the eastern end, and North Street to the western end and thereby to Emsworth railway station. This will provide a direct link for the residents of North Emsworth, to the countryside and alongside the River Ems.

The proposed traffic signalised access onto New Brighton Road will incorporate a pedestrian crossing, increasing safety for the pedestrians and both better and safer access Emsworth railway station, this will also enhance the safety to employees working in the proposed development. Subject to County approval within the updated 278 agreement, it has been agreed this will be upgraded to a Toucan crossing to serve the cycle route.

Within the development, cycle shelters will be provided to accommodate twenty cycles to encourage the use of cycling for the development's local workforce, plus four motorcycle spaces.

In line with the previous application we also would agree to provide visi-rail to replace the existing pedestrian safety fence under the railway bridge.

Appearance

The buildings comprise steel portal frames with a flat panel cladding system together with glazing to the primary elevations as a feature. In addition to the use of glass, the front elevation we will also have a contrast in cladding materials. The power coated metal windows, verges, fascias and projecting eaves line will combine to provide an interesting and attractive elevation.

Landscaping

Landscaping is indicated in the parking areas of supplemental to that to the footpath to the southern boundary, commuter car park and entrance. It is intended that this will be incorporated in the written Landscape Management Plan as before.

Highways

The revised 278 agreement for the main original permission is in hand with Hampshire County Council; the traffic signal sequencing having been updated to take account of revised traffic flows and the drawings modified to incorporate the toucan crossing.

The commuter Car Park and public footpath will be provided by the current permission, which has been commenced to provide basic access for site clearance work in the relocation of reptiles and avoiding bird disturbance when the highway work commences.

Summary

Of the original development there had been a potential loss of three B1 units at the rear, due to the actual sewer location; The SSE site to the rear is not adversely affected by this.

The market for Business units is variable and depleted from the time of the original scheme; the inclusion of the DVG building improves the viability of the development and would provide good and long term employment opportunities.

Kim Hammonds

From: Chris Manhire <Chris@nashpl.com>
Sent: 31 October 2016 16:54
To: Kim Hammonds
Subject: Interbridges

Hi Kim-spoke with Ben Trimmer-Downland Vets-he gave me the following info-

1-Existing Premises has 4 Consulting Rooms.

2-Each Vet has either 10 or 20min consultations-split 50/50-therefore 4 consults per hour per Vet.

3-Visits to site-7.30am-8.00 staff arrive .8am-9-Animals who are having operations arrive 10-15 per Day.Consultations take place 9am-1,Lunch 1pm-2 and then Consultations 2pm-7.During Lunch prob get 6 visitors paying bills etc-That makes 36 Consults a day plus staff etc.You should have info as to mode of Transport-if not give Andrew a ring.

Do you need any more Info-not sure when Staff leave but must be phased

Chris Manhire – Director



Nash and Partners Limited

60A North Street, Chichester, West Sussex, PO19 1NB

T: 01243 815720

M: 07866 730979

E: chris@nashpl.com

W: www.nashpl.com

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APPENDIX E

Calculation Reference: AUDIT-728001-161102-1127

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
 Category : M - VETERINARY SURGERY
 VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	GS GLOUCESTERSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	Gross floor area
Actual Range:	201 to 270 (units: sqm)
Range Selected by User:	201 to 500 (units: sqm)

Public Transport Provision:

Selection by:	Include all surveys
---------------	---------------------

Date Range:	01/01/08 to 28/11/13
-------------	----------------------

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Thursday	1 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	2
------------------	---

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

RGP Mill Pool House Godalming

Licence No: 728001

Filtering Stage 3 selection:**Use Class:**

D1 2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000 2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000 1 days

100,001 to 125,000 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1	CA-05-M-01	VETERINARY SURGERY	CAMBRIDGESHIRE
		CHERRY HINTON ROAD	
		CAMBRIDGE	
		Suburban Area (PPS6 Out of Centre)	
		Residential Zone	
		Total Gross floor area:	270 sqm
		Survey date: FRIDAY	12/07/13
2	GS-05-M-02	ANIMAL HOSPITAL	GLOUCESTERSHIRE
		THE REDDINGS	
		UP HATHERLEY	
		CHELTENHAM	
		Edge of Town	
		Residential Zone	
		Total Gross floor area:	201 sqm
		Survey date: THURSDAY	28/11/13
			Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

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TRIP RATE for Land Use 05 - HEALTH/M - VETERINARY SURGERY

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	236	1.699	2	236	0.212	2	236	1.911
08:00 - 09:00	2	236	2.760	2	236	1.699	2	236	4.459
09:00 - 10:00	2	236	2.972	2	236	3.185	2	236	6.157
10:00 - 11:00	2	236	1.911	2	236	2.123	2	236	4.034
11:00 - 12:00	2	236	1.911	2	236	1.486	2	236	3.397
12:00 - 13:00	2	236	2.972	2	236	2.760	2	236	5.732
13:00 - 14:00	2	236	4.246	2	236	3.609	2	236	7.855
14:00 - 15:00	2	236	2.760	2	236	3.397	2	236	6.157
15:00 - 16:00	2	236	2.760	2	236	4.034	2	236	6.794
16:00 - 17:00	2	236	4.034	2	236	3.822	2	236	7.856
17:00 - 18:00	2	236	2.123	2	236	2.972	2	236	5.095
18:00 - 19:00	2	236	1.274	2	236	1.699	2	236	2.973
19:00 - 20:00	1	270	0.000	1	270	0.741	1	270	0.741
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			31.422			31.739			63.161

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	201 - 270 (units: sqm)
Survey date range:	01/01/08 - 28/11/13
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 05 - HEALTH/M - VETERINARY SURGERY

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	236	0.000	2	236	0.000	2	236	0.000
08:00 - 09:00	2	236	0.000	2	236	0.000	2	236	0.000
09:00 - 10:00	2	236	0.000	2	236	0.000	2	236	0.000
10:00 - 11:00	2	236	0.000	2	236	0.000	2	236	0.000
11:00 - 12:00	2	236	0.000	2	236	0.000	2	236	0.000
12:00 - 13:00	2	236	0.000	2	236	0.000	2	236	0.000
13:00 - 14:00	2	236	0.000	2	236	0.000	2	236	0.000
14:00 - 15:00	2	236	0.000	2	236	0.000	2	236	0.000
15:00 - 16:00	2	236	0.000	2	236	0.000	2	236	0.000
16:00 - 17:00	2	236	0.000	2	236	0.000	2	236	0.000
17:00 - 18:00	2	236	0.000	2	236	0.000	2	236	0.000
18:00 - 19:00	2	236	0.000	2	236	0.000	2	236	0.000
19:00 - 20:00	1	270	0.000	1	270	0.000	1	270	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

Trip rate parameter range selected:	201 - 270 (units: sqm)
Survey date range:	01/01/08 - 28/11/13
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 05 - HEALTH/M - VETERINARY SURGERY

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	236	0.000	2	236	0.000	2	236	0.000
08:00 - 09:00	2	236	0.000	2	236	0.000	2	236	0.000
09:00 - 10:00	2	236	0.212	2	236	0.212	2	236	0.424
10:00 - 11:00	2	236	0.000	2	236	0.000	2	236	0.000
11:00 - 12:00	2	236	0.000	2	236	0.000	2	236	0.000
12:00 - 13:00	2	236	0.212	2	236	0.212	2	236	0.424
13:00 - 14:00	2	236	0.000	2	236	0.000	2	236	0.000
14:00 - 15:00	2	236	0.000	2	236	0.000	2	236	0.000
15:00 - 16:00	2	236	0.000	2	236	0.000	2	236	0.000
16:00 - 17:00	2	236	0.000	2	236	0.000	2	236	0.000
17:00 - 18:00	2	236	0.000	2	236	0.000	2	236	0.000
18:00 - 19:00	2	236	0.000	2	236	0.000	2	236	0.000
19:00 - 20:00	1	270	0.000	1	270	0.000	1	270	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.424			0.424			0.848

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	201 - 270 (units: sqm)
Survey date range:	01/01/08 - 28/11/13
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 05 - HEALTH/M - VETERINARY SURGERY

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	236	0.000	2	236	0.000	2	236	0.000
08:00 - 09:00	2	236	0.000	2	236	0.000	2	236	0.000
09:00 - 10:00	2	236	0.000	2	236	0.000	2	236	0.000
10:00 - 11:00	2	236	0.000	2	236	0.000	2	236	0.000
11:00 - 12:00	2	236	0.000	2	236	0.000	2	236	0.000
12:00 - 13:00	2	236	0.000	2	236	0.000	2	236	0.000
13:00 - 14:00	2	236	0.000	2	236	0.000	2	236	0.000
14:00 - 15:00	2	236	0.000	2	236	0.000	2	236	0.000
15:00 - 16:00	2	236	0.000	2	236	0.000	2	236	0.000
16:00 - 17:00	2	236	0.000	2	236	0.000	2	236	0.000
17:00 - 18:00	2	236	0.000	2	236	0.000	2	236	0.000
18:00 - 19:00	2	236	0.000	2	236	0.000	2	236	0.000
19:00 - 20:00	1	270	0.000	1	270	0.000	1	270	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	201 - 270 (units: sqm)
Survey date range:	01/01/08 - 28/11/13
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

RGP Mill Pool House Godalming

Licence No: 728001

TRIP RATE for Land Use 05 - HEALTH/M - VETERINARY SURGERY

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	236	0.000	2	236	0.000	2	236	0.000
08:00 - 09:00	2	236	0.425	2	236	0.000	2	236	0.425
09:00 - 10:00	2	236	0.000	2	236	0.212	2	236	0.212
10:00 - 11:00	2	236	0.212	2	236	0.212	2	236	0.424
11:00 - 12:00	2	236	0.212	2	236	0.212	2	236	0.424
12:00 - 13:00	2	236	0.000	2	236	0.000	2	236	0.000
13:00 - 14:00	2	236	0.212	2	236	0.000	2	236	0.212
14:00 - 15:00	2	236	0.212	2	236	0.212	2	236	0.424
15:00 - 16:00	2	236	0.000	2	236	0.212	2	236	0.212
16:00 - 17:00	2	236	0.212	2	236	0.000	2	236	0.212
17:00 - 18:00	2	236	0.212	2	236	0.425	2	236	0.637
18:00 - 19:00	2	236	0.000	2	236	0.212	2	236	0.212
19:00 - 20:00	1	270	0.000	1	270	0.000	1	270	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.697			1.697			3.394

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	201 - 270 (units: sqm)
Survey date range:	01/01/08 - 28/11/13
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

APPENDIX F

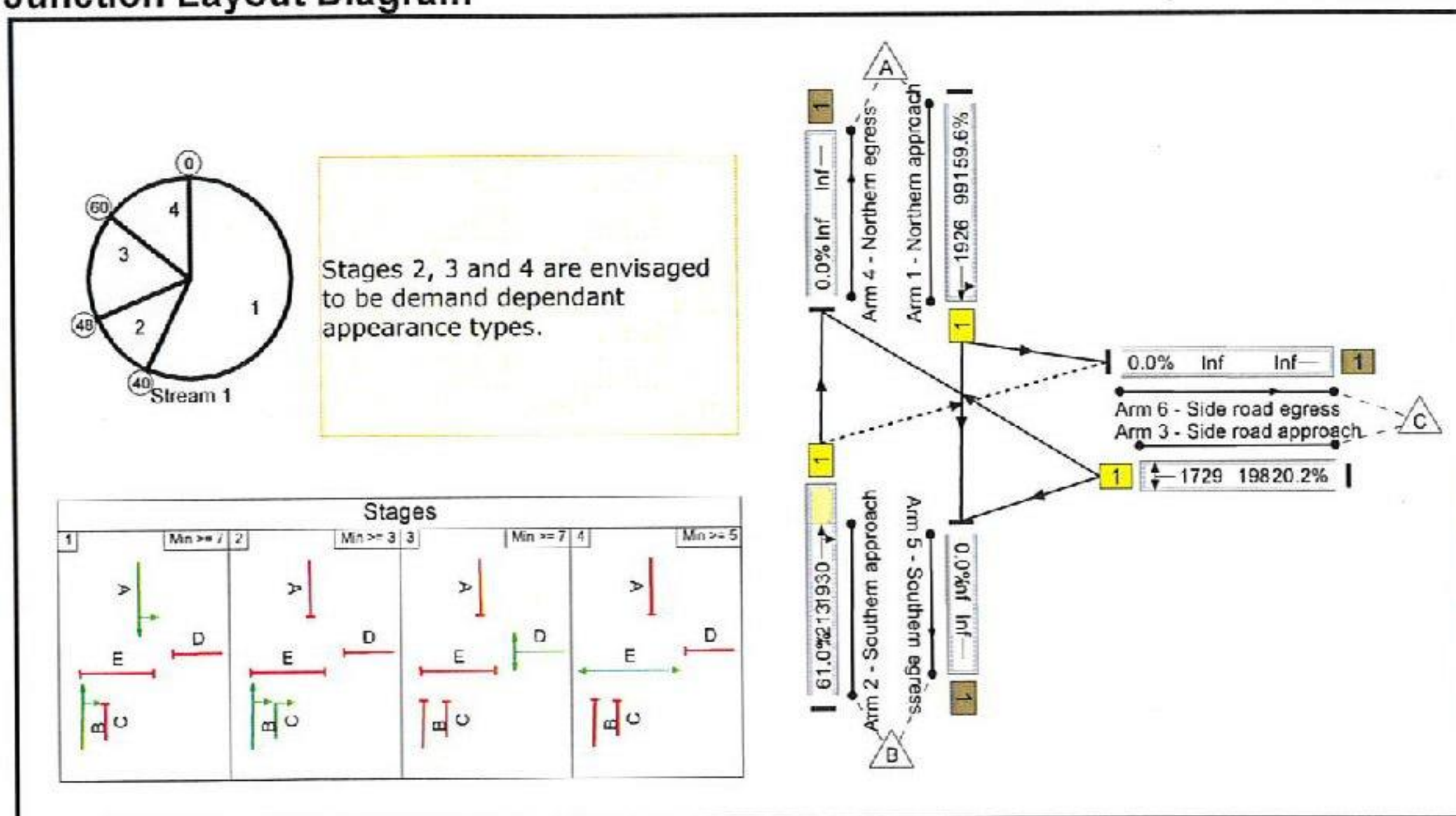
Traffic Signals Design

Linsig version 2.4.8.0, outline results

User and Project Details

Project:	Interbridges Development Site
Title:	Proposed traffic signal installation model
Location:	New Brighton Rd / Site Entrance - Emsworth
File name:	Project 00324 ver A.lsgx
Author:	UKR
Company:	RPF Associates Ltd
Address:	53 Valley Rd, Chandlers Ford, Hampshire, SO53 1GS.
Controller:	Generic
SCN:	n/a
Notes:	Traffic signal model for Interbridges Development site, New Brighton Rd, Emsworth, Hampshire. Traffic flow data has been taken from a traffic survey undertaken in September 2008. No traffic generation data has been supplied for the proposed development site, but consideration has been given to the number of parking spaces in the commuter car park, for each unit in the development and an allowance for deliveries. Stages 2, 3 and 4 are envisaged to be demand dependant appearance types.

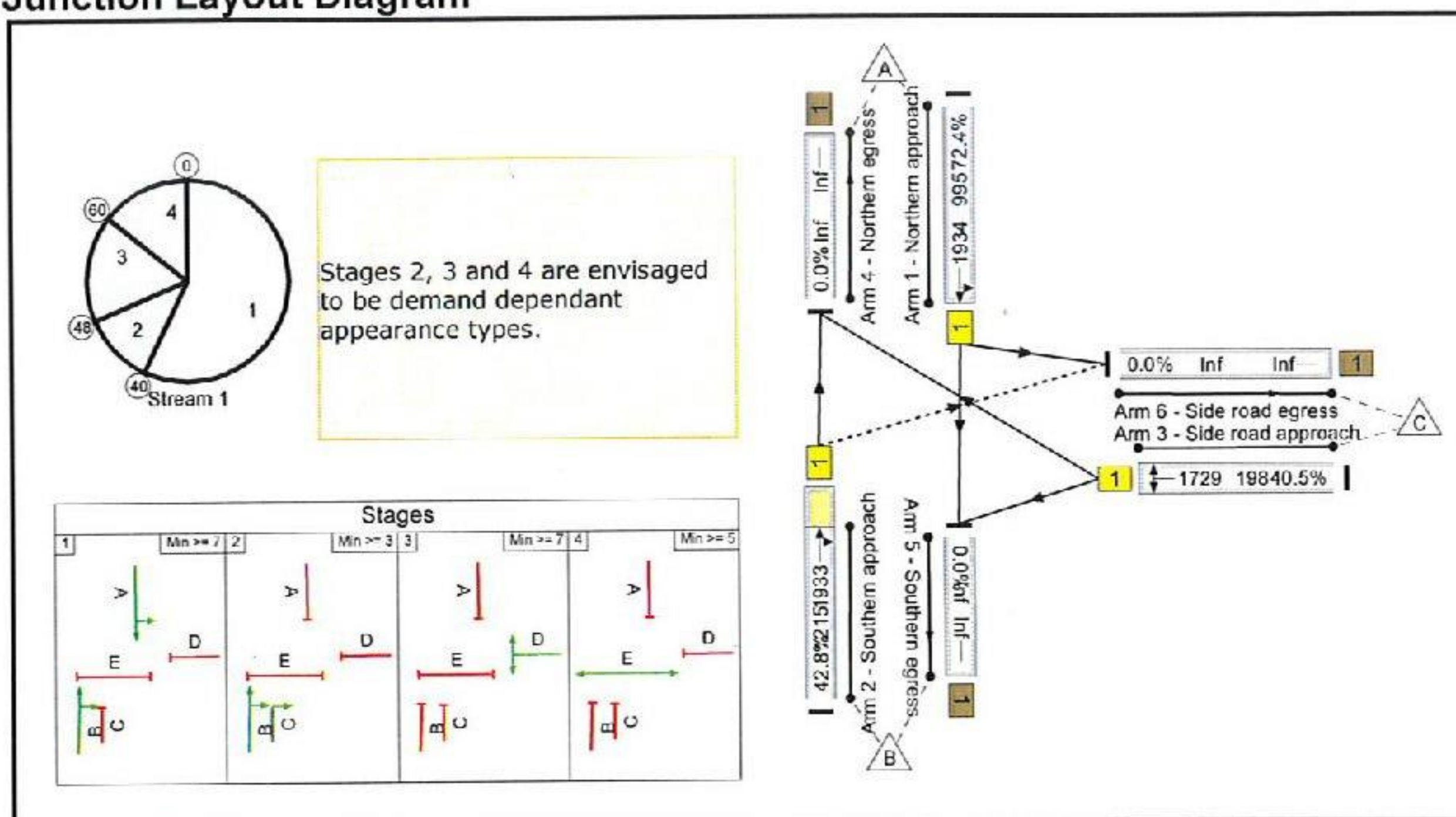
Flow Group 1: 'Post development - AM Peak - 2008'
Junction Layout Diagram



Link Results

LINK RESULTS																		
Link Num	Link Desc	Link Type	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 (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	Northern approach Ahead Left	U	A		1	35	-	590	1926	1926	991	59.6	-	-	-	2.7	16.4	8.8
2/1	Southern approach Ahead Right	O	B	C	1	43	3	740	1930	1930	1213	61.0	35	3	1	2.4	11.6	9.4
3/1	Side road approach Right Left	U	D		1	7	-	40	1729	1729	198	20.2	-	-	-	0.4	39.6	0.8
PRC for Signalled Links (%): 47.5 Total Delay for Signalled Links (pcuHr): 5.52																		
PRC Over All Links (%): 47.5 Total Delay Over All Links (pcuHr): 5.52 Cycle Time (s): 70																		

Flow Group 2: 'Post development - PM Peak - 2008' Junction Layout Diagram

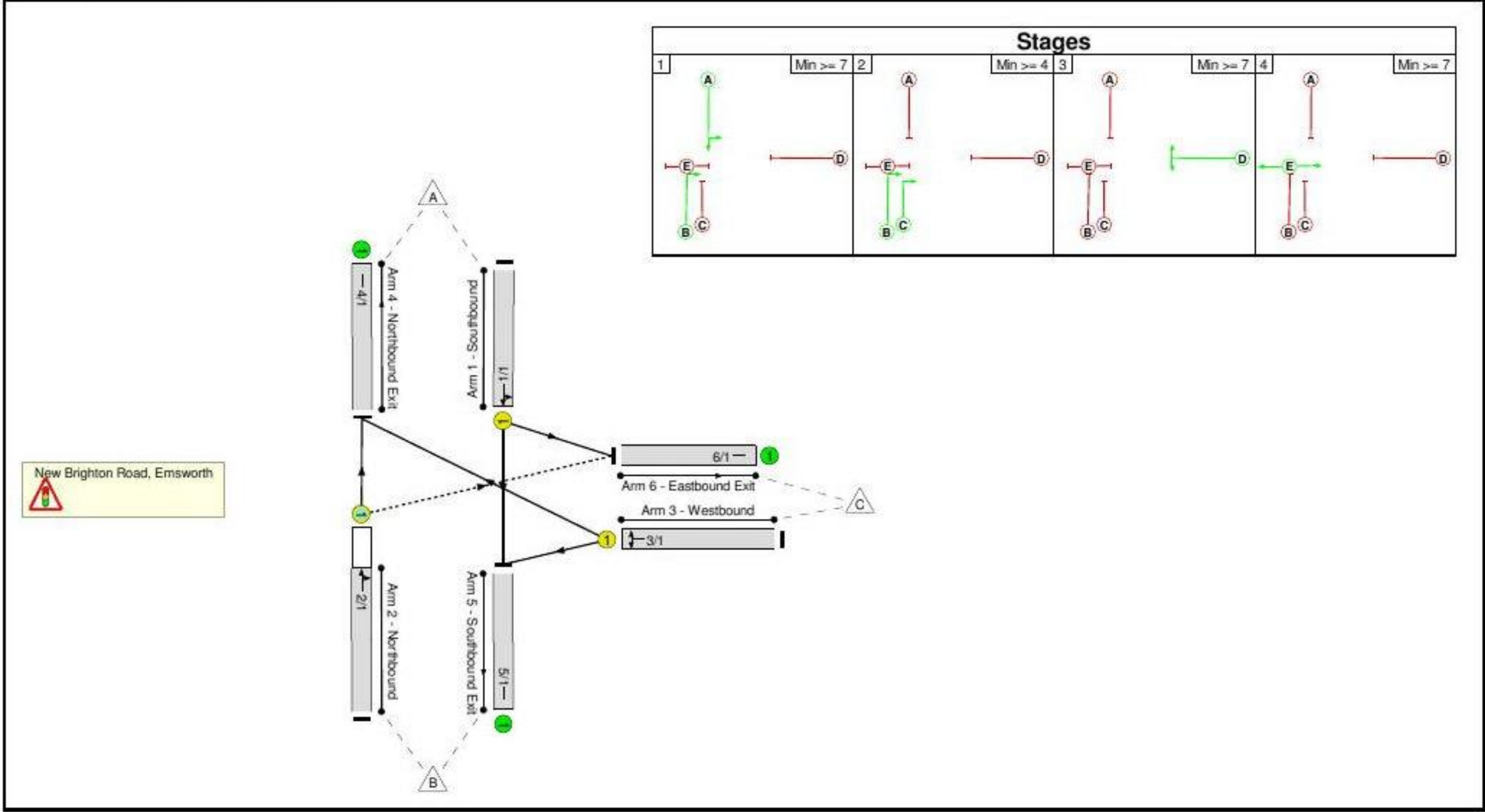


APPENDIX G

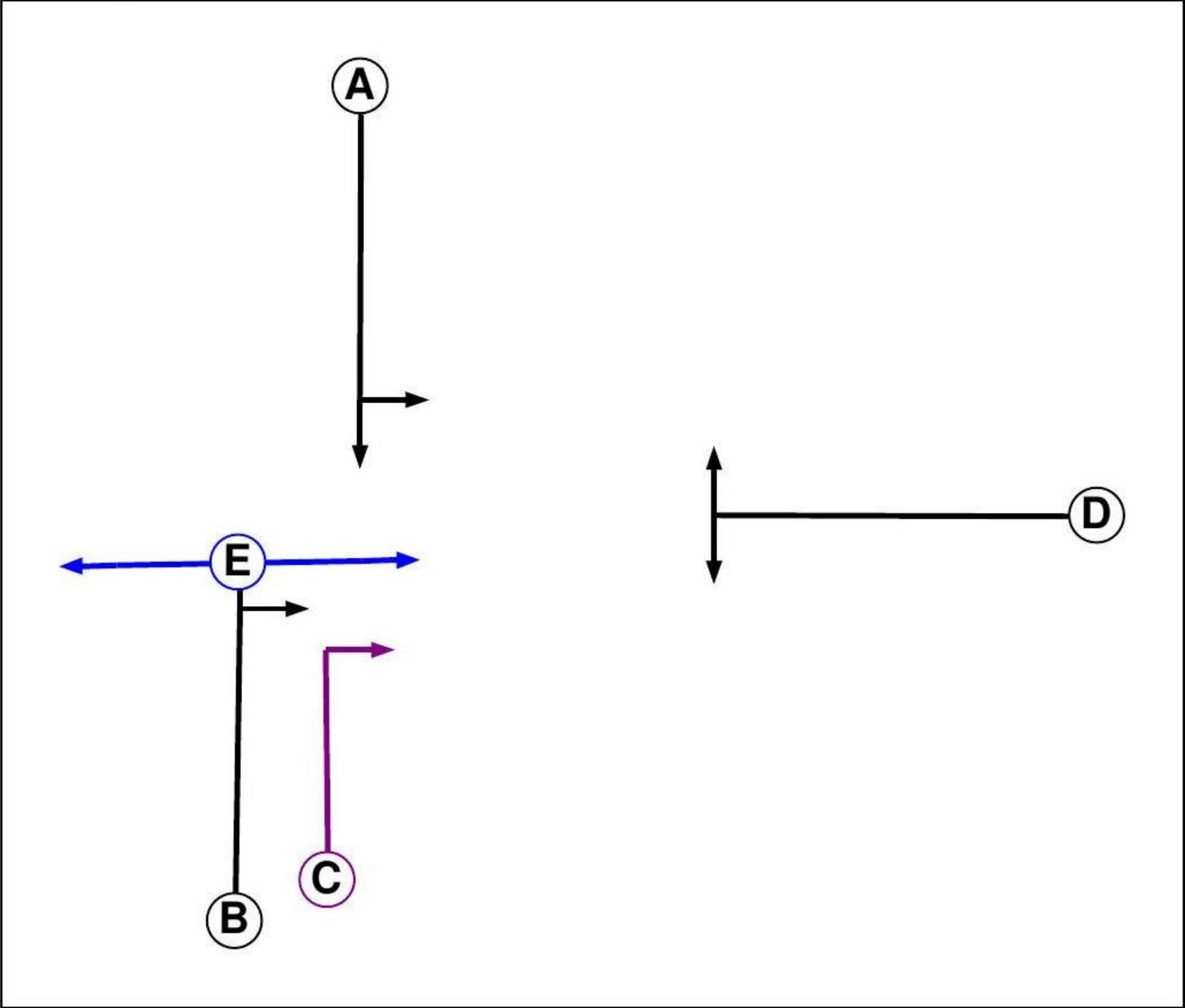
Full Input Data and Results**User and Project Details**

Project:	Interbridges S278
Title:	Model of Proposed Traffic Signals
Location:	New Brighton Road / Site Access (Interbridges), Emsworth
File name:	New Brighton Road - Interbridges, Emsworth.lsg3x
Author:	Dave Richards
Company:	telent Technology Services Ltd
Address:	Point 3, Haywood Road, Warwick, CV34 5AH
Notes:	The traffic count data was selected from Thursday 21st January 2016 using 08:00 - 09:00 for the AM Peak and 17:00 - 18:00 for the PM Peak because these periods had the highest traffic counts of the day. The time from 10:00 – 11:00 was selected as a good representation of the quieter Off Peak period. The count data was converted to PCU (Passenger Car Units) as follows: • Cycles multiplied by 0.2 • Motor Cycles multiplied by 0.4 • Car / Van multiplied by 1 • Car / Van Towing multiplied by 1 • 2 Axle Van / Lorry multiplied by 1.5 • 3 Axle Rigid and upwards multiplied by 2.3 As traffic count data for the Development Access Road could not be provided, figures supplied in 2008, based on the number of parking spaces provided in the commuter car park for each development unit and the volume of delivery traffic have been used. For the purposes of the model, the assumption has been made that 50% of vehicles will turn left out of the Development Access Road and 50% will turn right. In addition the assumption has been made that of the total amount of vehicles entering the Development Access Road, 50% will originate from New Brighton Road North and 50% from New Brighton Road South. In the absence of any pedestrian count data, the model includes two scenarios for each of the time periods, one that assumes the pedestrian stage appears every cycle and one that assumes it appears every other cycle ('Double'). The Practical Reserve Capacity (PRC) results for each scenario are as follows: AM PEAK: 34.9% OFF PEAK: 31.7% PM PEAK: 17.3% AM PEAK DOUBLE: 35.9% OFF PEAK DOUBLE: 14.6% PM PEAK DOUBLE: 21.1%

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	B	4	4
D	Traffic		7	7
E	Pedestrian		7	7

Full Input Data And Results

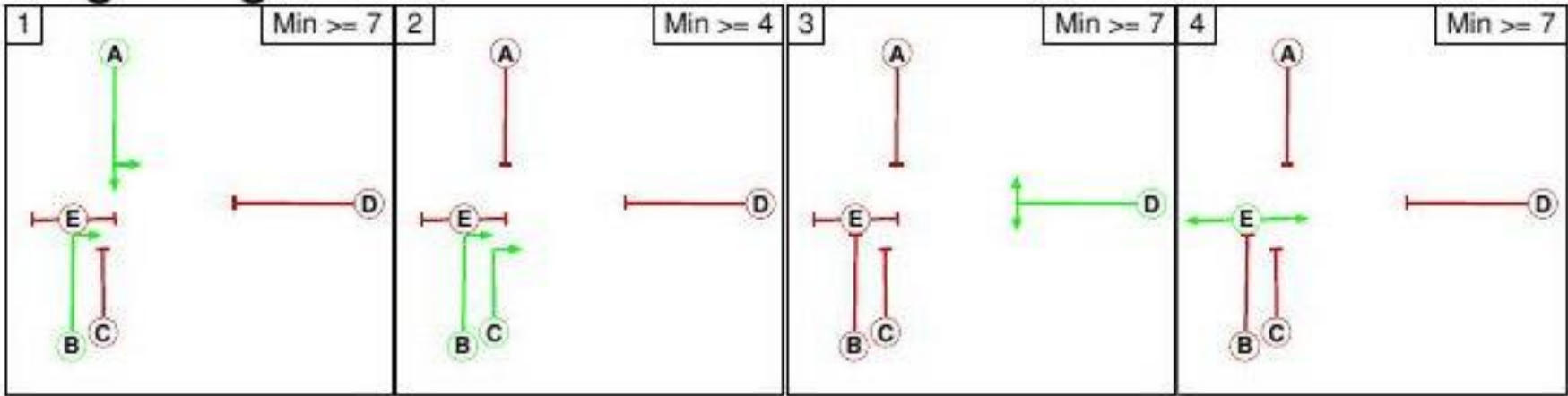
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: New Brighton Road, Emsworth											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/1 (Northbound)	6/1 (Right)	1439	0	1/1	1.09	All	3.00	-	0.50	3	2.00

Lane Input Data

Junction: New Brighton Road, Emsworth												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Southbound)	U	A	2	3	60.0	Geom	-	4.10	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Left	14.30
2/1 (Northbound)	O	B C	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 4 Ahead	Inf
											Arm 6 Right	18.85
3/1 (Westbound)	U	D	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 4 Right	17.00
											Arm 5 Left	12.24
4/1 (Northbound Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
5/1 (Southbound Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Eastbound Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM PEAK '	08:00	09:00	01:00	
2: 'OFF PEAK '	10:00	11:00	01:00	
3: 'PM PEAK'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	745	20	765
	B	507	0	20	527
	C	20	20	0	40
	Tot.	527	765	40	1332

Traffic Lane Flows

Lane	Scenario 1: AM Peak
Junction: New Brighton Road, Emsworth	
1/1	765
2/1	527
3/1	40
4/1	527
5/1	765
6/1	40

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.4 %	2019	2019
				Arm 6 Left	14.30	2.6 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	96.2 %	1949	1949
				Arm 6 Right	18.85	3.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'OFF Peak' (FG2: 'OFF PEAK ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow:

	Destination				
		A	B	C	Tot.
Origin	A	0	450	10	460
	B	348	0	10	358
	C	10	10	0	20
	Tot.	358	460	20	838

Traffic Lane Flows

Lane	Scenario 2: OFF Peak
Junction: New Brighton Road, Emsworth	
1/1	460
2/1	358
3/1	20
4/1	358
5/1	460
6/1	20

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.8 %	2020	2020
				Arm 6 Left	14.30	2.2 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	97.2 %	1951	1951
				Arm 6 Right	18.85	2.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'PM PEAK ' (FG3: 'PM PEAK', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	506	40	546
	B	713	0	40	753
	C	40	40	0	80
	Tot.	753	546	80	1379

Traffic Lane Flows

Lane	Scenario 3: PM PEAK
Junction: New Brighton Road, Emsworth	
1/1	546
2/1	753
3/1	80
4/1	753
5/1	546
6/1	80

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	92.7 %	2010	2010
				Arm 6 Left	14.30	7.3 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	94.7 %	1947	1947
				Arm 6 Right	18.85	5.3 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'AM Peak Double' (FG1: 'AM PEAK ', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	745	20	765
	B	507	0	20	527
	C	20	20	0	40
	Tot.	527	765	40	1332

Traffic Lane Flows

Lane	Scenario 4: AM Peak Double
Junction: New Brighton Road, Emsworth	
1/1	765
2/1	527
3/1	40
4/1	527
5/1	765
6/1	40

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.4 %	2019	2019
				Arm 6 Left	14.30	2.6 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	96.2 %	1949	1949
				Arm 6 Right	18.85	3.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'OFF Peak Double' (FG2: 'OFF PEAK ', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	450	10	460
	B	348	0	10	358
	C	10	10	0	20
	Tot.	358	460	20	838

Traffic Lane Flows

Lane	Scenario 5: OFF Peak Double
Junction: New Brighton Road, Emsworth	
1/1	460
2/1	358
3/1	20
4/1	358
5/1	460
6/1	20

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.8 %	2020	2020
				Arm 6 Left	14.30	2.2 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	97.2 %	1951	1951
				Arm 6 Right	18.85	2.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak Double' (FG3: 'PM PEAK', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	506	40	546
	B	713	0	40	753
	C	40	40	0	80
	Tot.	753	546	80	1379

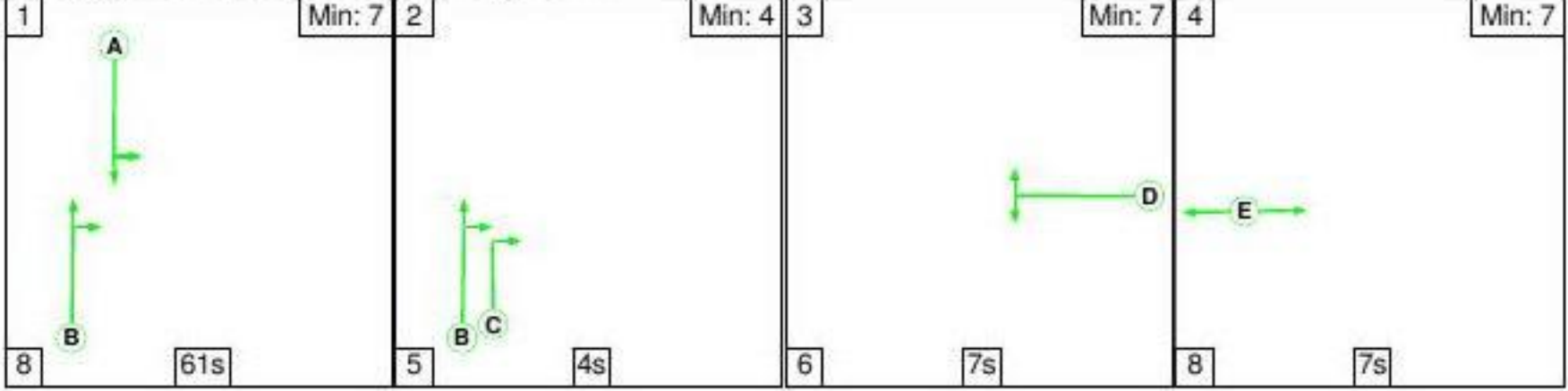
Traffic Lane Flows

Lane	Scenario 6: PM Peak Double
Junction: New Brighton Road, Emsworth	
1/1	546
2/1	753
3/1	80
4/1	753
5/1	546
6/1	80

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	92.7 %	2010	2010
				Arm 6 Left	14.30	7.3 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	94.7 %	1947	1947
				Arm 6 Right	18.85	5.3 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

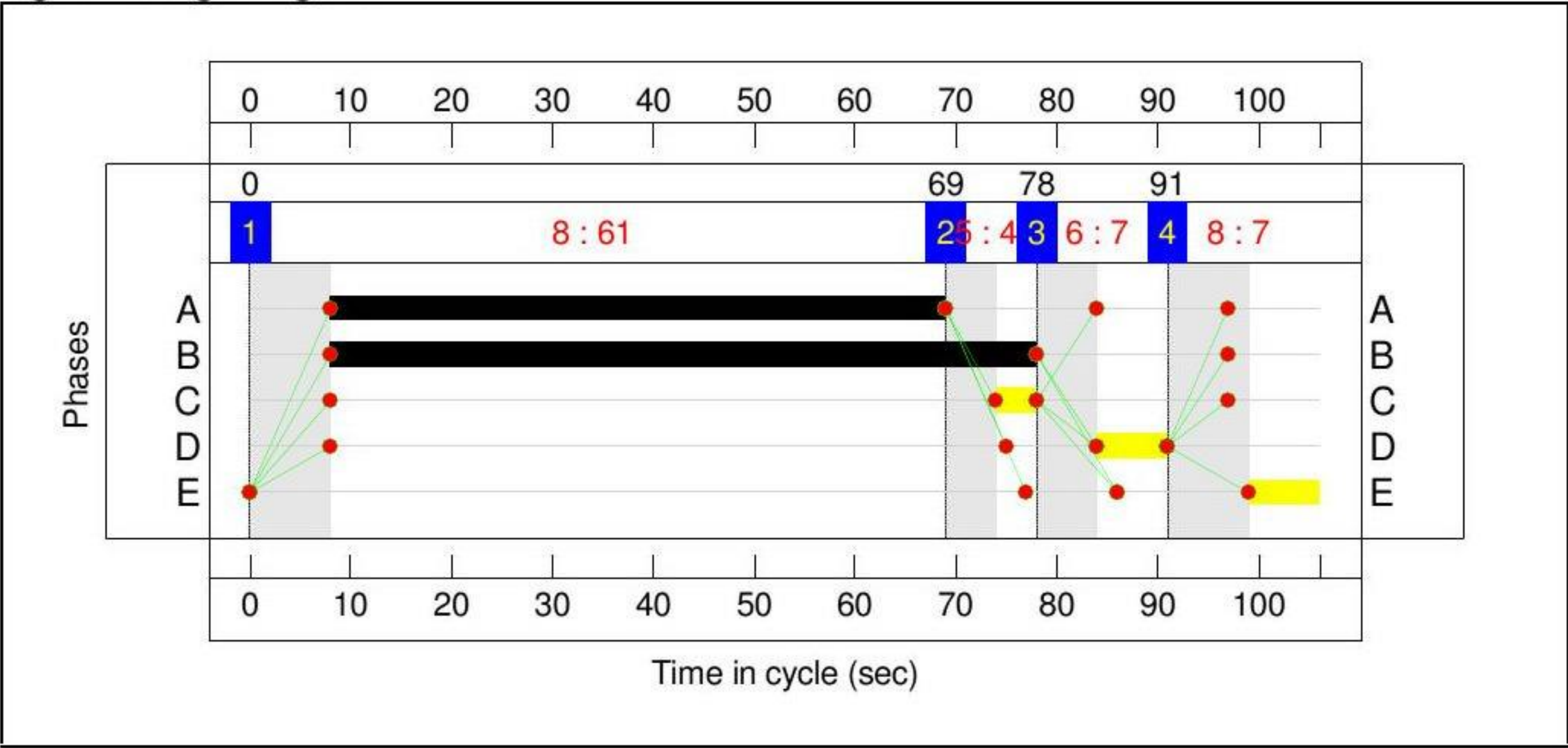
Scenario 1: 'AM Peak' (FG1: 'AM PEAK ', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



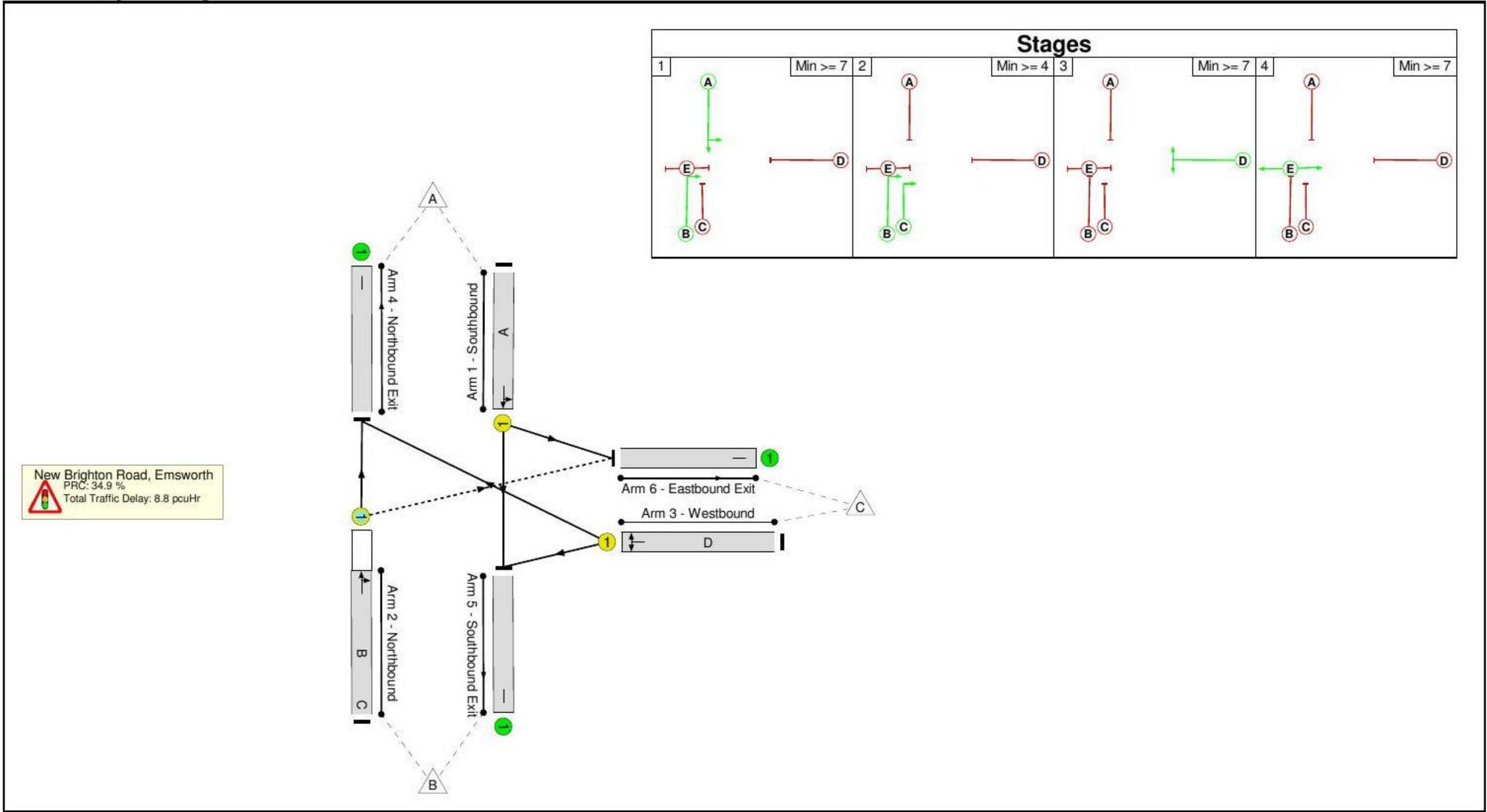
Stage Timings

Stage	1	2	3	4
Duration	61	4	7	7
Change Point	0	69	78	91

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	66.7%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	66.7%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	61	-	765	2019	1181	64.8%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	70	4	527	1949	790	66.7%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	40	1805	136	29.4%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	527	1940	1940	27.2%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	765	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	40	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	18	1	1	6.5	2.3	0.0	8.8	-	-	-	-
New Brighton Road, Emsworth	-	-	18	1	1	6.5	2.3	0.0	8.8	-	-	-	-
1/1	765	765	-	-	-	3.1	0.9	-	4.0	19.0	14.9	0.9	15.8
2/1	527	527	18	1	1	2.8	1.0	0.0	3.9	26.3	12.3	1.0	13.3
3/1	40	40	-	-	-	0.5	0.2	-	0.7	65.0	1.1	0.2	1.3
4/1	527	527	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/1	765	765	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

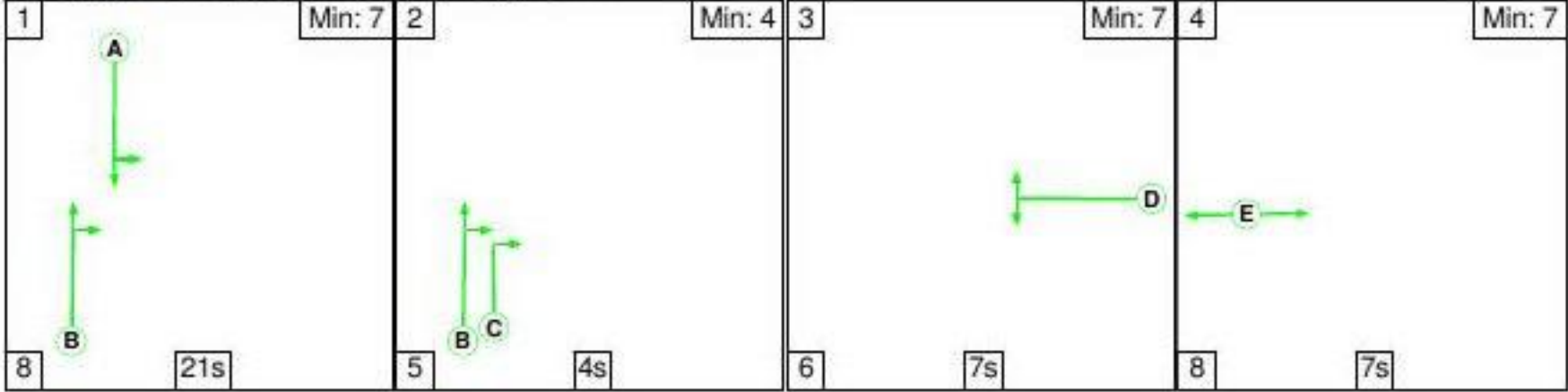
Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	34.9	Total Delay for Signalled Lanes (pcuHr):	8.61	Cycle Time (s):	106
	PRC Over All Lanes (%):	34.9	Total Delay Over All Lanes(pcuHr):	8.80		

Full Input Data And Results

Scenario 2: 'OFF Peak' (FG2: 'OFF PEAK ', Plan 1: 'Network Control Plan 1')

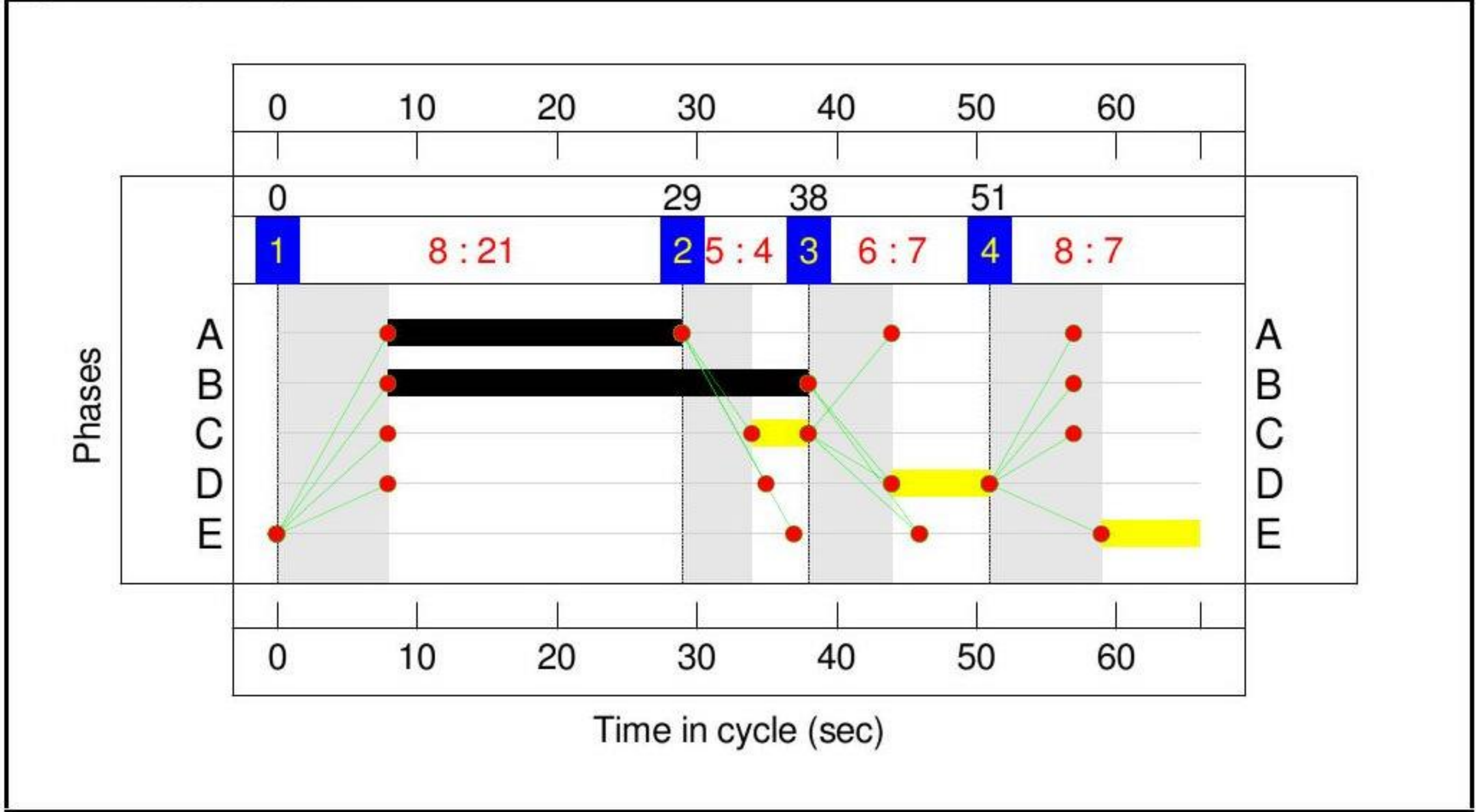
Stage Sequence Diagram



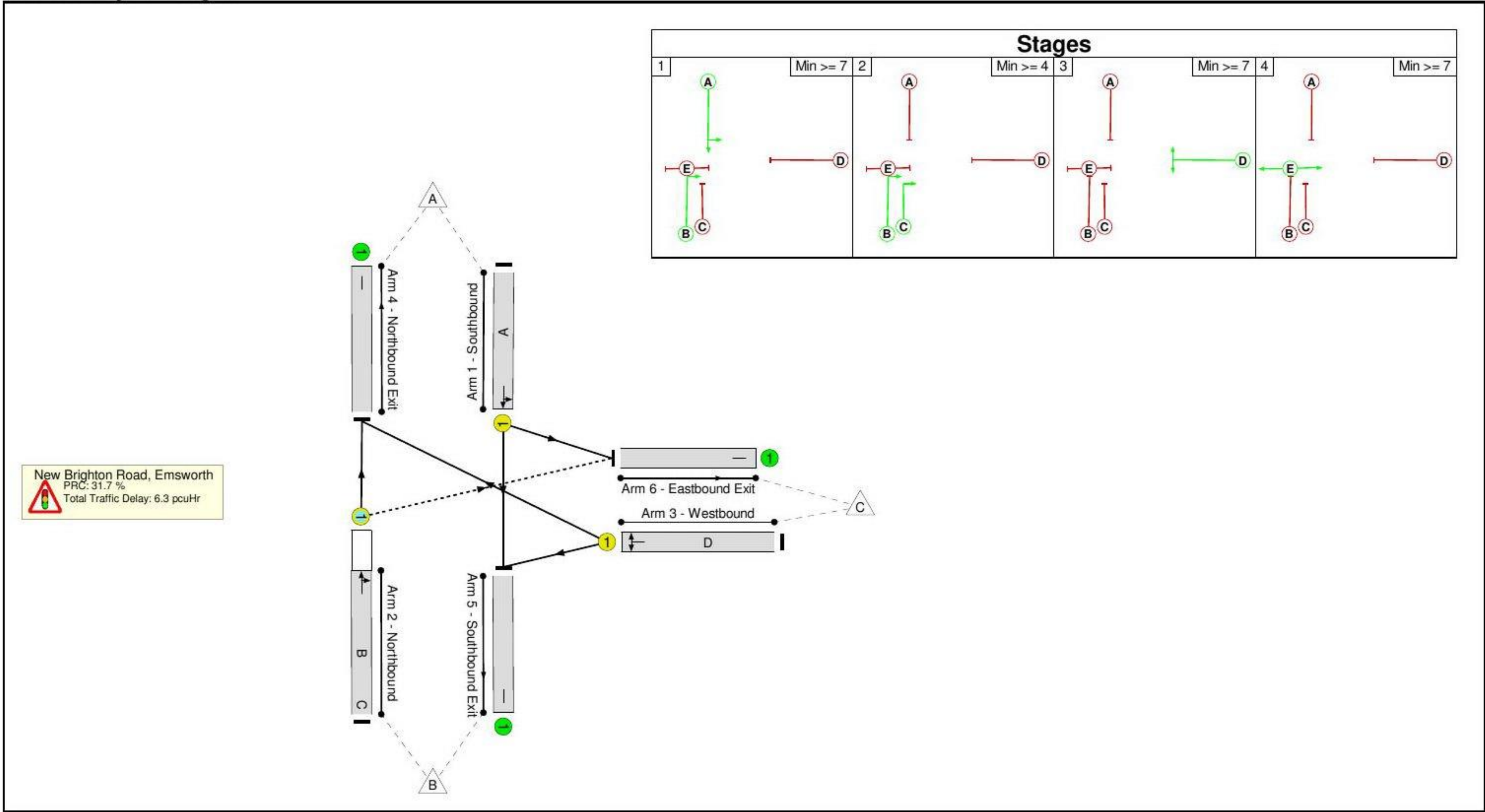
Stage Timings

Stage	1	2	3	4
Duration	21	4	7	7
Change Point	0	29	38	51

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

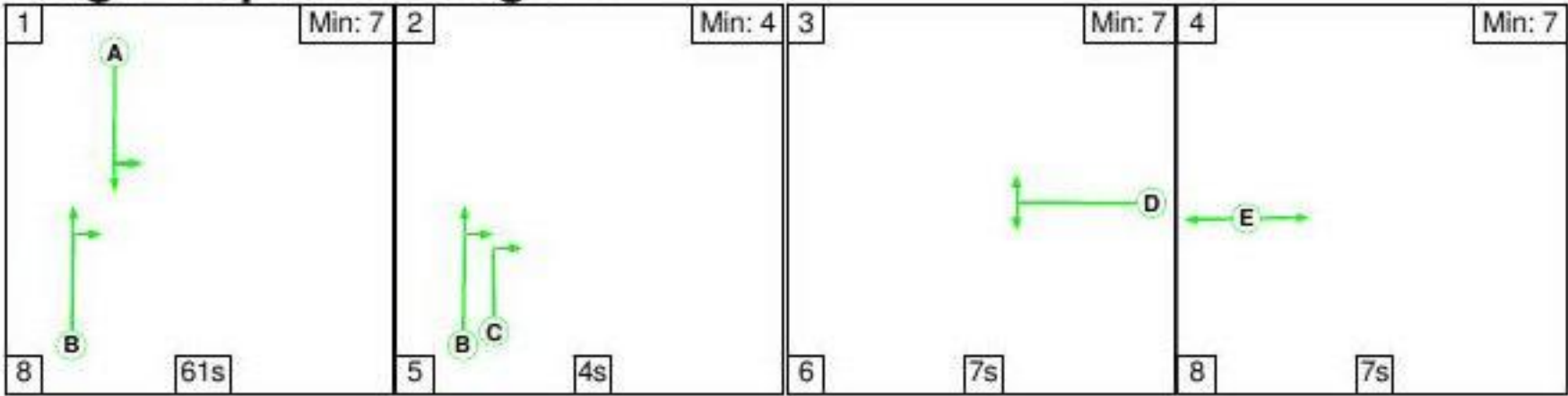
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	68.3%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	68.3%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	21	-	460	2020	673	68.3%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	30	4	358	1951	548	65.3%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	20	1805	219	9.1%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	358	1940	1940	18.5%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	20	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	7	3	0	4.1	2.2	0.0	6.3	-	-	-	-
New Brighton Road, Emsworth	-	-	7	3	0	4.1	2.2	0.0	6.3	-	-	-	-
1/1	460	460	-	-	-	2.4	1.1	-	3.5	27.3	7.2	1.1	8.2
2/1	358	358	7	3	0	1.5	0.9	0.0	2.5	24.8	5.8	0.9	6.7
3/1	20	20	-	-	-	0.1	0.1	-	0.2	35.0	0.3	0.1	0.4
4/1	358	358	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
5/1	460	460	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	20	20	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	31.7	Total Delay for Signalled Lanes (pcuHr):	6.15	Cycle Time (s):	66
	PRC Over All Lanes (%):	31.7	Total Delay Over All Lanes(pcuHr):	6.26		

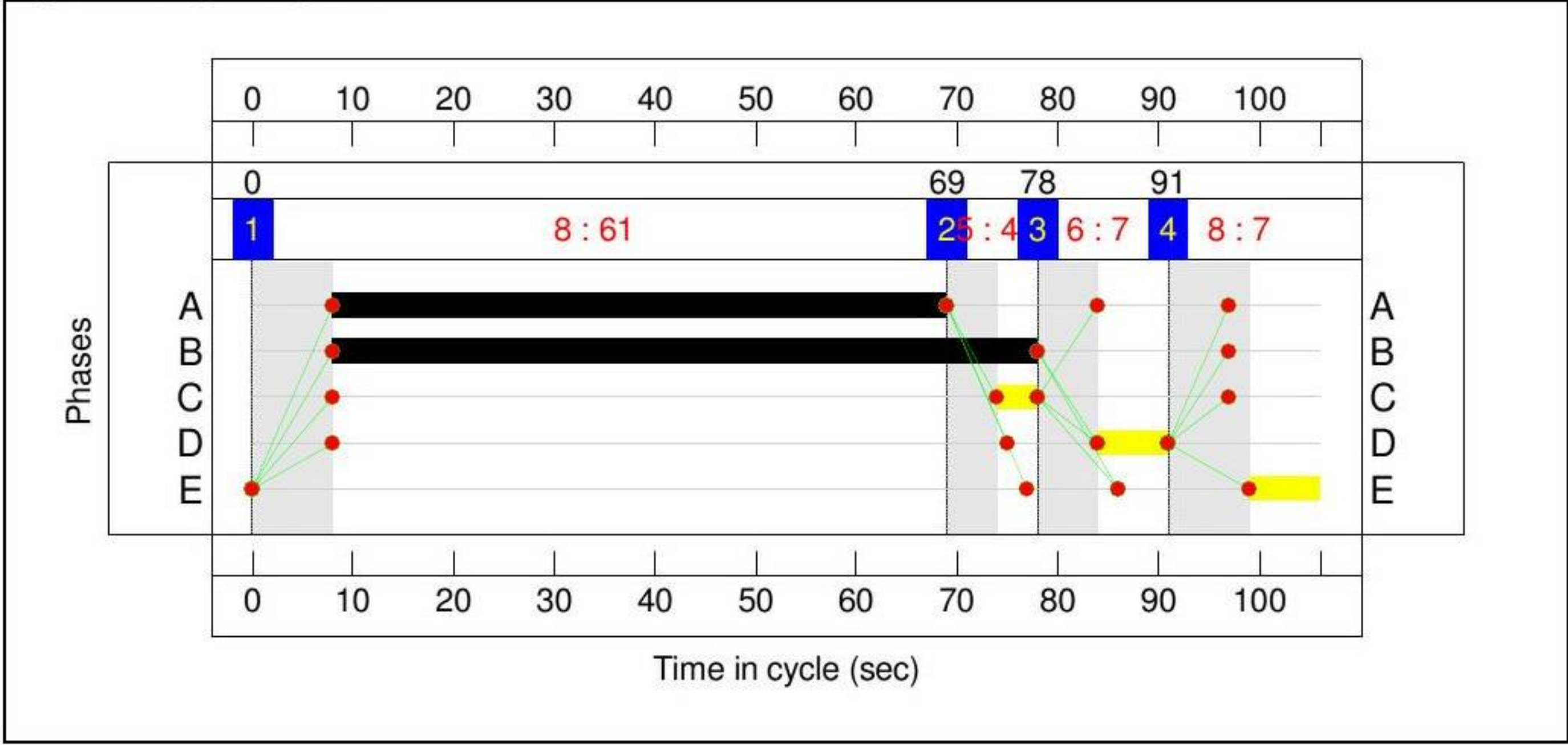
Stage Sequence Diagram



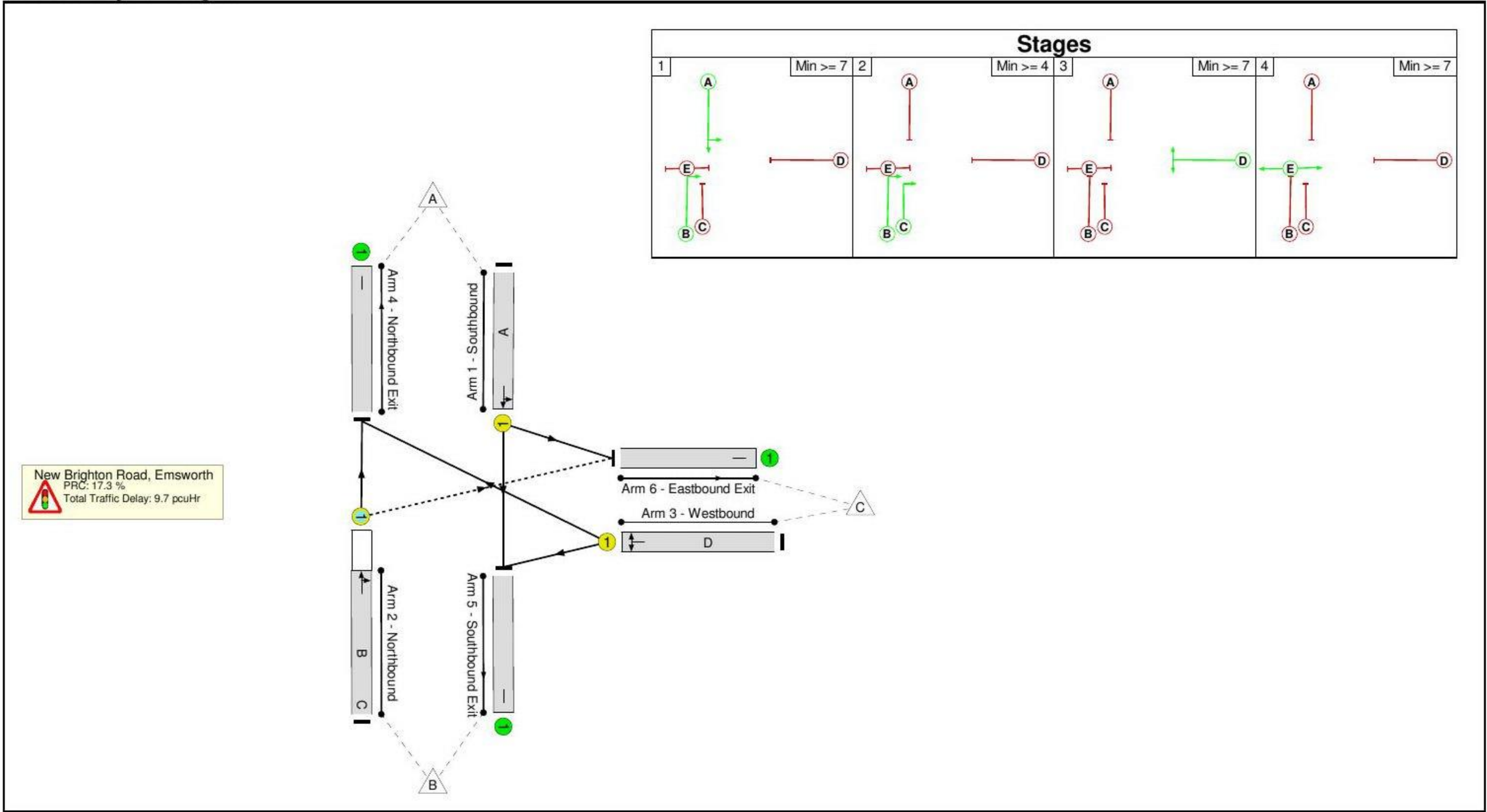
Stage Timings

Stage	1	2	3	4
Duration	61	4	7	7
Change Point	0	69	78	91

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	76.7%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	76.7%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	61	-	546	2010	1176	46.4%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	70	4	753	1947	982	76.7%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	80	1805	136	58.7%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	753	1940	1940	38.8%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	80	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	36	3	1	6.6	3.1	0.0	9.7	-	-	-	-
New Brighton Road, Emsworth	-	-	36	3	1	6.6	3.1	0.0	9.7	-	-	-	-
1/1	546	546	-	-	-	1.9	0.4	-	2.3	15.4	9.1	0.4	9.5
2/1	753	753	36	3	1	3.7	1.6	0.0	5.3	25.4	17.2	1.6	18.8
3/1	80	80	-	-	-	1.1	0.7	-	1.7	78.7	2.3	0.7	3.0
4/1	753	753	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
5/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	80	80	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

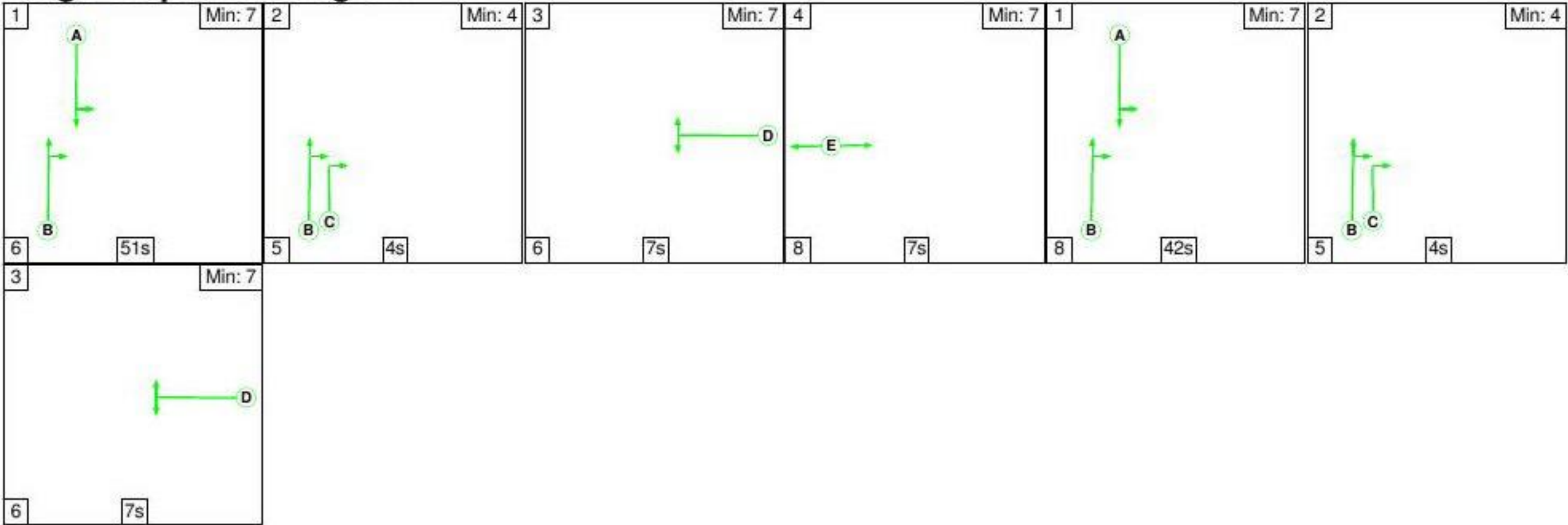
Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	17.3	Total Delay for Signalled Lanes (pcuHr):	9.40	Cycle Time (s):	106
	PRC Over All Lanes (%):	17.3	Total Delay Over All Lanes(pcuHr):	9.71		

Full Input Data And Results

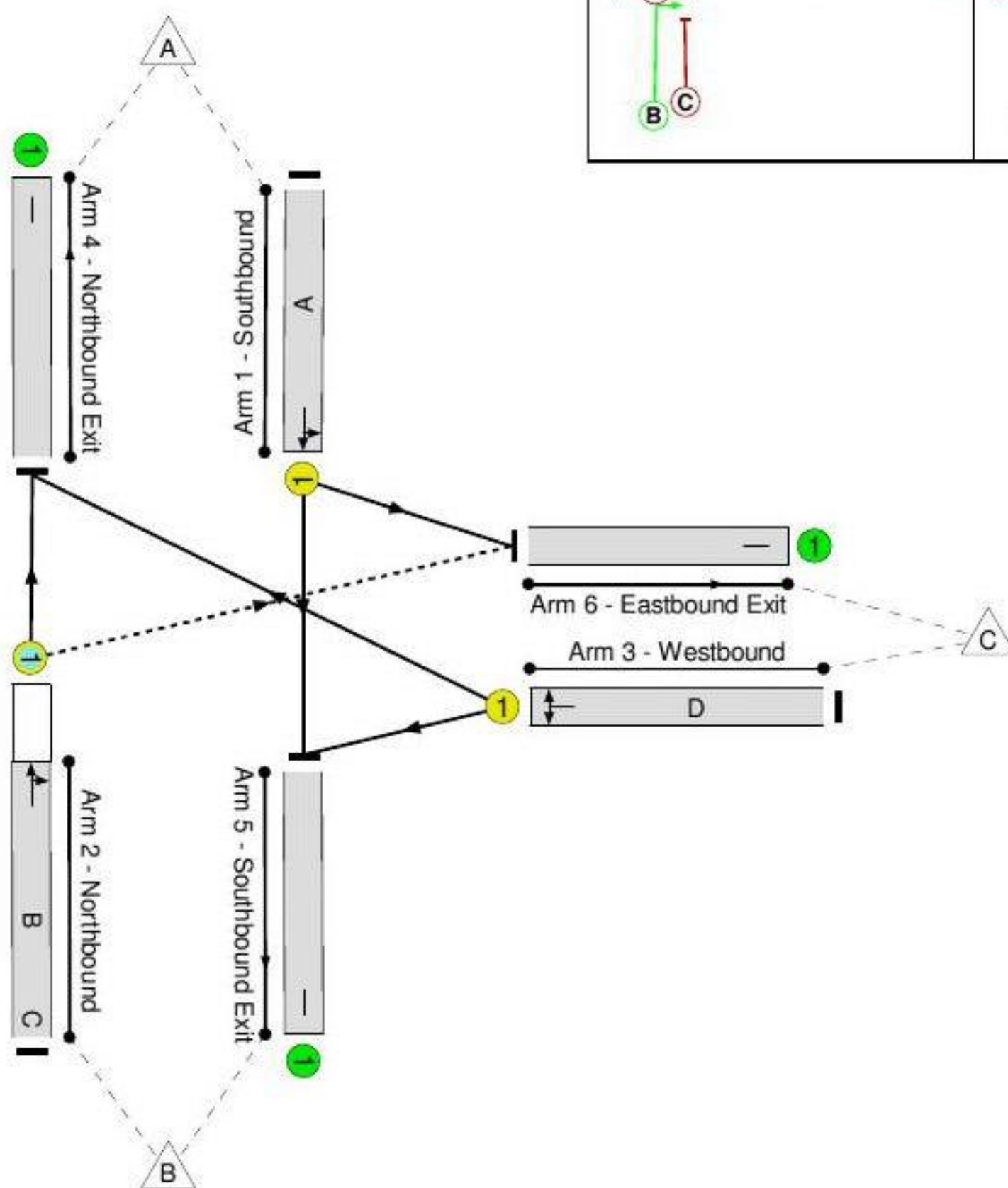
Scenario 4: 'AM Peak Double' (FG1: 'AM PEAK ', Plan 2: 'Network Control Plan 2')

Stage Sequence Diagram



Full Input Data And Results

Network Layout Diagram



Stages					
1	Min ≥ 7	2	Min ≥ 4	3	Min ≥ 7

New Brighton Road, Emsworth
 PRC: 35.9 %
 Total Traffic Delay: 7.6 pcuHr

Full Input Data And Results

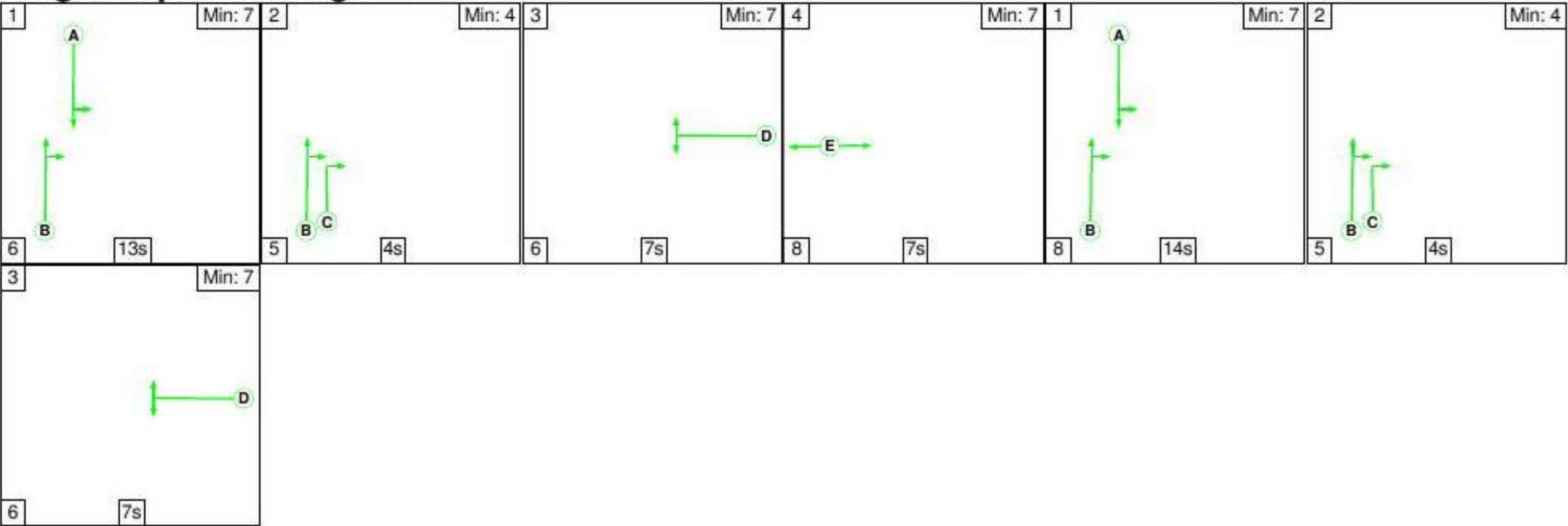
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	66.2%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	66.2%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	93	-	765	2019	1155	66.2%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	111	8	527	1949	803	65.6%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	40	1805	174	23.0%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	527	1940	1940	27.2%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	765	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	40	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	15	4	1	5.4	2.3	0.0	7.6	-	-	-	-
New Brighton Road, Emsworth	-	-	15	4	1	5.4	2.3	0.0	7.6	-	-	-	-
1/1	765	765	-	-	-	2.7	1.0	-	3.7	17.5	14.9	1.0	15.8
2/1	527	527	15	4	1	2.2	0.9	0.0	3.2	21.9	12.3	0.9	13.2
3/1	40	40	-	-	-	0.4	0.1	-	0.5	48.2	0.9	0.1	1.0
4/1	527	527	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/1	765	765	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	35.9	Total Delay for Signalled Lanes (pcuHr):	7.46	Cycle Time (s):	166
	PRC Over All Lanes (%):	35.9	Total Delay Over All Lanes(pcuHr):	7.65		

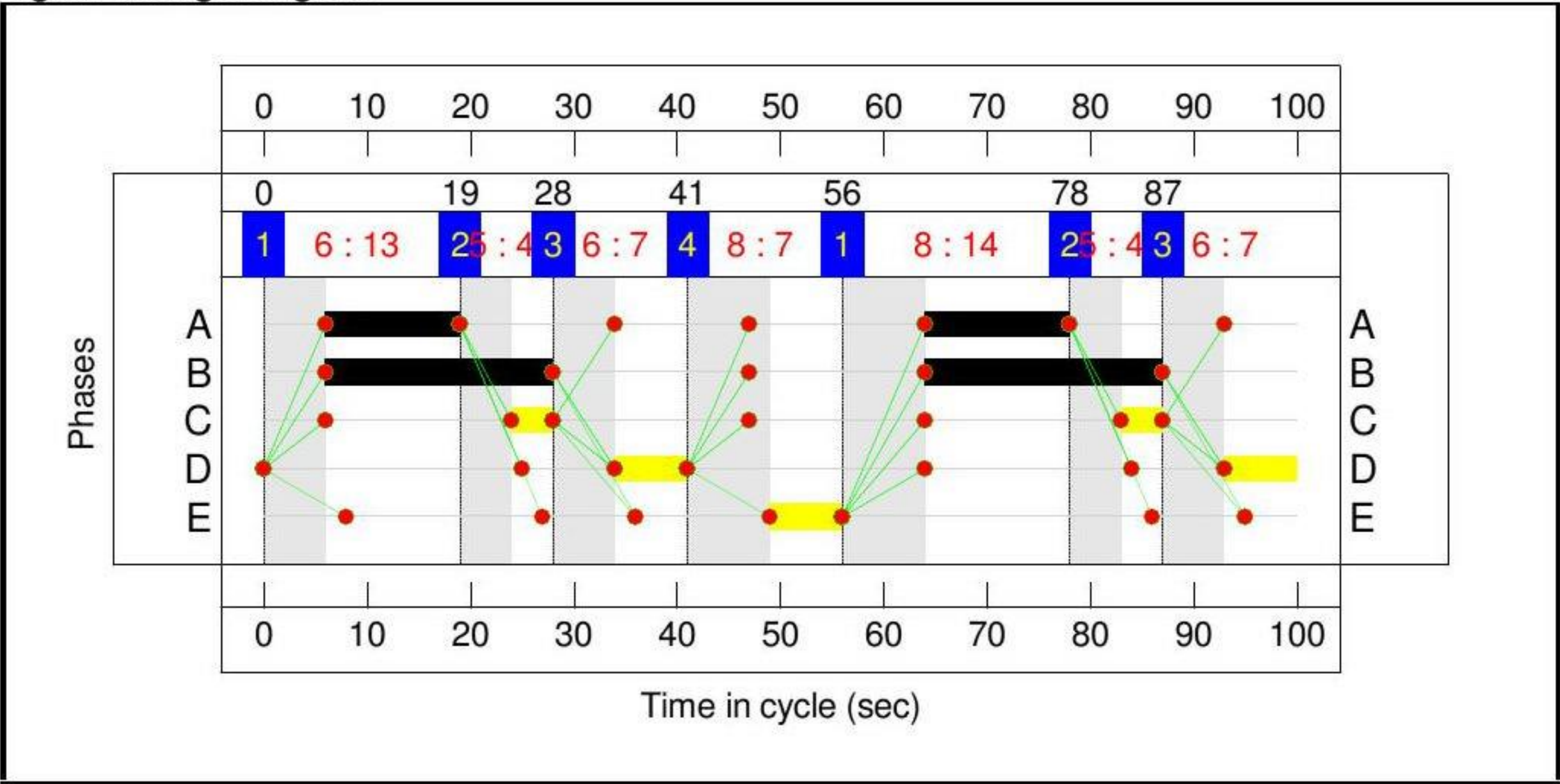
Stage Sequence Diagram



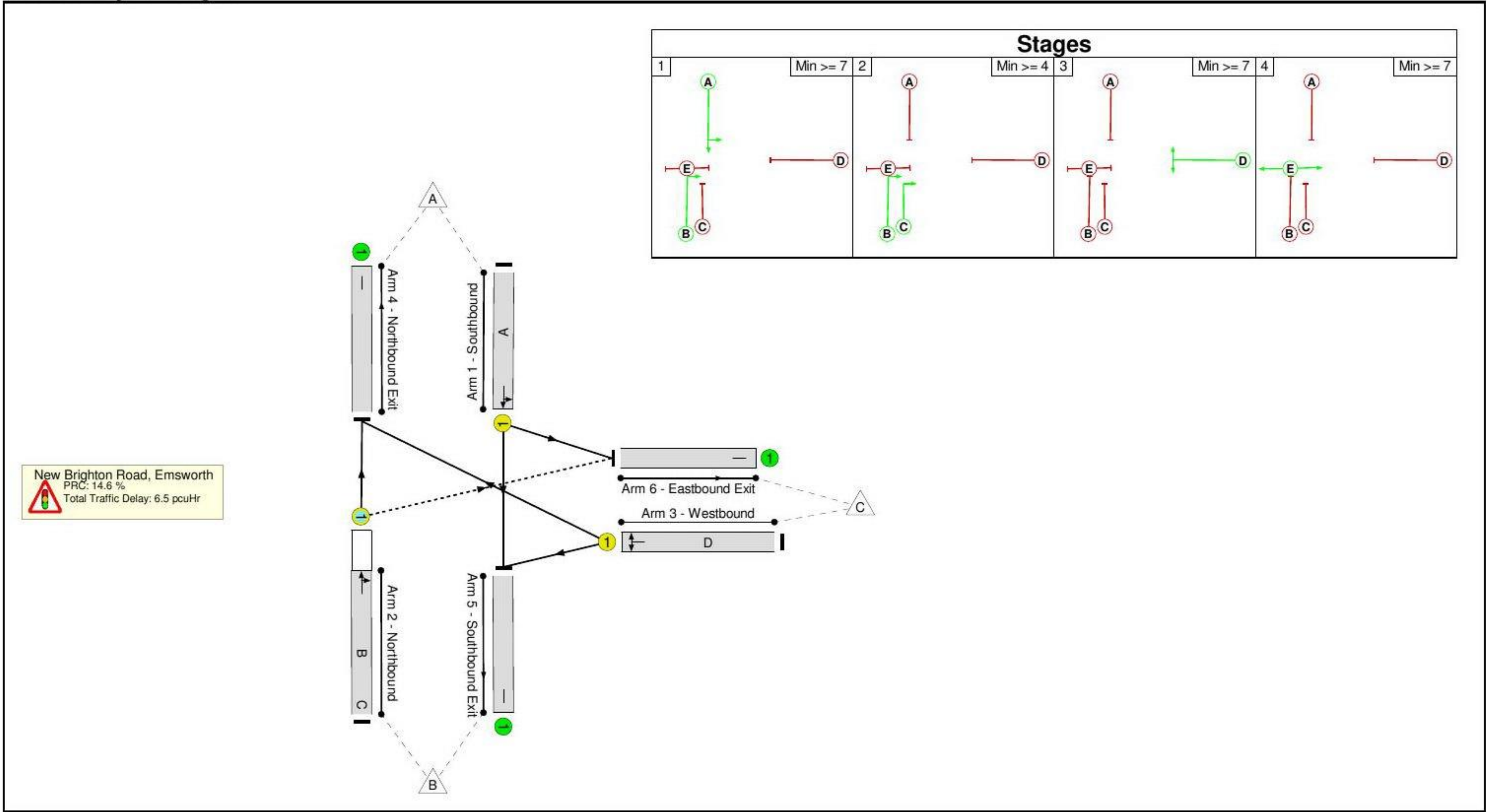
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	13	4	7	7	14	4	7
Change Point	0	19	28	41	56	78	87

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	78.5%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	78.5%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	27	-	460	2020	586	78.5%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	45	8	358	1951	528	67.8%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	20	1805	289	6.9%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	358	1940	1940	18.5%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	20	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	4	4	2	3.5	3.0	0.0	6.5	-	-	-	-
New Brighton Road, Emsworth	-	-	4	4	2	3.5	3.0	0.0	6.5	-	-	-	-
1/1	460	460	-	-	-	2.2	1.8	-	4.0	31.2	7.2	1.8	8.9
2/1	358	358	4	4	2	1.2	1.0	0.0	2.3	22.6	5.8	1.0	6.8
3/1	20	20	-	-	-	0.1	0.0	-	0.1	25.6	0.3	0.0	0.3
4/1	358	358	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
5/1	460	460	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	20	20	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

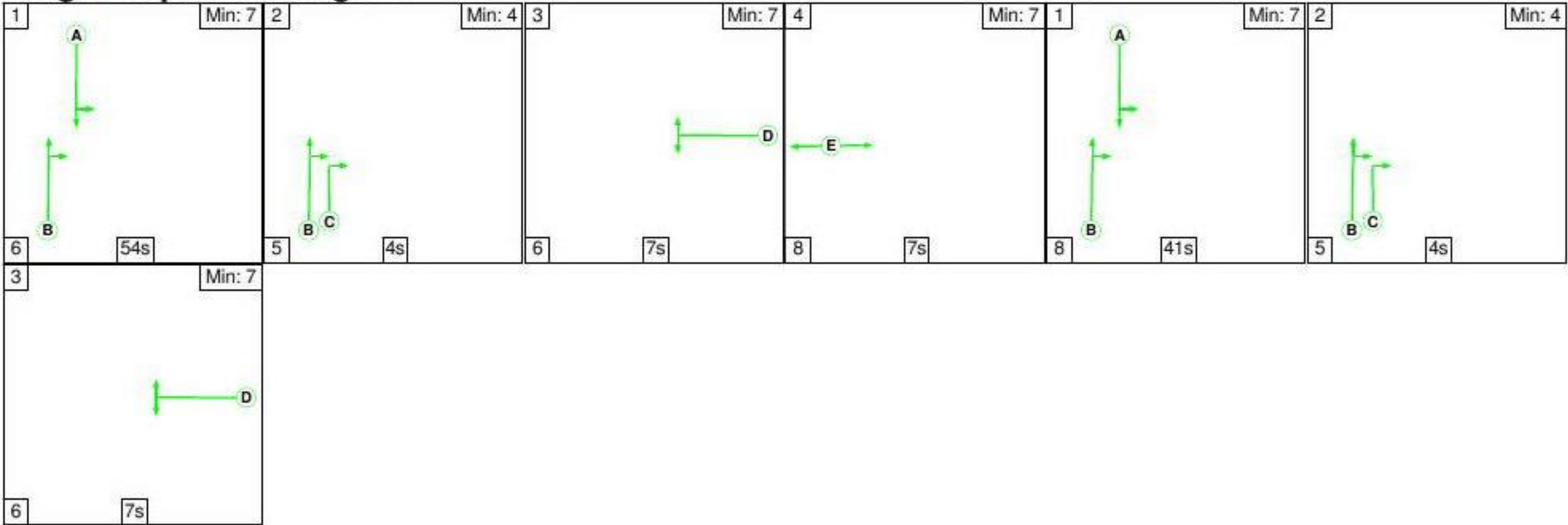
Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	14.6	Total Delay for Signalled Lanes (pcuHr):	6.38	Cycle Time (s):	100
	PRC Over All Lanes (%):	14.6	Total Delay Over All Lanes(pcuHr):	6.49		

Full Input Data And Results

Scenario 6: 'PM Peak Double' (FG3: 'PM PEAK', Plan 2: 'Network Control Plan 2')

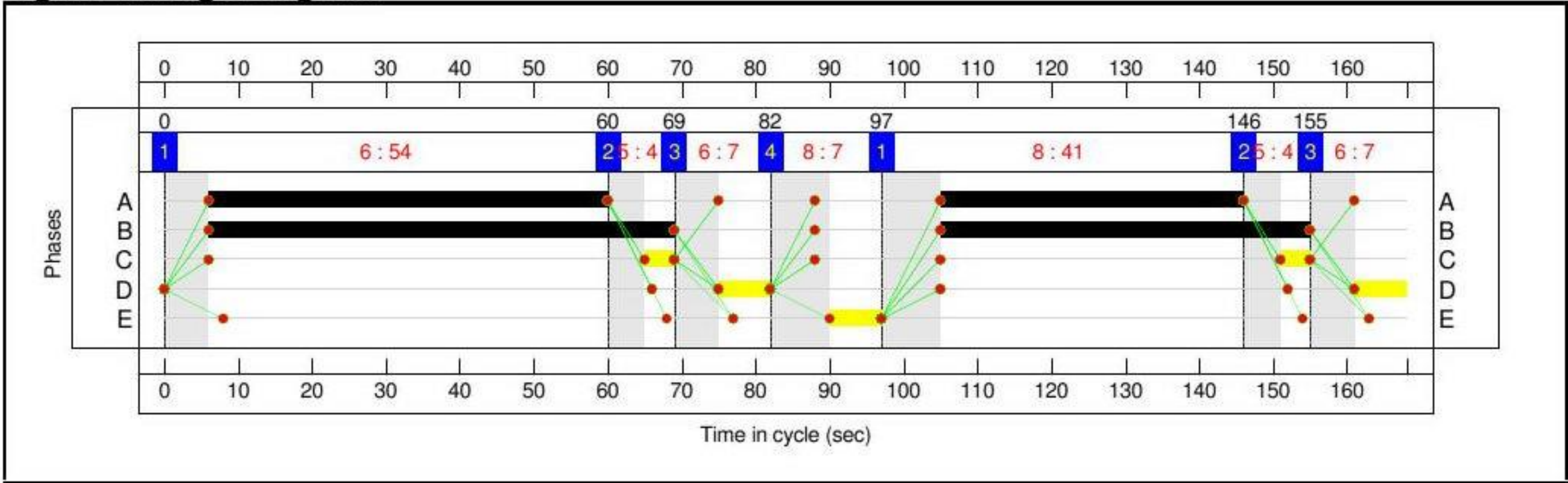
Stage Sequence Diagram



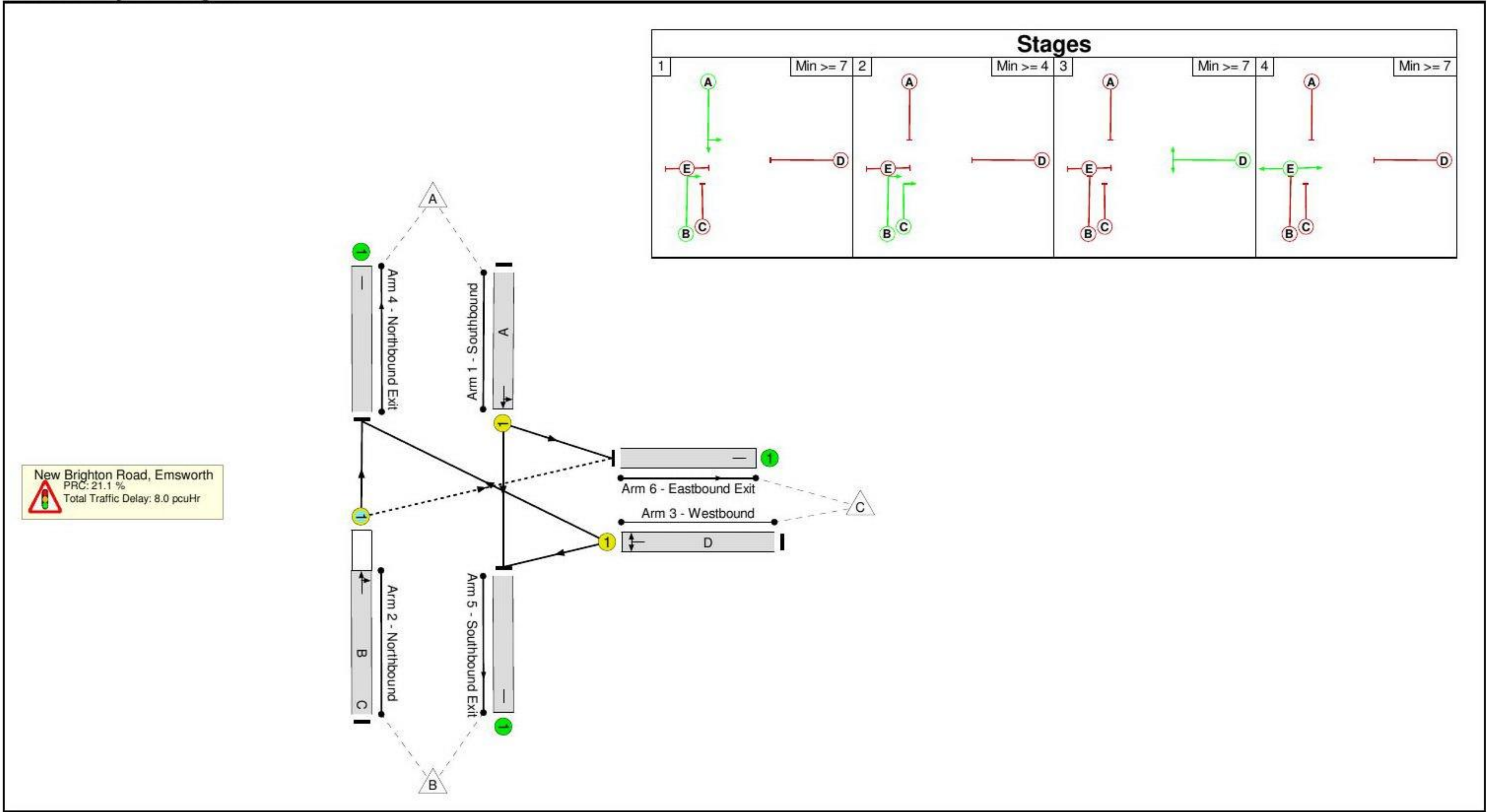
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	54	4	7	7	41	4	7
Change Point	0	60	69	82	97	146	155

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	74.3%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	74.3%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	95	-	546	2010	1161	47.0%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	113	8	753	1947	1014	74.3%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	80	1805	172	46.5%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	753	1940	1940	38.8%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	80	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	32	6	2	5.4	2.6	0.0	8.0	-	-	-	-
New Brighton Road, Emsworth	-	-	32	6	2	5.4	2.6	0.0	8.0	-	-	-	-
1/1	546	546	-	-	-	1.7	0.4	-	2.1	13.8	9.1	0.4	9.5
2/1	753	753	32	6	2	2.9	1.4	0.0	4.4	20.9	17.2	1.4	18.6
3/1	80	80	-	-	-	0.8	0.4	-	1.2	55.4	1.8	0.4	2.2
4/1	753	753	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
5/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	80	80	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

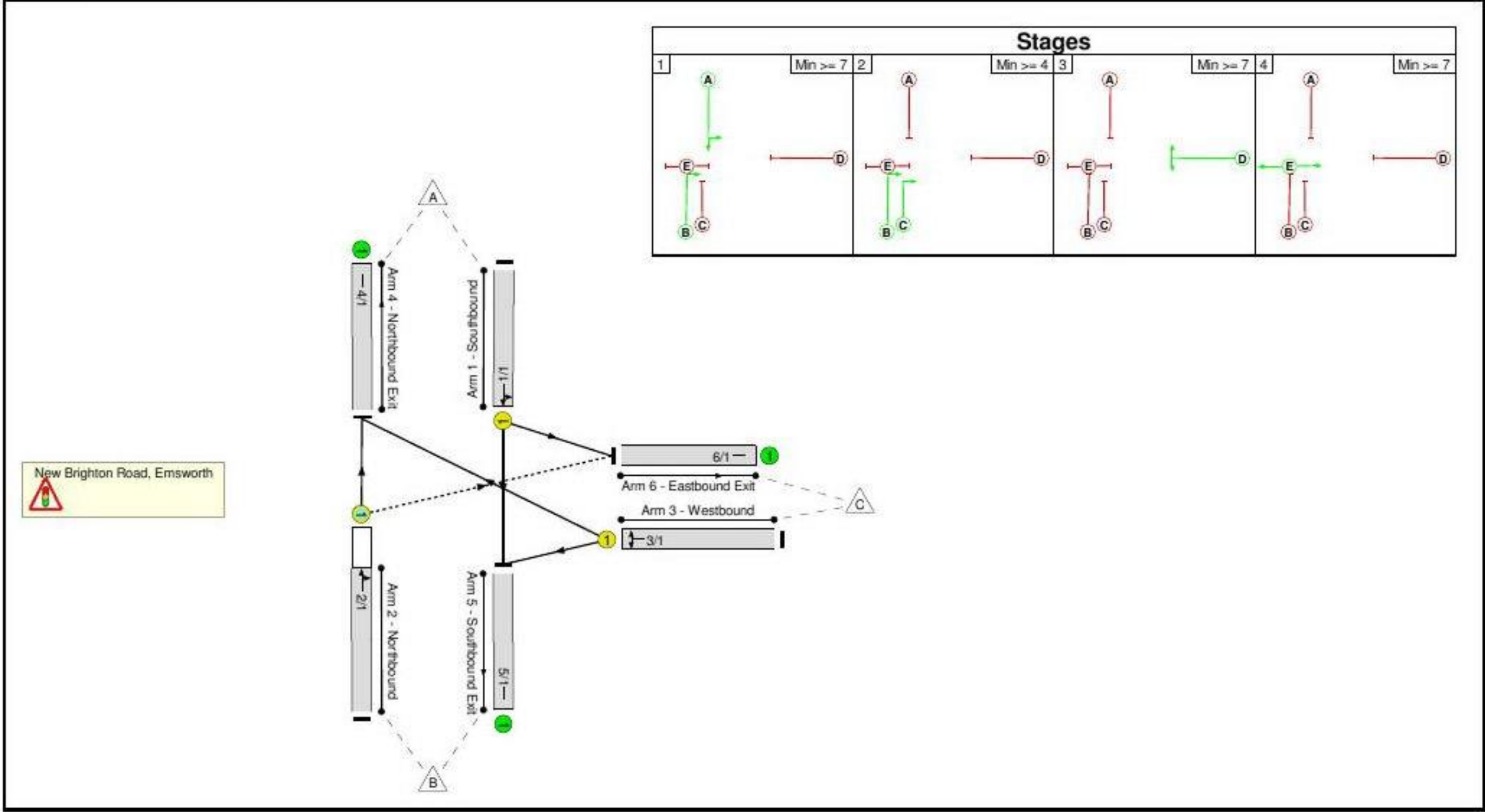
Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	21.1	Total Delay for Signalled Lanes (pcuHr):	7.69	Cycle Time (s):	168
	PRC Over All Lanes (%):	21.1	Total Delay Over All Lanes(pcuHr):	8.01		

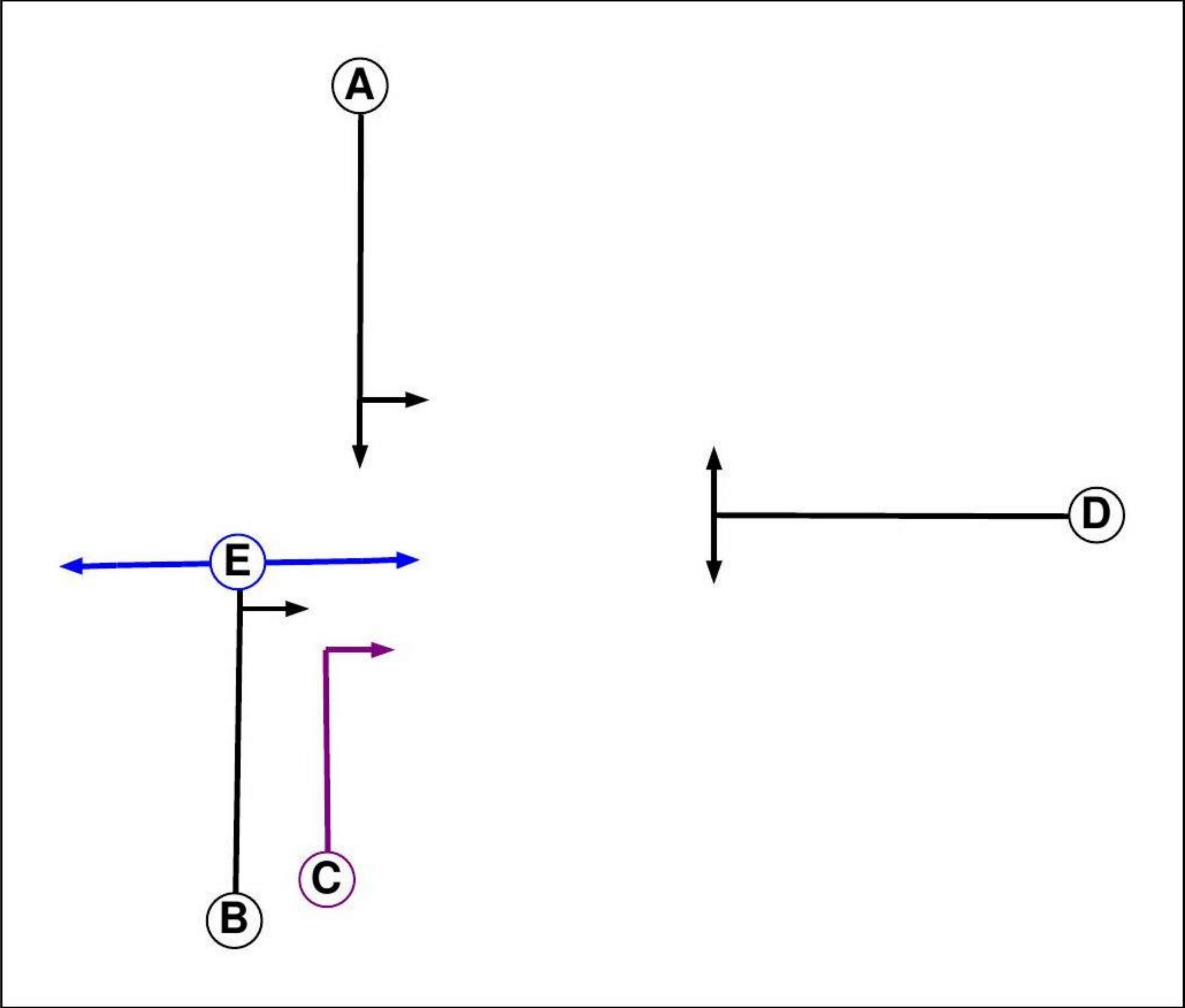
Full Input Data and Results**User and Project Details**

Project:	Interbridges S278
Title:	Model of Proposed Traffic Signals – 2021 Traffic Growth
Location:	New Brighton Road / Site Access (Interbridges), Emsworth
File name:	New Brighton Road - Interbridges, Emsworth - 2021 Traffic Growth.lsg3x
Author:	Dave Richards
Company:	Telent Technology Services Ltd
Address:	Point 3, Haywood Road, Warwick, CV34 5AH
Notes:	The traffic count data was selected from Thursday 21st January 2016 using 08:00 - 09:00 for the AM Peak and 17:00 - 18:00 for the PM Peak because these periods had the highest traffic counts of the day. The time from 10:00 – 11:00 was selected as a good representation of the quieter Off Peak period. The count data was converted to PCU (Passenger Car Units) as follows: • Cycles multiplied by 0.2 • Motor Cycles multiplied by 0.4 • Car / Van multiplied by 1 • Car / Van Towing multiplied by 1 • 2 Axle Van / Lorry multiplied by 1.5 • 3 Axle Rigid and upwards multiplied by 2.3 As traffic count data for the Development Access Road could not be provided, figures supplied in 2008, based on the number of parking spaces provided in the commuter car park for each development unit and the volume of delivery traffic have been used. For the purposes of the model, the assumption has been made that 50% of vehicles will turn left out of the Development Access Road and 50% will turn right. In addition the assumption has been made that of the total amount of vehicles entering the Development Access Road, 50% will originate from New Brighton Road North and 50% from New Brighton Road South. For this model, the 2016 Traffic Count converted PCU values and the 2008 PCU values have been increased by 10% to represent traffic growth predicted by 2021. In the absence of any pedestrian count data, the model includes two scenarios for each of the time periods, one that assumes the pedestrian stage appears every cycle and one that assumes it appears every other cycle ('Double'). The Practical Reserve Capacity (PRC) results for each scenario are as follows: AM PEAK: 9.4% OFF PEAK: 11.9% PM PEAK: 1.1% AM PEAK DOUBLE: 12.1% OFF PEAK DOUBLE: 4.4% PM PEAK DOUBLE: 4.6%

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	B	4	4
D	Traffic		7	7
E	Pedestrian		7	7

Full Input Data And Results

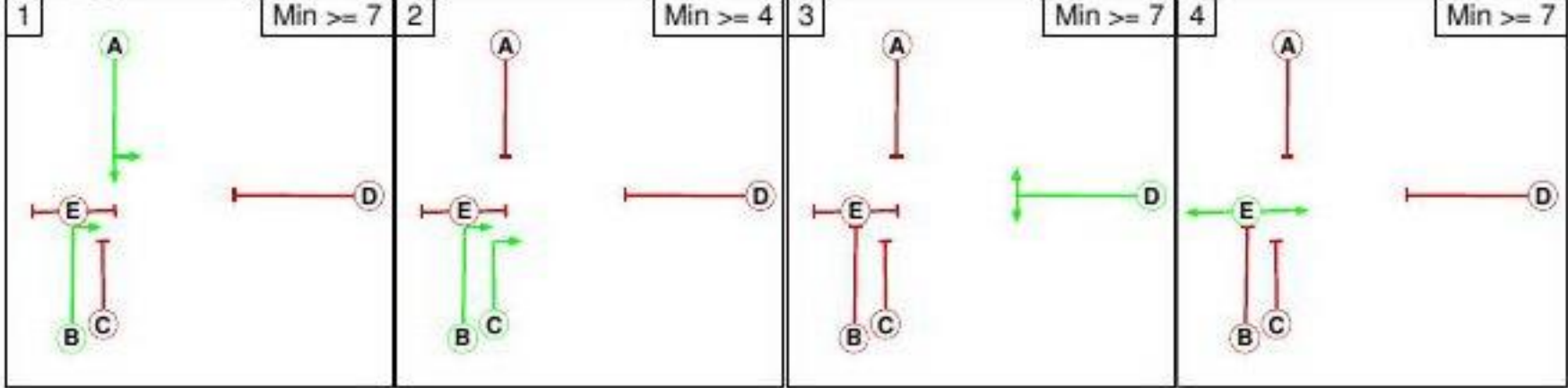
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: New Brighton Road, Emsworth											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/1 (Northbound)	6/1 (Right)	1439	0	1/1	1.09	All	3.00	-	0.50	3	2.00

Lane Input Data

Junction: New Brighton Road, Emsworth												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Southbound)	U	A	2	3	60.0	Geom	-	4.10	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Left	14.30
2/1 (Northbound)	O	B C	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 4 Ahead	Inf
											Arm 6 Right	18.85
3/1 (Westbound)	U	D	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 4 Right	17.00
											Arm 5 Left	12.24
4/1 (Northbound Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
5/1 (Southbound Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Eastbound Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM PEAK '	08:00	09:00	01:00	
2: 'OFF PEAK '	10:00	11:00	01:00	
3: 'PM PEAK'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	818	22	840
	B	559	0	22	581
	C	22	22	0	44
	Tot.	581	840	44	1465

Traffic Lane Flows

Lane	Scenario 1: AM Peak
Junction: New Brighton Road, Emsworth	
1/1	840
2/1	581
3/1	44
4/1	581
5/1	840
6/1	44

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.4 %	2019	2019
				Arm 6 Left	14.30	2.6 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	96.2 %	1949	1949
				Arm 6 Right	18.85	3.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'OFF Peak' (FG2: 'OFF PEAK ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	494	11	505
	B	382	0	11	393
	C	11	11	0	22
	Tot.	393	505	22	920

Traffic Lane Flows

Lane	Scenario 2: OFF Peak
Junction: New Brighton Road, Emsworth	
1/1	505
2/1	393
3/1	22
4/1	393
5/1	505
6/1	22

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.8 %	2020	2020
				Arm 6 Left	14.30	2.2 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	97.2 %	1951	1951
				Arm 6 Right	18.85	2.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'PM PEAK ' (FG3: 'PM PEAK', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow:

	Destination				
		A	B	C	Tot.
Origin	A	0	555	44	599
	B	784	0	44	828
	C	44	44	0	88
	Tot.	828	599	88	1515

Traffic Lane Flows

Lane	Scenario 3: PM PEAK
Junction: New Brighton Road, Emsworth	
1/1	599
2/1	828
3/1	88
4/1	828
5/1	599
6/1	88

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	92.7 %	2010	2010
				Arm 6 Left	14.30	7.3 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	94.7 %	1947	1947
				Arm 6 Right	18.85	5.3 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'AM Peak Double' (FG1: 'AM PEAK ', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	818	22	840
	B	559	0	22	581
	C	22	22	0	44
	Tot.	581	840	44	1465

Traffic Lane Flows

Lane	Scenario 4: AM Peak Double
Junction: New Brighton Road, Emsworth	
1/1	840
2/1	581
3/1	44
4/1	581
5/1	840
6/1	44

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.4 %	2019	2019
				Arm 6 Left	14.30	2.6 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	96.2 %	1949	1949
				Arm 6 Right	18.85	3.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'OFF Peak Double' (FG2: 'OFF PEAK ', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin		A	B	C	Tot.
	A	0	494	11	505
	B	382	0	11	393
	C	11	11	0	22
	Tot.	393	505	22	920

Traffic Lane Flows

Lane	Scenario 5: OFF Peak Double
Junction: New Brighton Road, Emsworth	
1/1	505
2/1	393
3/1	22
4/1	393
5/1	505
6/1	22

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.8 %	2020	2020
				Arm 6 Left	14.30	2.2 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	97.2 %	1951	1951
				Arm 6 Right	18.85	2.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak Double' (FG3: 'PM PEAK', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
		A	B	C	Tot.
Origin	A	0	555	44	599
	B	784	0	44	828
	C	44	44	0	88
	Tot.	828	599	88	1515

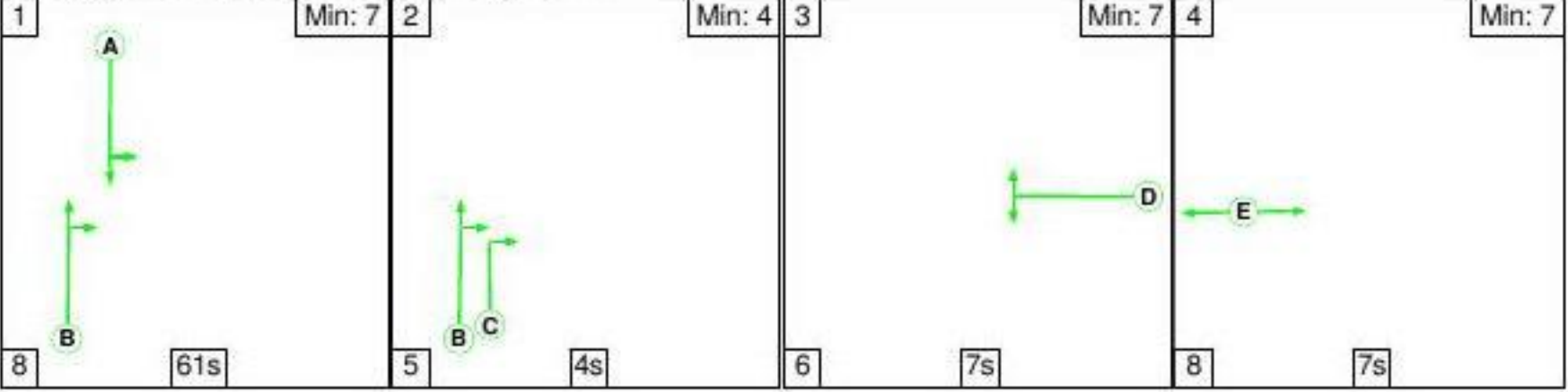
Traffic Lane Flows

Lane	Scenario 6: PM Peak Double
Junction: New Brighton Road, Emsworth	
1/1	599
2/1	828
3/1	88
4/1	828
5/1	599
6/1	88

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	92.7 %	2010	2010
				Arm 6 Left	14.30	7.3 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	94.7 %	1947	1947
				Arm 6 Right	18.85	5.3 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

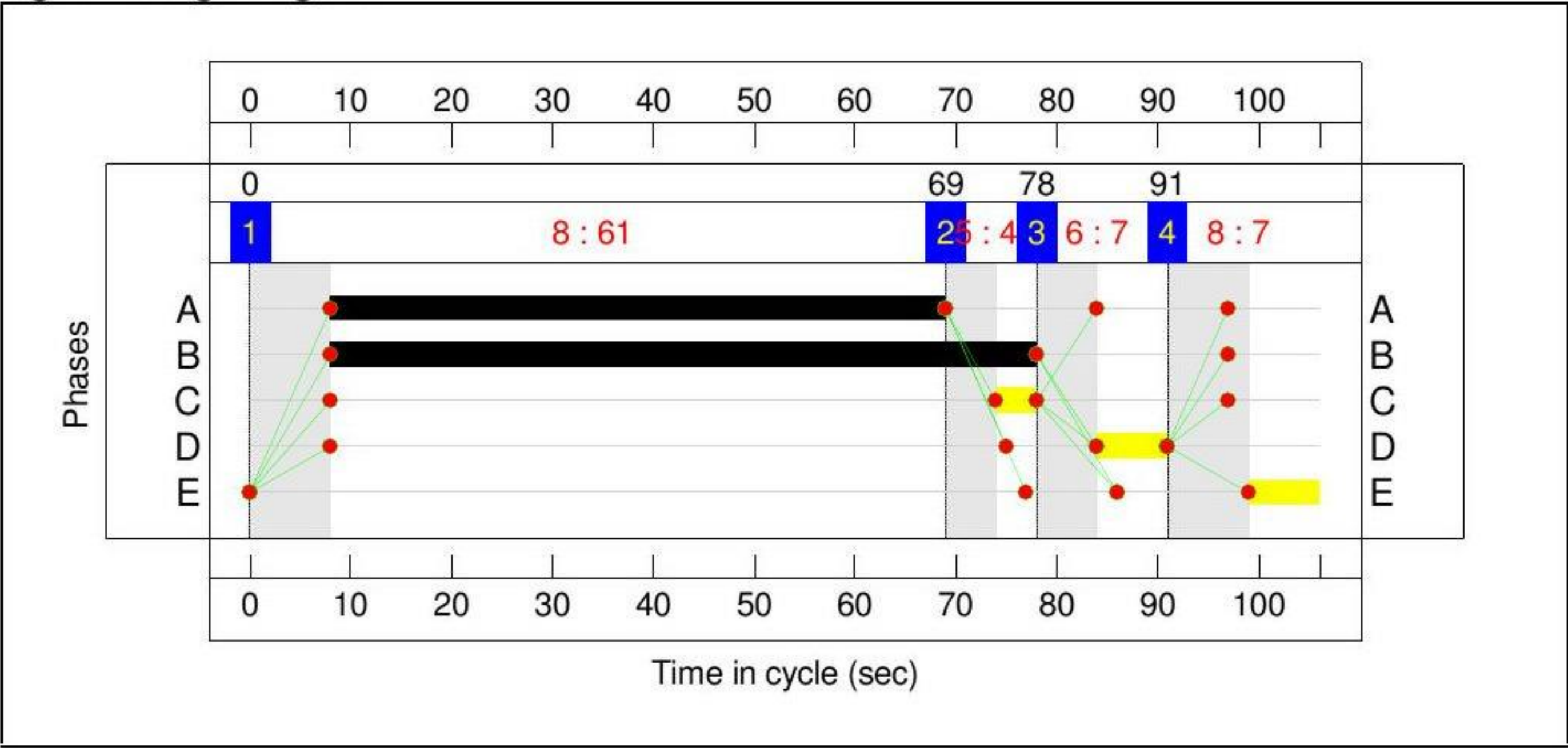
Scenario 1: 'AM Peak' (FG1: 'AM PEAK ', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



Stage Timings

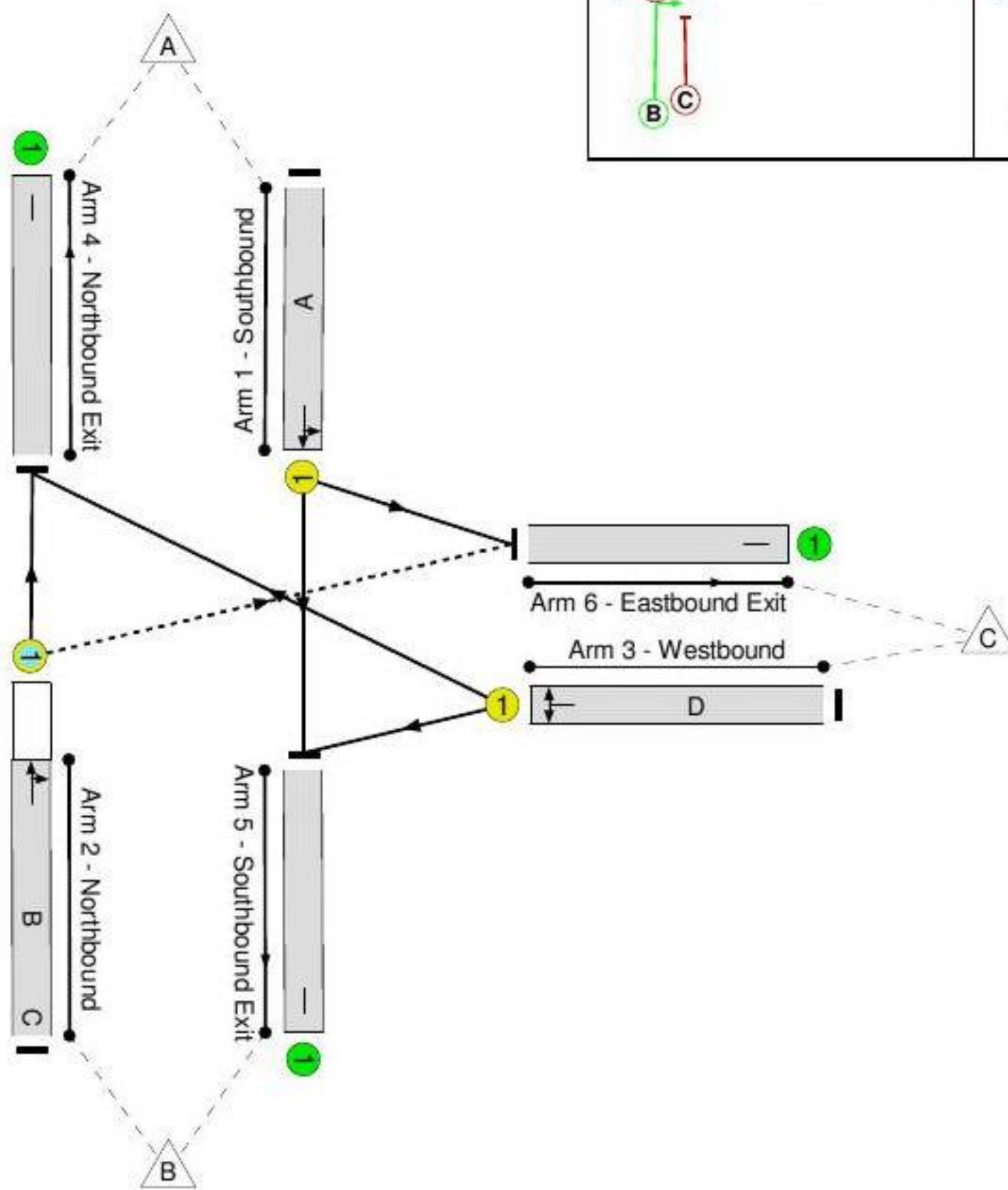
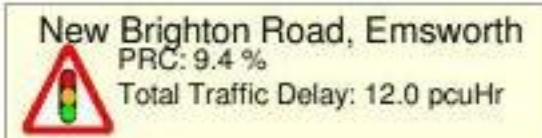
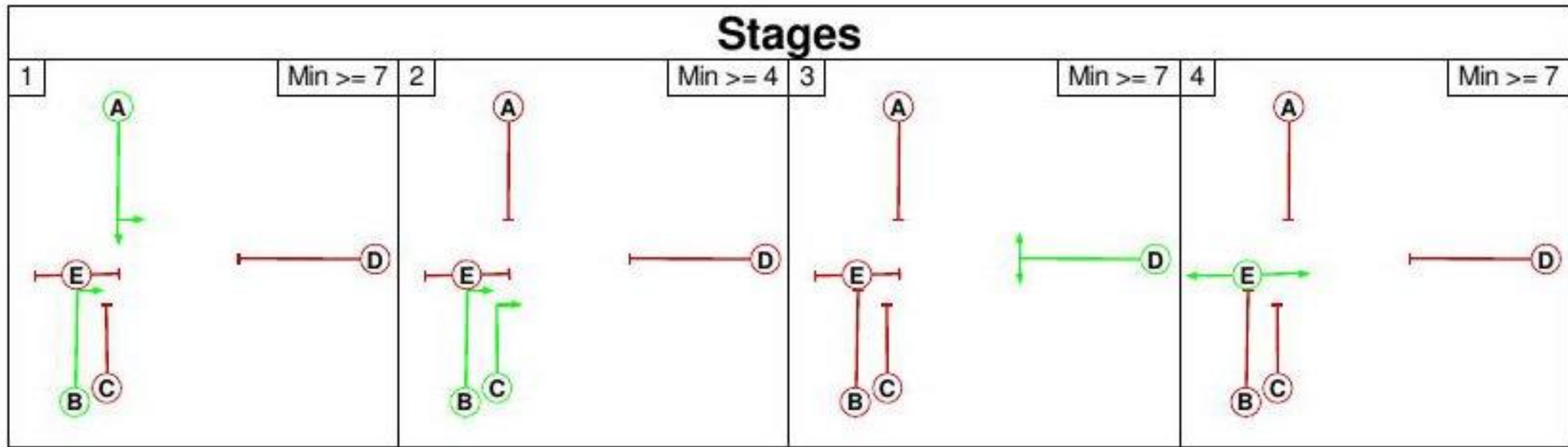
Stage	1	2	3	4
Duration	61	4	7	7
Change Point	0	69	78	91

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

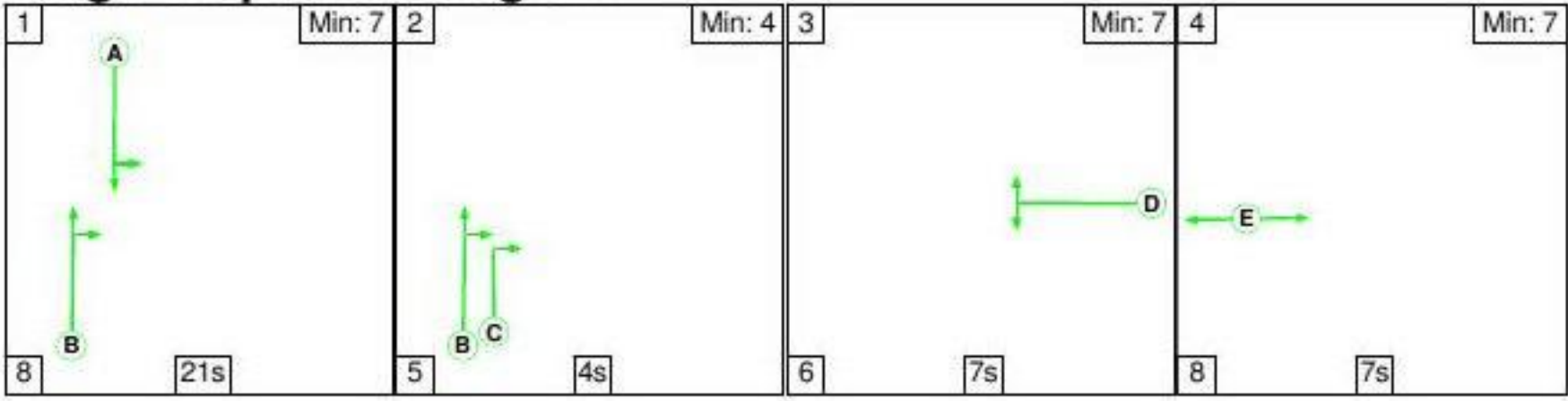
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	82.3%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	82.3%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	61	-	840	2019	1181	71.1%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	70	4	581	1949	706	82.3%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	44	1805	136	32.3%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	581	1940	1940	29.9%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	840	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	44	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	19	2	1	8.0	3.9	0.0	12.0	-	-	-	-
New Brighton Road, Emsworth	-	-	19	2	1	8.0	3.9	0.0	12.0	-	-	-	-
1/1	840	840	-	-	-	3.6	1.2	-	4.9	20.9	17.5	1.2	18.7
2/1	581	581	19	2	1	3.8	2.2	0.0	6.1	37.6	15.0	2.2	17.3
3/1	44	44	-	-	-	0.6	0.2	-	0.8	65.9	1.2	0.2	1.5
4/1	581	581	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/1	840	840	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	44	44	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	9.4	Total Delay for Signalled Lanes (pcuHr):	11.75	Cycle Time (s):	106
	PRC Over All Lanes (%):	9.4	Total Delay Over All Lanes(pcuHr):	11.96		

Full Input Data And Results
Scenario 2: 'OFF Peak' (FG2: 'OFF PEAK ', Plan 1: 'Network Control Plan 1')

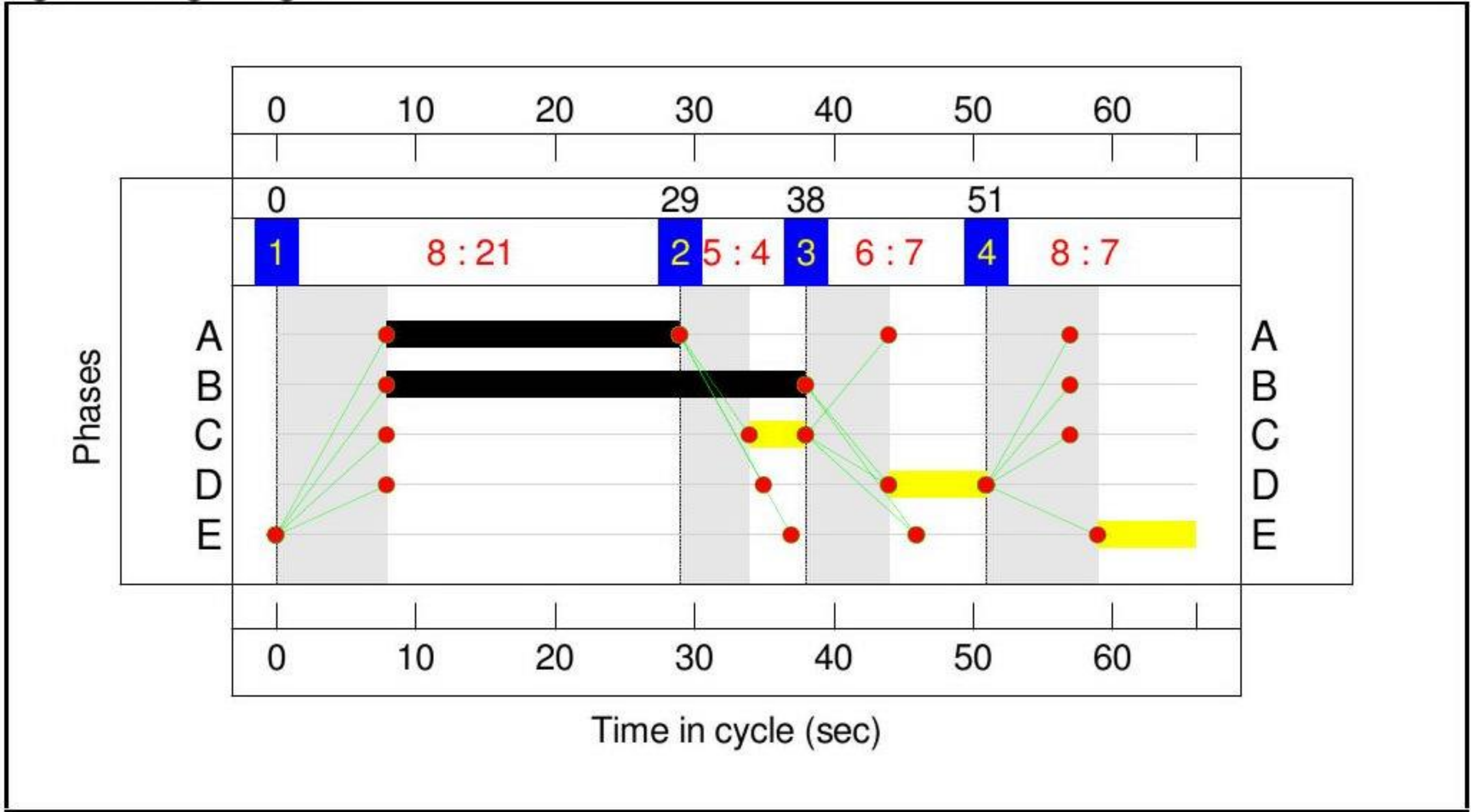
Stage Sequence Diagram



Stage Timings

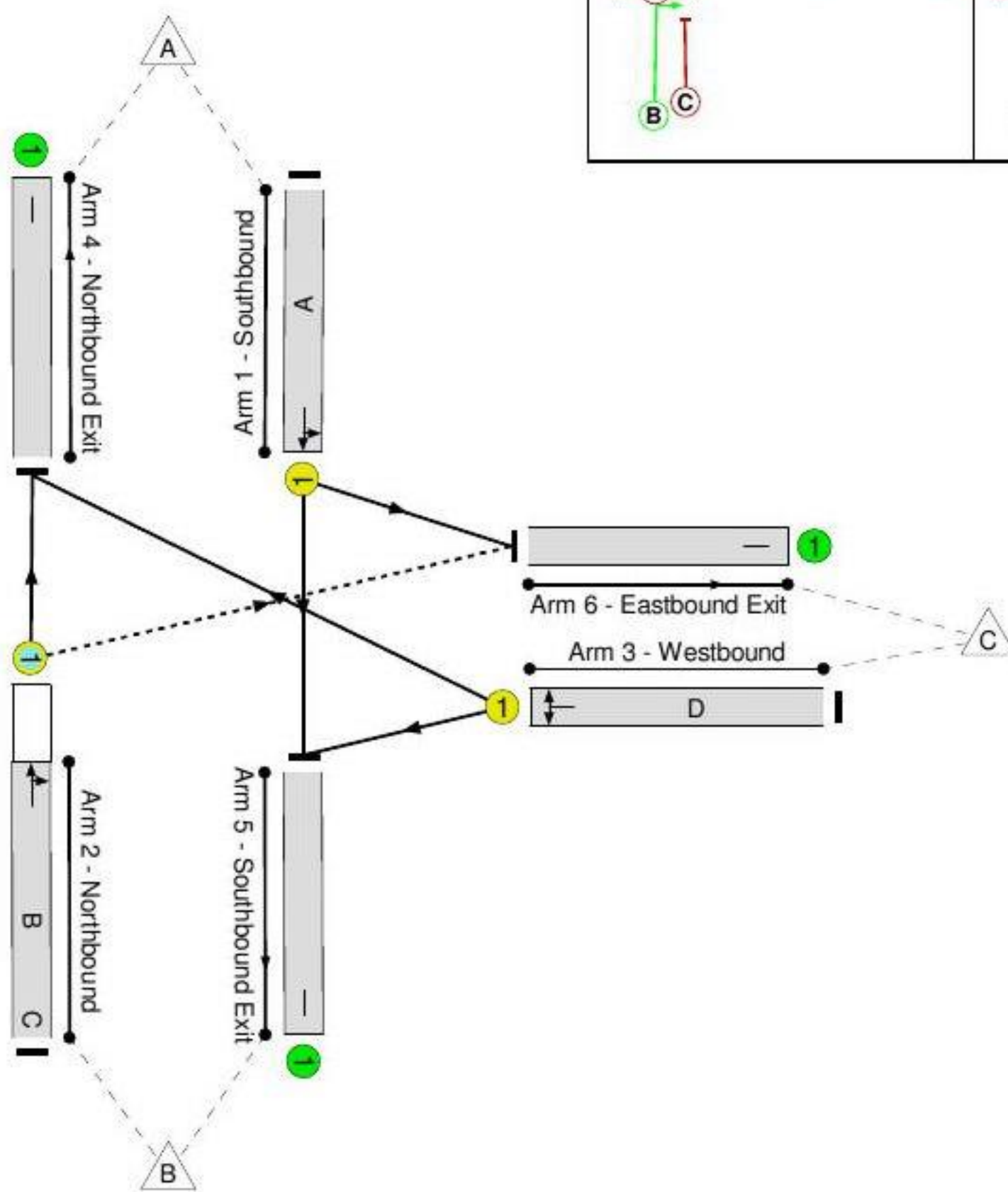
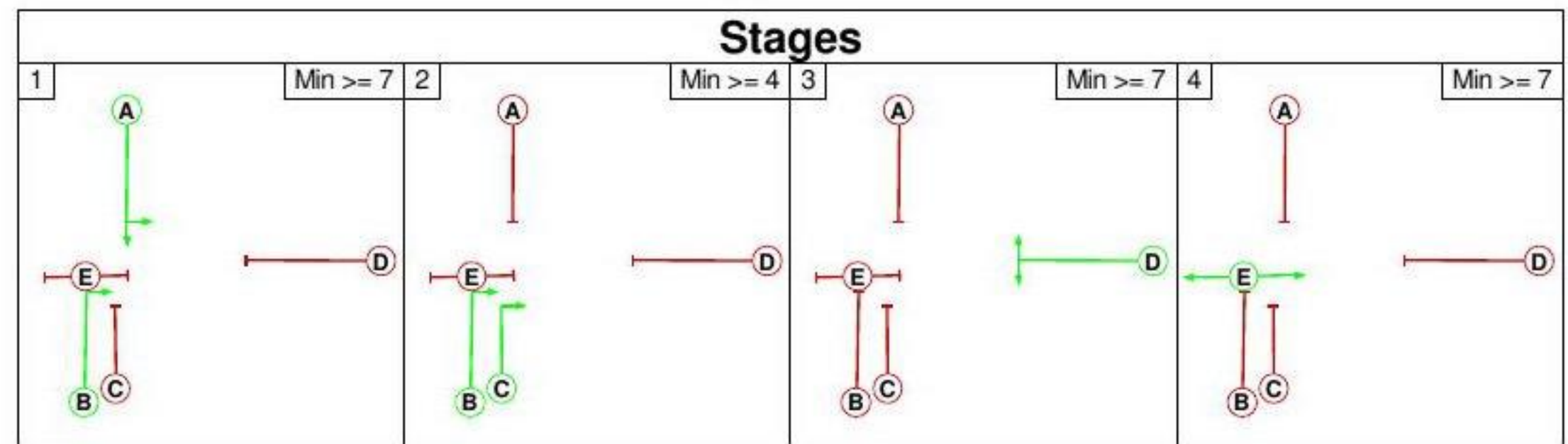
Stage	1	2	3	4
Duration	21	4	7	7
Change Point	0	29	38	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



New Brighton Road, Emsworth
PRC: 11.9 %
Total Traffic Delay: 8.4 pcuHr

Full Input Data And Results

Network Results

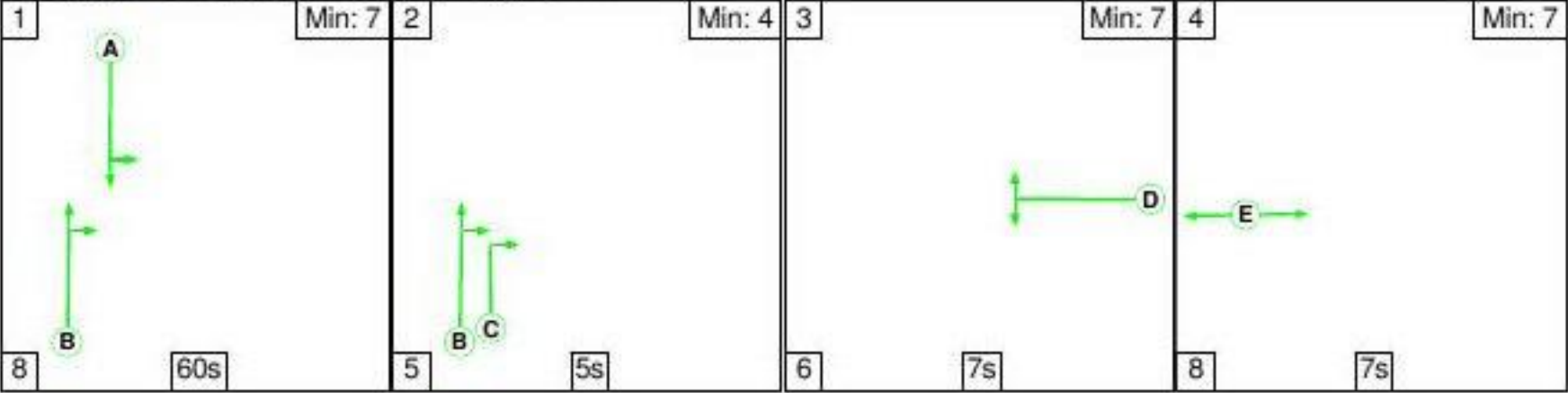
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	80.4%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	80.4%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	21	-	505	2020	673	75.0%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	30	4	393	1951	489	80.4%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	22	1805	219	10.1%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	393	1940	1940	20.3%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	5	5	1	4.8	3.6	0.0	8.4	-	-	-	-
New Brighton Road, Emsworth	-	-	5	5	1	4.8	3.6	0.0	8.4	-	-	-	-
1/1	505	505	-	-	-	2.7	1.5	-	4.2	30.1	8.1	1.5	9.6
2/1	393	393	5	5	1	1.9	2.0	0.0	3.9	35.4	6.7	2.0	8.6
3/1	22	22	-	-	-	0.2	0.1	-	0.2	35.1	0.4	0.1	0.4
4/1	393	393	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
5/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	22	22	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	11.9	Total Delay for Signalled Lanes (pcuHr):	8.30	Cycle Time (s):	66
	PRC Over All Lanes (%):	11.9	Total Delay Over All Lanes(pcuHr):	8.43		

Full Input Data And Results
Scenario 3: 'PM PEAK ' (FG3: 'PM PEAK', Plan 1: 'Network Control Plan 1')

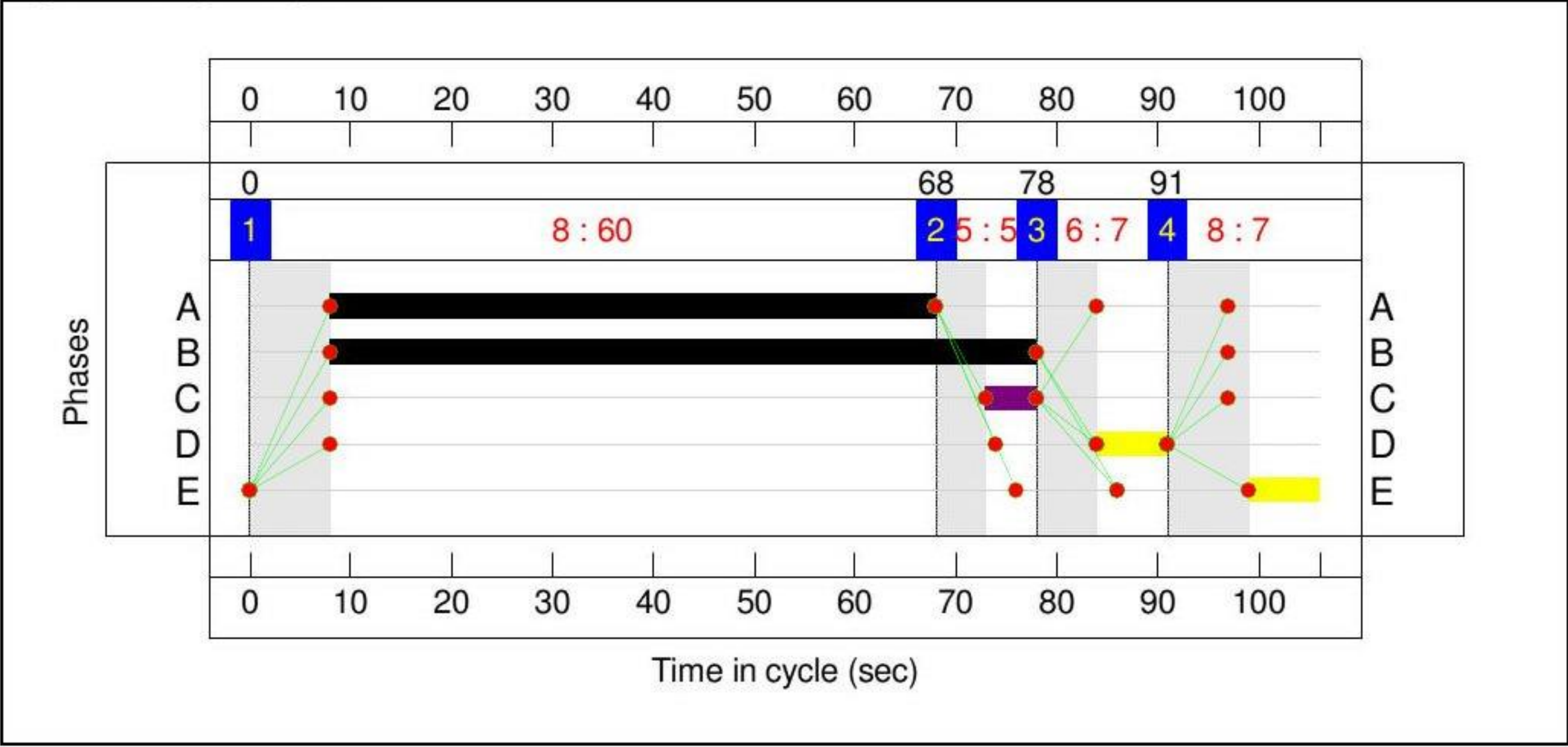
Stage Sequence Diagram



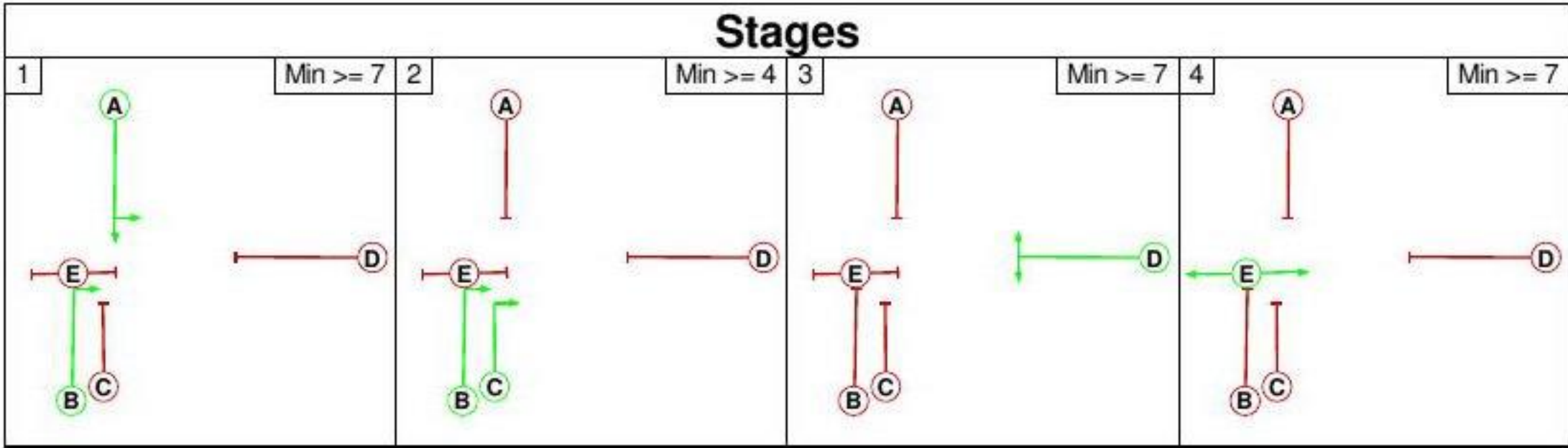
Stage Timings

Stage	1	2	3	4
Duration	60	5	7	7
Change Point	0	68	78	91

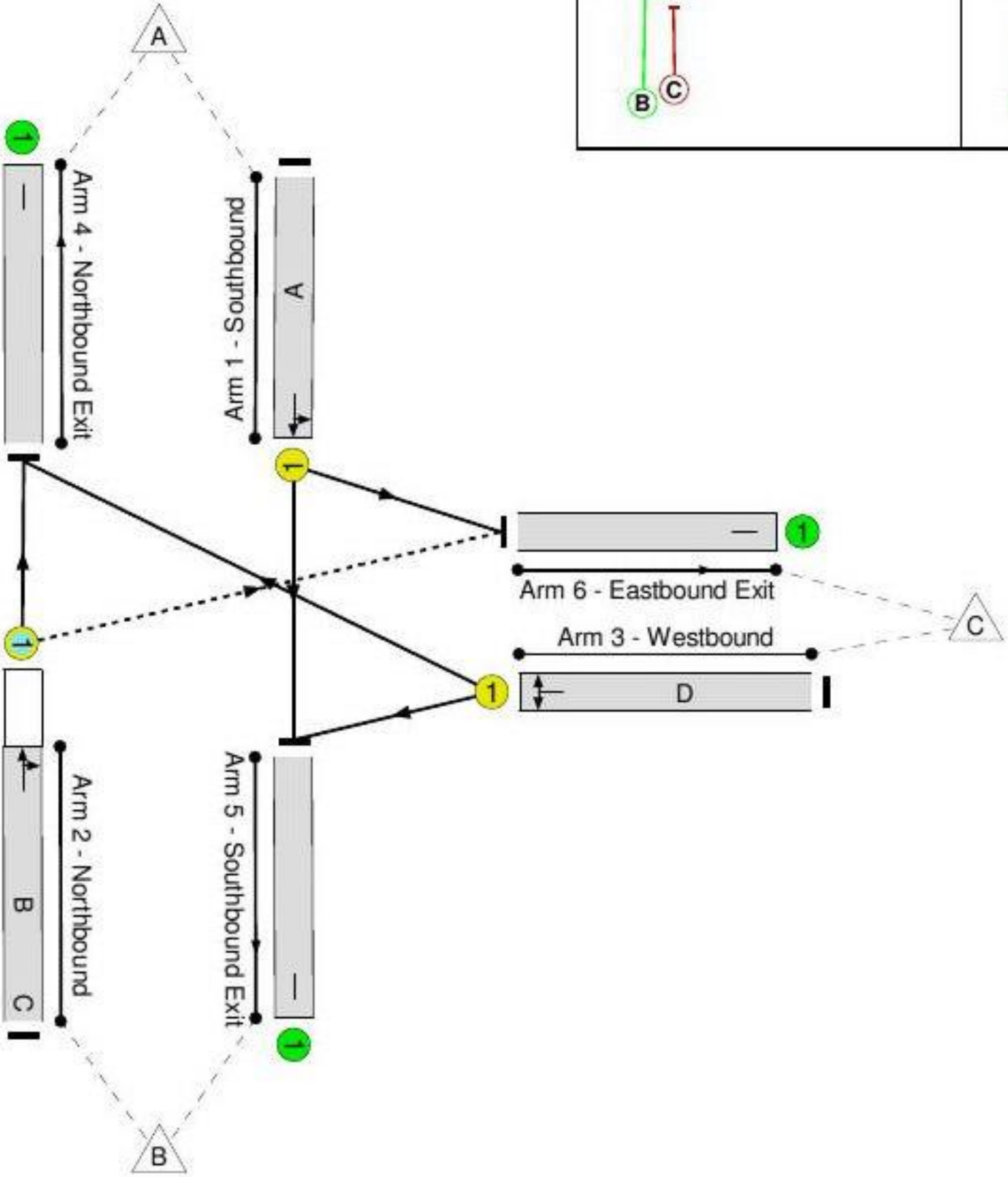
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



New Brighton Road, Emsworth
PRC: 1.1 %
Total Traffic Delay: 13.9 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	89.1%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	89.1%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	60	-	599	2010	1157	51.8%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	70	5	828	1947	930	89.1%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	88	1805	136	64.6%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	828	1940	1940	42.7%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	88	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	38	5	1	8.3	5.6	0.0	13.9	-	-	-	-
New Brighton Road, Emsworth	-	-	38	5	1	8.3	5.6	0.0	13.9	-	-	-	-
1/1	599	599	-	-	-	2.3	0.5	-	2.8	16.8	10.6	0.5	11.2
2/1	828	828	38	5	1	4.9	3.8	0.0	8.7	37.8	21.4	3.8	25.2
3/1	88	88	-	-	-	1.2	0.9	-	2.0	83.6	2.5	0.9	3.4
4/1	828	828	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/1	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	88	88	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

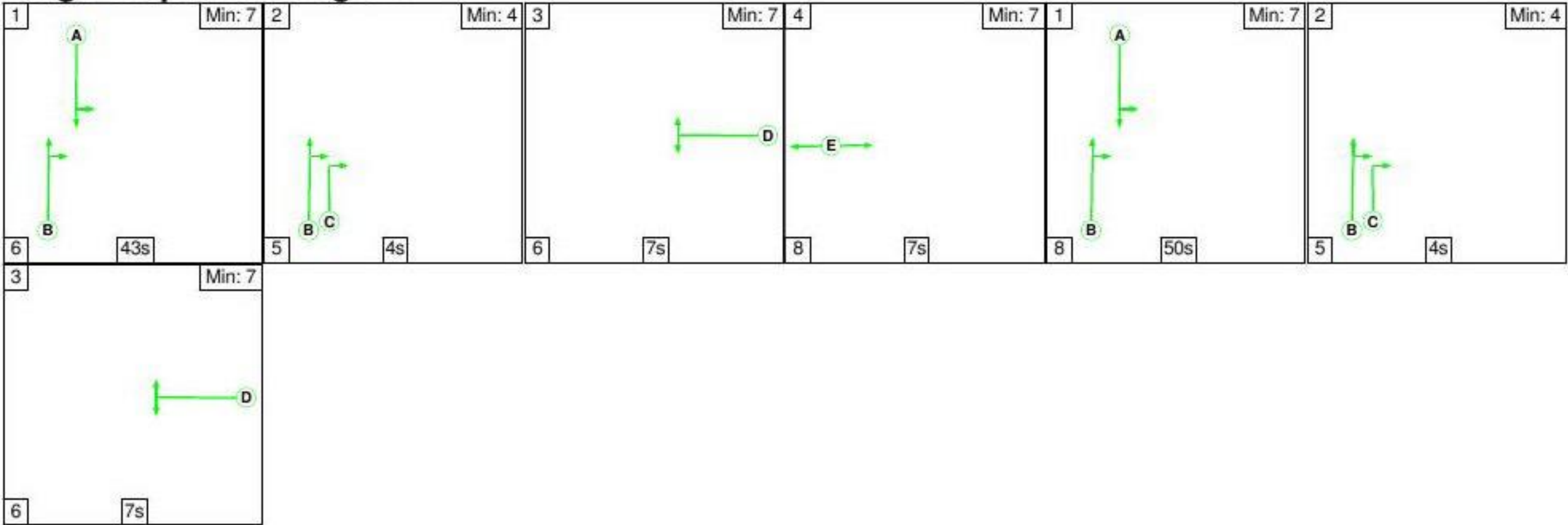
Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	13.55	Cycle Time (s):	106
	PRC Over All Lanes (%):	1.1	Total Delay Over All Lanes(pcuHr):	13.92		

Full Input Data And Results

Scenario 4: 'AM Peak Double' (FG1: 'AM PEAK ', Plan 2: 'Network Control Plan 2')

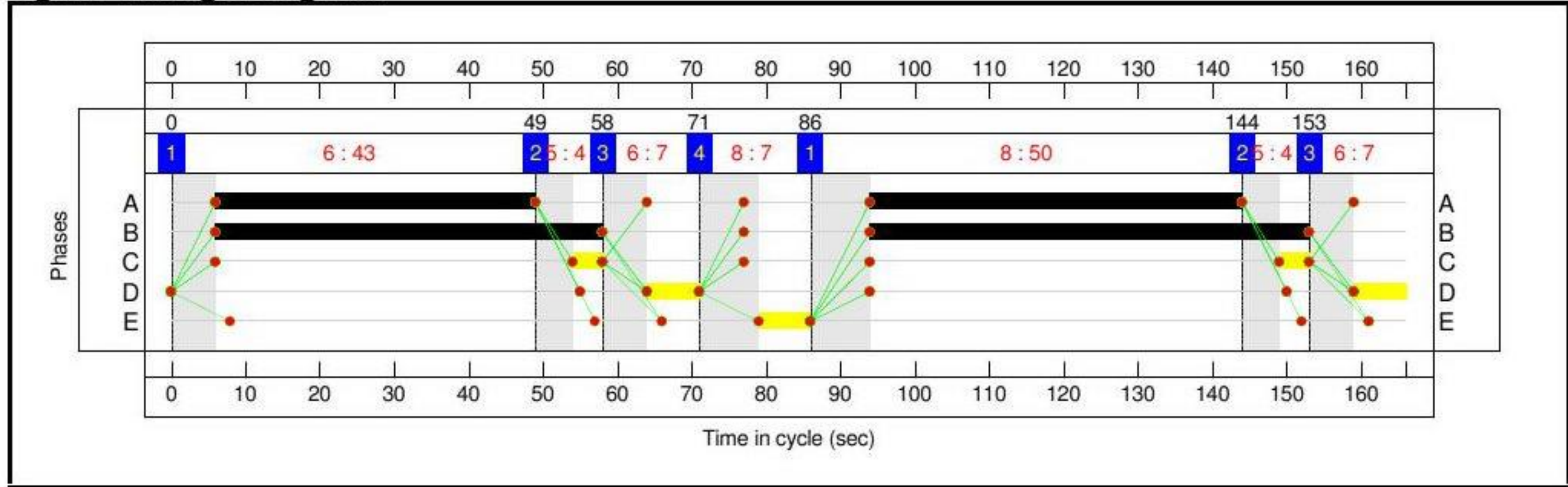
Stage Sequence Diagram



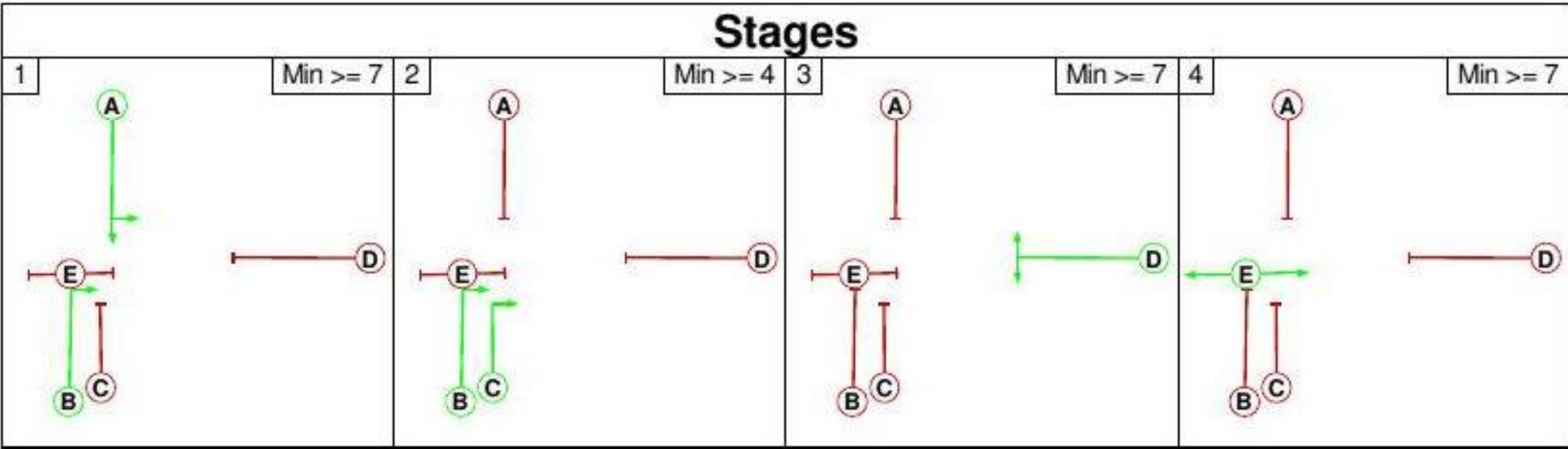
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	43	4	7	7	50	4	7
Change Point	0	49	58	71	86	144	153

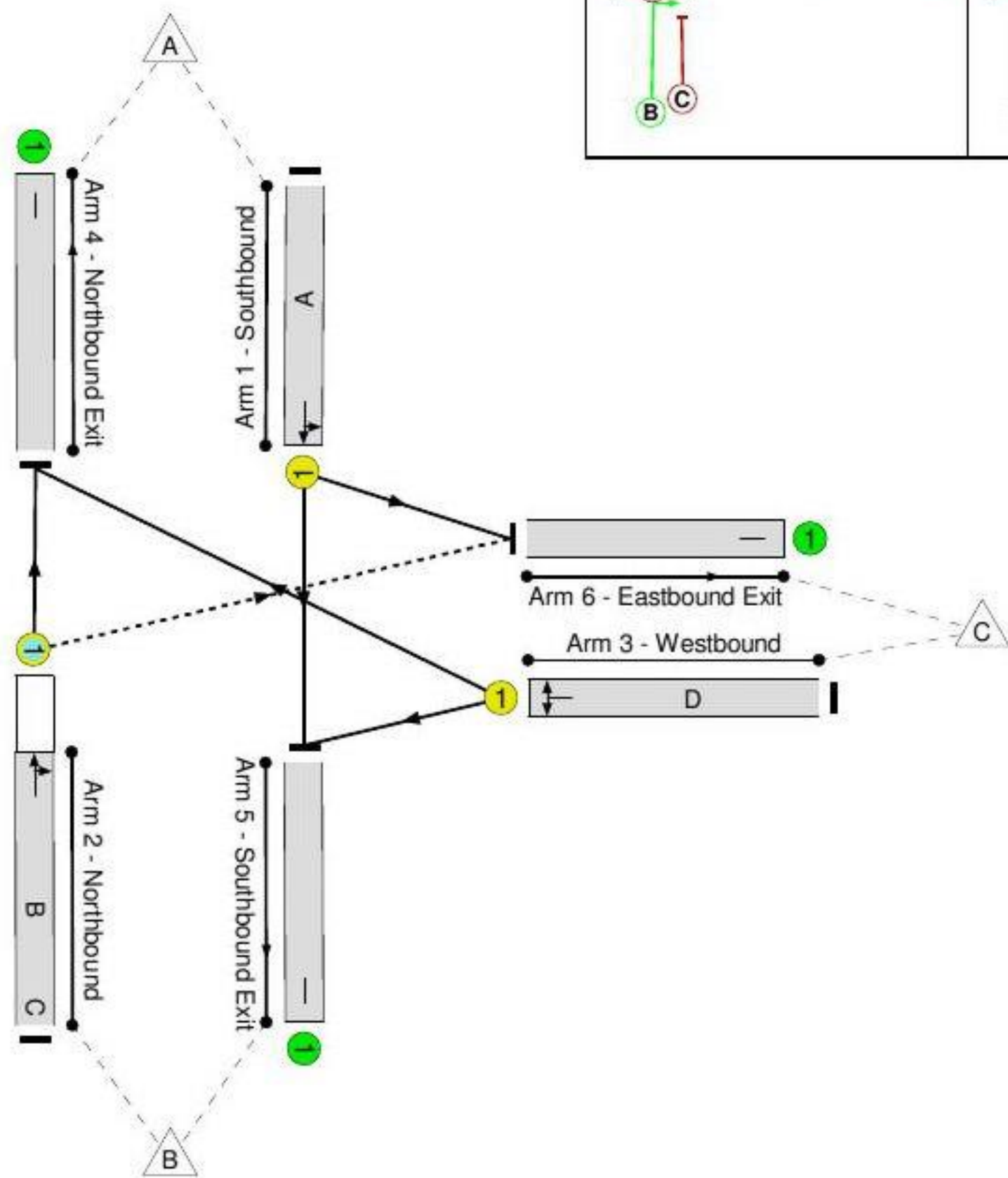
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



New Brighton Road, Emsworth
PRC: 12.1 %
Total Traffic Delay: 10.4 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	80.3%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	80.3%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	93	-	840	2019	1155	72.7%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	111	8	581	1949	724	80.3%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	44	1805	174	25.3%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	581	1940	1940	29.9%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	840	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	44	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	16	4	2	6.6	3.7	0.0	10.4	-	-	-	-
New Brighton Road, Emsworth	-	-	16	4	2	6.6	3.7	0.0	10.4	-	-	-	-
1/1	840	840	-	-	-	3.2	1.3	-	4.5	19.4	17.5	1.3	18.8
2/1	581	581	16	4	2	3.0	2.0	0.0	5.0	31.1	15.0	2.0	17.0
3/1	44	44	-	-	-	0.4	0.2	-	0.6	49.5	1.1	0.2	1.3
4/1	581	581	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/1	840	840	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	44	44	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

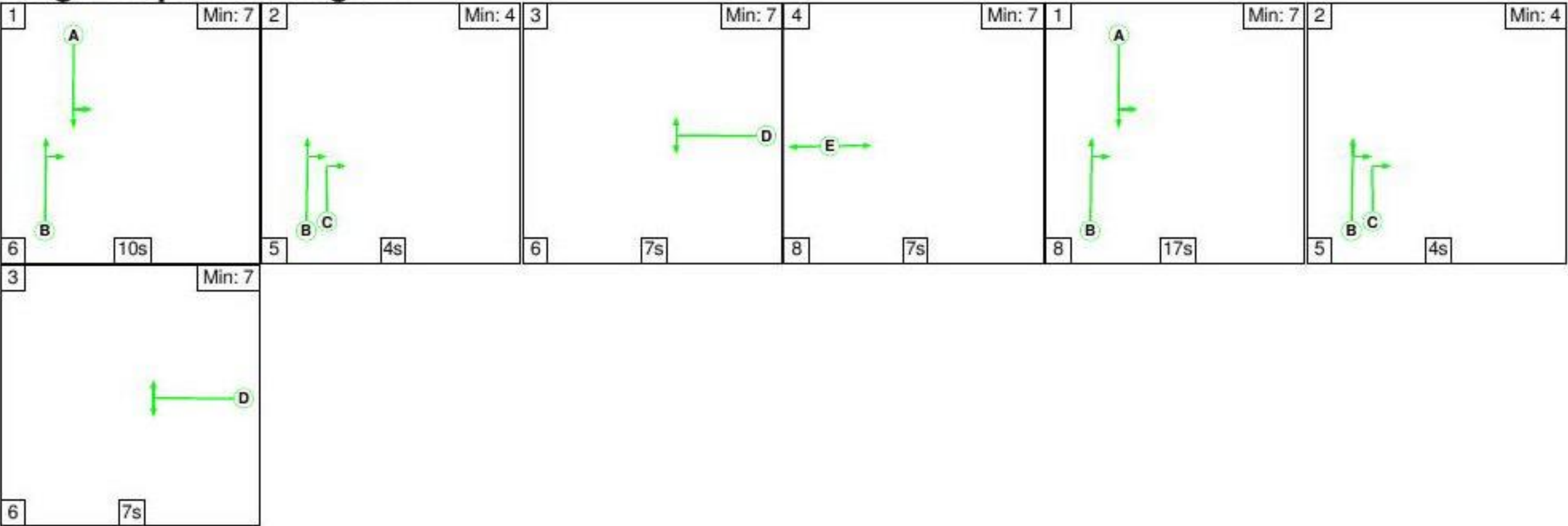
Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	12.1	Total Delay for Signalled Lanes (pcuHr):	10.16	Cycle Time (s):	166
	PRC Over All Lanes (%):	12.1	Total Delay Over All Lanes(pcuHr):	10.37		

Full Input Data And Results

Scenario 5: 'OFF Peak Double' (FG2: 'OFF PEAK ', Plan 2: 'Network Control Plan 2')

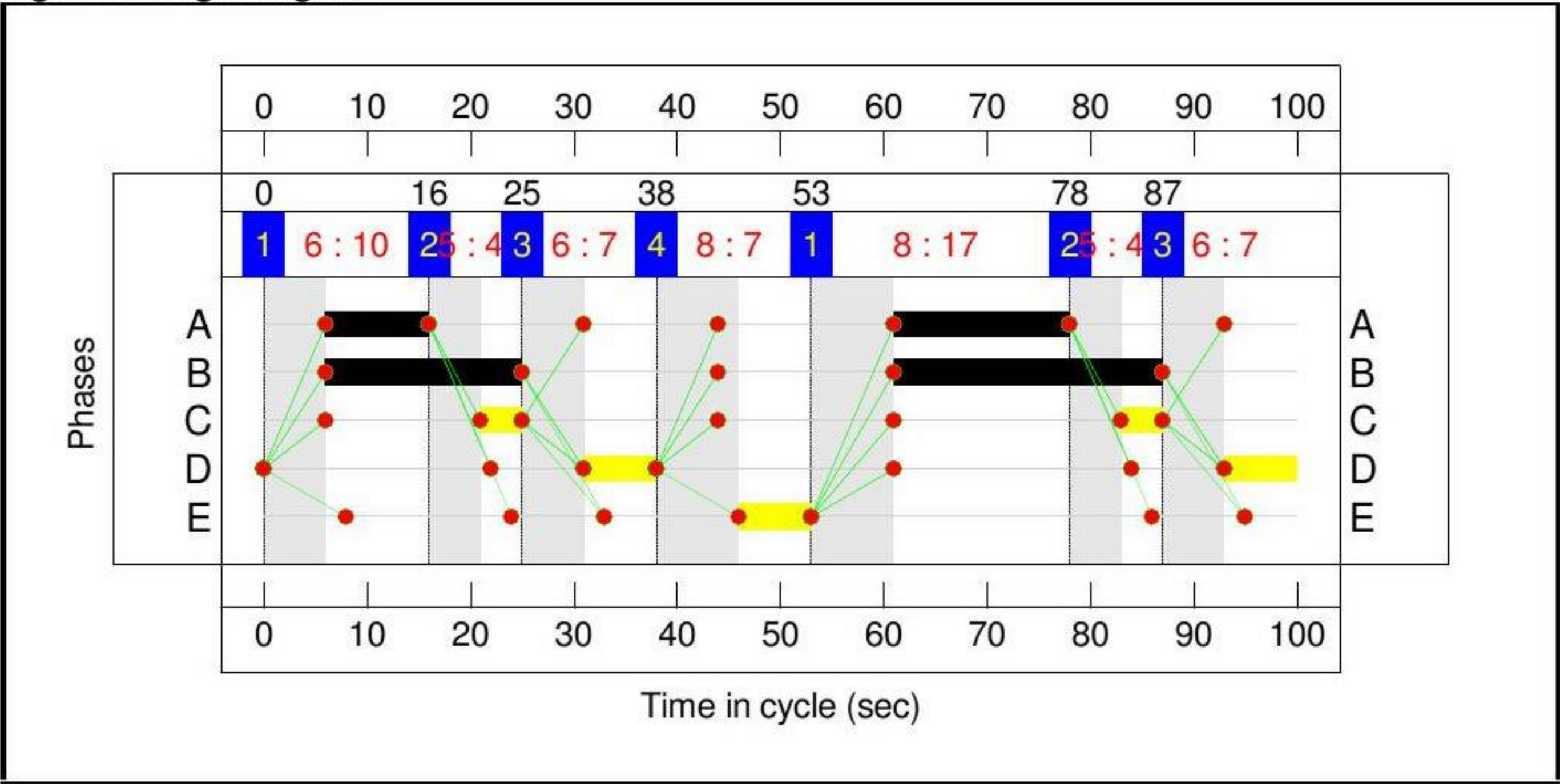
Stage Sequence Diagram



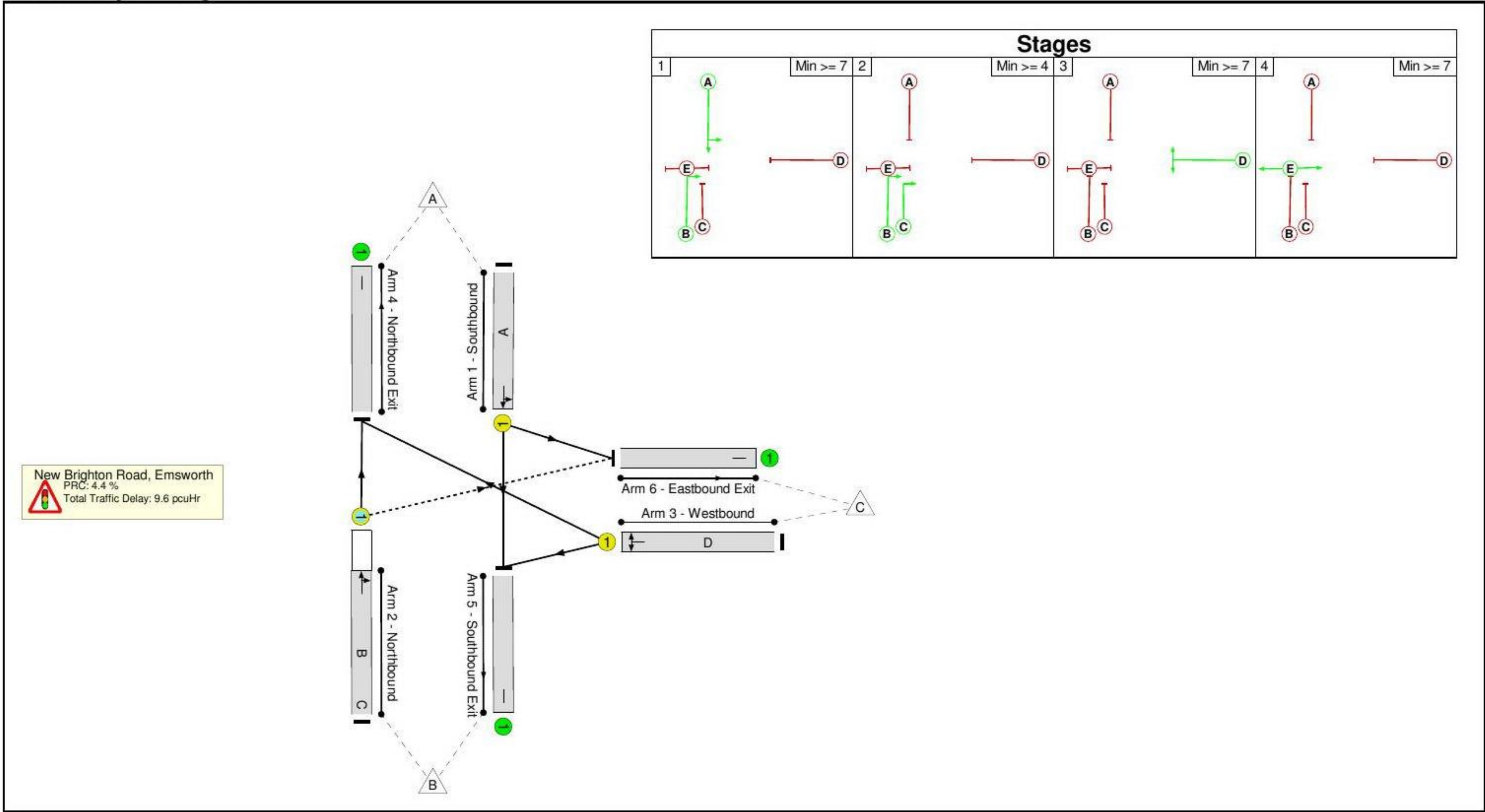
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	10	4	7	7	17	4	7
Change Point	0	16	25	38	53	78	87

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	86.2%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	86.2%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	27	-	505	2020	586	86.2%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	45	8	393	1951	470	83.7%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	22	1805	289	7.6%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	393	1940	1940	20.3%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	3	6	2	4.1	5.5	0.0	9.6	-	-	-	-
New Brighton Road, Emsworth	-	-	3	6	2	4.1	5.5	0.0	9.6	-	-	-	-
1/1	505	505	-	-	-	2.5	2.9	-	5.4	38.5	8.1	2.9	11.1
2/1	393	393	3	6	2	1.5	2.4	0.0	3.9	35.8	6.7	2.4	9.1
3/1	22	22	-	-	-	0.1	0.0	-	0.2	26.2	0.3	0.0	0.4
4/1	393	393	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
5/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	22	22	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

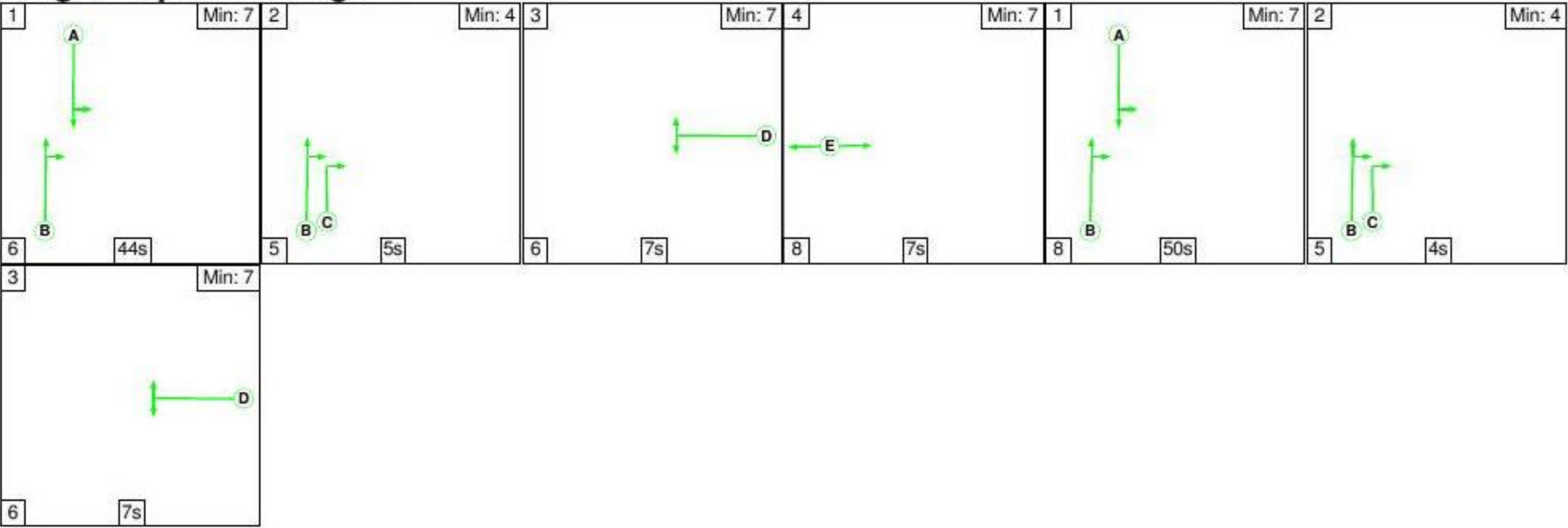
Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	4.4	Total Delay for Signalled Lanes (pcuHr):	9.47	Cycle Time (s):	100
	PRC Over All Lanes (%):	4.4	Total Delay Over All Lanes(pcuHr):	9.60		

Full Input Data And Results

Scenario 6: 'PM Peak Double' (FG3: 'PM PEAK', Plan 2: 'Network Control Plan 2')

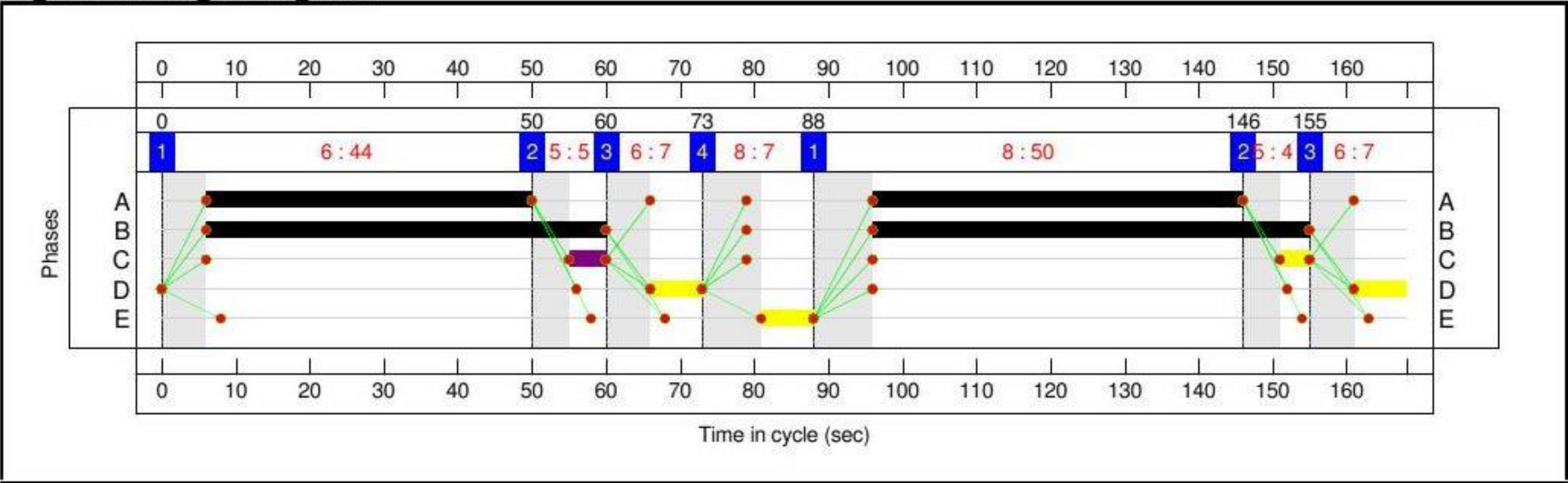
Stage Sequence Diagram



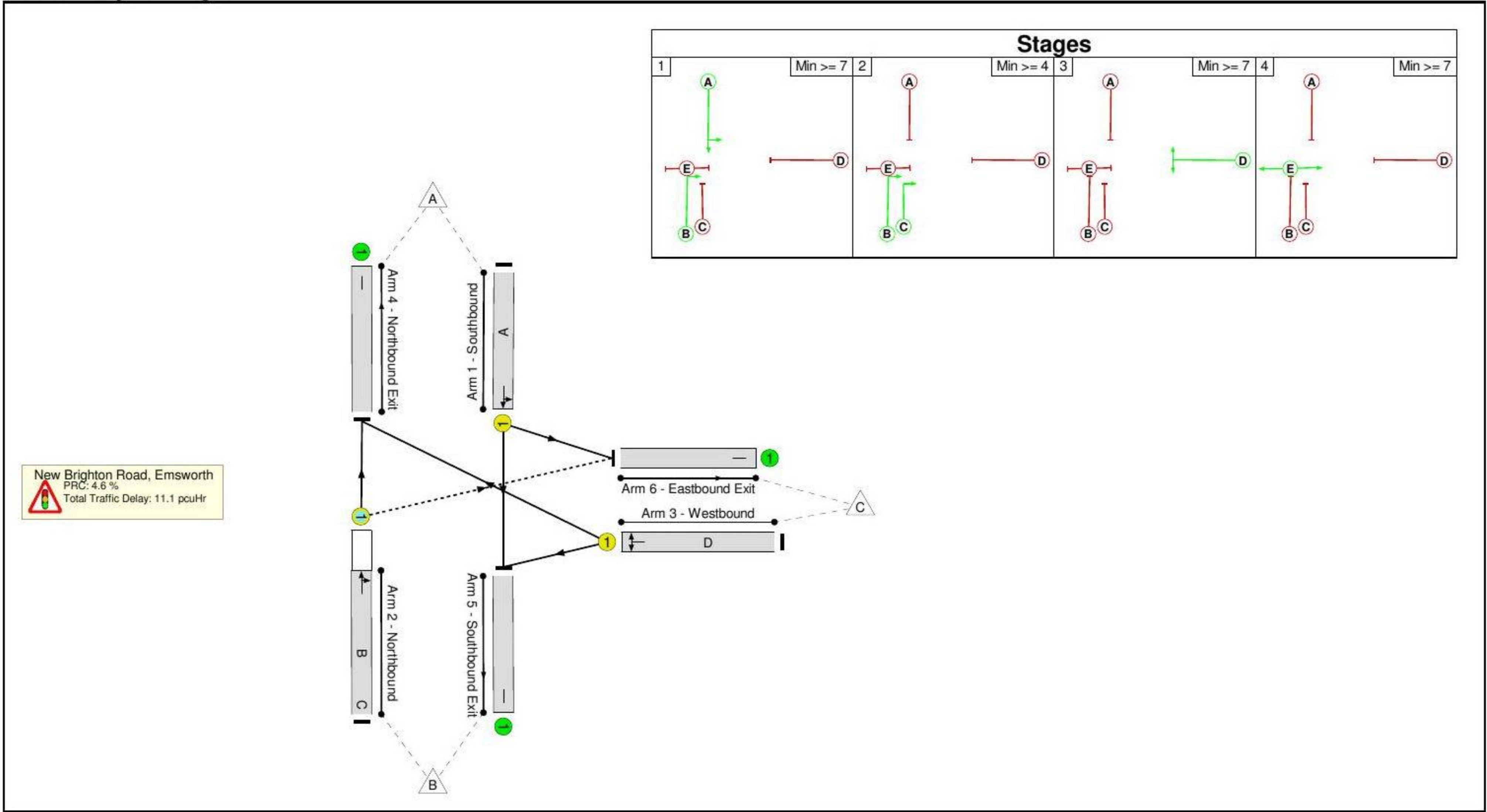
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	44	5	7	7	50	4	7
Change Point	0	50	60	73	88	146	155

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	86.0%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	86.0%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	94	-	599	2010	1149	52.2%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	113	9	828	1947	963	86.0%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	88	1805	172	51.2%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	828	1940	1940	42.7%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	88	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Traffic Signal Installation Model	-	-	35	6	3	6.7	4.4	0.0	11.1	-	-	-	-
New Brighton Road, Emsworth	-	-	35	6	3	6.7	4.4	0.0	11.1	-	-	-	-
1/1	599	599	-	-	-	1.9	0.5	-	2.5	14.9	10.6	0.5	11.2
2/1	828	828	35	6	3	3.9	2.9	0.0	6.8	29.7	21.4	2.9	24.3
3/1	88	88	-	-	-	0.9	0.5	-	1.4	58.1	2.2	0.5	2.7
4/1	828	828	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/1	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	88	88	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	4.6	Total Delay for Signalled Lanes (pcuHr):	10.75	Cycle Time (s):	168
	PRC Over All Lanes (%):	4.6	Total Delay Over All Lanes(pcuHr):	11.12		

APPENDIX H

B2148 Emsworth, Hampshire

(North of Sultan Rd)

Automatic Traffic Count

21 January 2016

Automatic Traffic Count
B2148, Emsworth, Hampshire (North of Sultan Road)
Northbound



21 January 2016

Time	Total	Number Vehicle Classes ARX Scheme										
		Cycles	Motor Cycles	Car Van	Car Van Towing	2 Axle Van Lorry	3 Axle Rigid	4 Axle Rigid	3 Axle Artic	4 Axle Artic	5 Axle Artic	6 Axle Artic
0545	0	0	0	0	0	0	0	0	0	0	0	0
0600	17	1	0	12	0	4	0	0	0	0	0	0
0615	30	0	0	29	0	1	0	0	0	0	0	0
0630	25	0	0	22	0	3	0	0	0	0	0	0
0645	40	0	0	35	0	5	0	0	0	0	0	0
0700	57	0	0	54	1	2	0	0	0	0	0	0
0715	75	0	1	69	0	5	0	0	0	0	0	0
0730	78	2	0	74	0	1	0	1	0	0	0	0
0745	128	1	1	116	0	10	0	0	0	0	0	0
0800	94	0	1	83	1	9	0	0	0	0	0	0
0815	113	0	0	109	0	4	0	0	0	0	0	0
0830	119	0	0	110	1	8	0	0	0	0	0	0
0845	170	0	2	162	1	5	0	0	0	0	0	0
0900	98	0	0	93	0	5	0	0	0	0	0	0
0915	101	0	0	93	0	8	0	0	0	0	0	0
0930	98	0	0	91	0	7	0	0	0	0	0	0
0945	81	0	0	73	2	6	0	0	0	0	0	0
1000	87	0	1	85	0	1	0	0	0	0	0	0
1015	93	0	0	80	0	13	0	0	0	0	0	0
1030	89	0	0	81	2	5	0	0	0	0	0	1
1045	67	0	0	63	1	3	0	0	0	0	0	0
1100	105	1	0	96	0	8	0	0	0	0	0	0
1115	96	0	0	93	1	2	0	0	0	0	0	0
1130	103	1	0	99	1	2	0	0	0	0	0	0
1145	108	2	0	104	0	2	0	0	0	0	0	0
1200	141	1	0	134	1	5	0	0	0	0	0	0
1215	103	0	0	100	1	2	0	0	0	0	0	0
1230	115	0	1	111	0	3	0	0	0	0	0	0
1245	117	2	1	111	0	3	0	0	0	0	0	0
1300	110	1	0	106	1	2	0	0	0	0	0	0
1315	103	1	0	98	1	3	0	0	0	0	0	0
1330	110	1	0	105	0	4	0	0	0	0	0	0
1345	75	2	1	70	1	1	0	0	0	0	0	0
1400	134	1	0	130	0	3	0	0	0	0	0	0
1415	93	0	0	88	2	3	0	0	0	0	0	0
1430	121	3	0	112	1	3	0	0	0	0	0	1
1445	135	1	0	129	0	5	0	0	0	0	0	0
1500	156	0	2	146	1	7	0	0	0	0	0	0
1515	177	0	0	162	4	8	0	0	2	0	1	0
1530	149	0	1	143	1	4	0	0	0	0	0	0
1545	140	1	2	127	1	8	1	0	0	0	0	0
1600	142	0	1	135	0	6	0	0	0	0	0	0
1615	167	0	0	155	1	10	0	0	1	0	0	0
1630	173	1	1	164	0	7	0	0	0	0	0	0
1645	191	0	1	184	1	5	0	0	0	0	0	0
1700	197	0	0	191	0	6	0	0	0	0	0	0
1715	167	1	1	160	1	4	0	0	0	0	0	0
1730	175	3	1	166	1	4	0	0	0	0	0	0
1745	170	1	1	163	2	2	0	1	0	0	0	0
07-19	5321	27	20	5018	32	214	1	2	3	0	1	2
06-22	5433	28	20	5116	32	227	1	2	3	0	1	2
06-00	5433	28	20	5116	32	227	1	2	3	0	1	2
00-00	5433	28	20	5116	32	227	1	2	3	0	1	2

Grand Total

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11
--	5433	28	20	5116	32	227	1	2	3	0	1	2

Automatic Traffic Count
B2148, Emsworth, Hampshire (North of Sultan Road)
Southbound



21 January 2016

Time	Total	Number Vehicle Classes ARX Scheme										
		Cycles	Motor Cycles	Car Van	Car Van Towing	2 Axle Van Lorry	3 Axle Rigid	4 Axle Rigid	3 Axle Artic	4 Axle Artic	5 Axle Artic	6 Axle Artic
0545	0	0	0	0	0	0	0	0	0	0	0	0
0600	38	0	0	36	0	2	0	0	0	0	0	0
0615	33	0	0	32	0	1	0	0	0	0	0	0
0630	55	0	0	52	0	3	0	0	0	0	0	0
0645	60	0	0	59	0	1	0	0	0	0	0	0
0700	89	0	1	83	0	5	0	0	0	0	0	0
0715	129	1	1	118	0	8	0	1	0	0	0	0
0730	164	3	0	150	1	10	0	0	0	0	0	0
0745	157	1	0	148	0	8	0	0	0	0	0	0
0800	189	0	0	180	2	7	0	0	0	0	0	0
0815	198	0	1	191	1	5	0	0	0	0	0	0
0830	196	2	0	187	2	4	0	0	0	1	0	0
0845	150	0	1	137	3	8	0	0	1	0	0	0
0900	182	0	0	175	0	5	1	1	0	0	0	0
0915	141	0	0	129	2	9	0	0	0	0	1	0
0930	117	0	0	111	0	6	0	0	0	0	0	0
0945	109	0	0	98	1	9	0	1	0	0	0	0
1000	111	1	1	100	0	9	0	0	0	0	0	0
1015	115	0	0	110	0	5	0	0	0	0	0	0
1030	113	2	0	105	1	5	0	0	0	0	0	0
1045	101	0	0	95	1	4	1	0	0	0	0	0
1100	98	0	0	93	0	4	0	1	0	0	0	0
1115	110	0	0	103	0	7	0	0	0	0	0	0
1130	107	0	0	100	1	5	0	0	0	1	0	0
1145	116	0	0	110	0	5	0	0	0	1	0	0
1200	116	0	0	114	0	2	0	0	0	0	0	0
1215	112	1	0	105	2	4	0	0	0	0	0	0
1230	104	1	2	92	0	6	0	3	0	0	0	0
1245	115	0	1	113	0	1	0	0	0	0	0	0
1300	109	0	0	105	0	4	0	0	0	0	0	0
1315	116	0	0	110	0	6	0	0	0	0	0	0
1330	106	1	0	102	1	2	0	0	0	0	0	0
1345	108	0	0	102	1	4	1	0	0	0	0	0
1400	96	0	0	92	0	4	0	0	0	0	0	0
1415	108	0	0	106	0	2	0	0	0	0	0	0
1430	101	0	1	98	0	2	0	0	0	0	0	0
1445	128	1	1	119	1	4	0	0	0	1	0	1
1500	120	0	0	115	2	2	0	1	0	0	0	0
1515	137	1	0	127	4	5	0	0	0	0	0	0
1530	125	0	0	120	2	3	0	0	0	0	0	0
1545	107	0	0	100	1	5	0	1	0	0	0	0
1600	136	0	0	124	1	11	0	0	0	0	0	0
1615	111	0	2	101	0	7	0	0	0	0	0	1
1630	131	0	0	119	1	9	0	2	0	0	0	0
1645	142	0	1	134	0	6	0	1	0	0	0	0
1700	120	0	0	115	1	4	0	0	0	0	0	0
1715	126	0	1	120	0	3	1	1	0	0	0	0
1730	138	0	1	131	2	3	0	1	0	0	0	0
1745	114	0	0	112	2	0	0	0	0	0	0	0
07-19	5518	15	15	5199	36	227	4	14	1	4	1	2
06-22	5704	15	15	5378	36	234	4	14	1	4	1	2
06-00	5704	15	15	5378	36	234	4	14	1	4	1	2
00-00	5704	15	15	5378	36	234	4	14	1	4	1	2

Grand Total

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11
--	5704	15	15	5378	36	234	4	14	1	4	1	2

APPENDIX I

Basic Results Summary

User and Project Details

Project:	Interbridges - 3415
Title:	Interbridges LinSig Modeling
Location:	
File name:	Brighton Road Junction LinSig Model
Author:	
Company:	RGP
Address:	
Notes:	

Scenario 1: 'Original AM' (FG1: 'Brighton Road Junction - Original, 2016, AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Interbridges LinSig Modeling	-	-	-		-	-	-	-	-	-	62.0%	14	0	0	5.1	-	-
New Brighton Road, Emsworth	-	-	-		-	-	-	-	-	-	62.0%	14	0	0	5.1	-	-
1/1	Arm 1 - Southbound Ahead Left	U	A		1	54	-	765	2019	1234	62.0%	-	-	-	3.1	14.8	12.7
2/1	Arm 2 - Northbound Right Ahead	O	B		1	54	-	520	1951	1192	43.6%	14	0	0	1.8	12.2	7.2
3/1	Arm 3 - Westbound Left Right	U	C		1	7	-	14	1864	166	8.4%	-	-	-	0.2	49.7	0.4
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
C1								PRC for Signalled Lanes (%):	45.2	Total Delay for Signalled Lanes (pcuHr):				5.09	Cycle Time (s): 90		
								PRC Over All Lanes (%):	45.2	Total Delay Over All Lanes(pcuHr):				5.09			

Scenario 2: 'Original PM' (FG2: 'Brighton Road Junction - Original, 2016, PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Interbridges LinSig Modeling	-	-	-		-	-	-	-	-	-	60.5%	10	0	0	5.2	-	-
New Brighton Road, Emsworth	-	-	-		-	-	-	-	-	-	60.5%	10	0	0	5.2	-	-
1/1	Arm 1 - Southbound Ahead Left	U	A		1	54	-	513	2023	1236	41.5%	-	-	-	1.7	11.6	6.9
2/1	Arm 2 - Northbound Right Ahead	O	B		1	54	-	722	1953	1194	60.5%	10	0	0	2.9	14.6	11.8
3/1	Arm 3 - Westbound Left Right	U	C		1	7	-	41	1904	169	24.2%	-	-	-	0.6	52.2	1.1
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
C1								PRC for Signalled Lanes (%):	48.8	Total Delay for Signalled Lanes (pcuHr):				5.18	Cycle Time (s): 90		
								PRC Over All Lanes (%):	48.8	Total Delay Over All Lanes(pcuHr):				5.18			

Scenario 3: 'Proposed 2016 AM' (FG3: 'Brighton Road Junction - Proposed Scheme, 2016, AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Interbridges LinSig Modeling	-	-	-		-	-	-	-	-	-	71.7%	16	1	1	6.8	-	-
New Brighton Road, Emsworth	-	-	-		-	-	-	-	-	-	71.7%	16	1	1	6.8	-	-
1/1	Arm 1 - Southbound Ahead Left	U	A		1	47	-	772	2018	1076	71.7%	-	-	-	4.7	21.7	15.8
2/1	Arm 2 - Northbound Right Ahead	O	B		1	54	-	524	1950	1192	44.0%	16	1	1	1.8	12.4	7.2
3/1	Arm 3 - Westbound Left Right	U	C		1	7	-	24	1862	166	14.5%	-	-	-	0.3	50.6	0.6
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
C1								PRC for Signalled Lanes (%):	25.5	Total Delay for Signalled Lanes (pcuHr):			6.80	Cycle Time (s): 90			
								PRC Over All Lanes (%):	25.5	Total Delay Over All Lanes(pcuHr):			6.80				

Scenario 4: 'Proposed 2016 PM' (FG4: 'Brighton Road Junction - Proposed Scheme, 2016, PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Interbridges LinSig Modeling	-	-	-		-	-	-	-	-	-	61.4%	18	1	1	6.3	-	-
New Brighton Road, Emsworth	-	-	-		-	-	-	-	-	-	61.4%	18	1	1	6.3	-	-
1/1	Arm 1 - Southbound Ahead Left	U	A		1	47	-	520	2020	1077	48.3%	-	-	-	2.4	16.4	8.6
2/1	Arm 2 - Northbound Right Ahead	O	B		1	54	-	732	1951	1192	61.4%	18	1	1	3.0	14.9	12.2
3/1	Arm 3 - Westbound Left Right	U	C		1	7	-	58	1903	169	34.3%	-	-	-	0.9	54.7	1.6
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
C1					PRC for Signalled Lanes (%):			46.6	Total Delay for Signalled Lanes (pcuHr):				6.28	Cycle Time (s): 90			
					PRC Over All Lanes (%):			46.6	Total Delay Over All Lanes(pcuHr):				6.28				

Scenario 5: 'Proposed 2021 AM' (FG5: 'Brighton Road Junction - Proposed Scheme, 2021 + Committed Development, AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Interbridges LinSig Modeling	-	-	-		-	-	-	-	-	-	86.1%	16	1	1	10.4	-	-
New Brighton Road, Emsworth	-	-	-		-	-	-	-	-	-	86.1%	16	1	1	10.4	-	-
1/1	Arm 1 - Southbound Ahead Left	U	A		1	47	-	927	2019	1077	86.1%	-	-	-	7.6	29.7	22.8
2/1	Arm 2 - Northbound Right Ahead	O	B		1	54	-	633	1951	1192	53.1%	16	1	1	2.4	13.8	9.5
3/1	Arm 3 - Westbound Left Right	U	C		1	7	-	24	1862	166	14.5%	-	-	-	0.3	50.6	0.6
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
C1					PRC for Signalled Lanes (%):			4.5	Total Delay for Signalled Lanes (pcuHr):				10.41	Cycle Time (s): 90			
					PRC Over All Lanes (%):			4.5	Total Delay Over All Lanes(pcuHr):				10.41				

Scenario 6: 'Proposed 2021 PM' (FG6: 'Brighton Road Junction - Proposed Scheme, 2021 + Committed Development, PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Interbridges LinSig Modeling	-	-	-		-	-	-	-	-	-	74.4%	18	1	1	8.7	-	-	
New Brighton Road, Emsworth	-	-	-		-	-	-	-	-	-	74.4%	18	1	1	8.7	-	-	
1/1	Arm 1 - Southbound Ahead Left	U	A		1	47	-	639	2021	1078	59.3%	-	-	-	3.3	18.4	11.6	
2/1	Arm 2 - Northbound Right Ahead	O	B		1	54	-	888	1952	1193	74.4%	18	1	1	4.5	18.4	17.2	
3/1	Arm 3 - Westbound Left Right	U	C		1	7	-	58	1903	169	34.3%	-	-	-	0.9	54.7	1.6	
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	
			C1	PRC for Signalled Lanes (%):				20.9	Total Delay for Signalled Lanes (pcuHr):				8.70	Cycle Time (s):				90
				PRC Over All Lanes (%):				20.9	Total Delay Over All Lanes(pcuHr):				8.70					

APPENDIX J



Data selections

Trip end selections

Trip end by time period selections

Select time period:

Weekday AM peak period (0700 - 0959)

Trip end type

- ☐ Production/Attraction
- ☒ Origin/Destination

Select data type

- ☒ Growth factors
- ☐ Future year minus base year
- ☐ Base year data
- ☐ Future year data

Walk Cycle Car Driver Car Passenger Bus/Coach Rail/Underground Combined Modes

Area Description		All Purposes	
Level	Name	Origin	Destination
Authority	Havant	1.0328	1.0324
24UH4	Emsworth	1.052	1.0418

Reset Selections

Results

NTM Traffic Growth Calculations

1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

3: Select area type:

4: Select road type:

5: Select which area it serves:

☒ Havant

☒ Emsworth (24UH4)

☒ Urban

☐ Rural

☐ All

☐ Motorway

☐ Trunk

☒ Principal

☐ Minor

☐ All

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Authority	Havant	1.0770
24UH4	Emsworth	1.0909



Data selections

Trip end selections

Trip end by time period selections

Select time period:

Weekday PM peak period (1600 - 1859)

Trip end type

- ☐ Production/Attraction
- ☒ Origin/Destination

Select data type

- ☒ Growth factors
- ☐ Future year minus base year
- ☐ Base year data
- ☐ Future year data

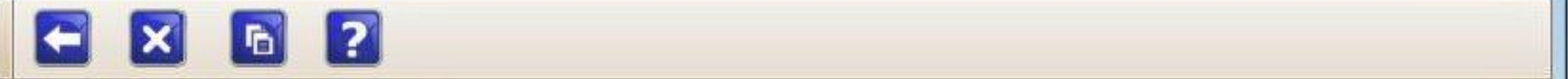
Walk Cycle Car Driver Car Passenger Bus/Coach Rail/Underground Combined Modes

Area Description		All Purposes	
Level	Name	Origin	Destination
Authority	Havant	1.0355	1.0351
24UH4	Emsworth	1.0474	1.0526

Results

Reset Selections

NTM Traffic Growth Calculations



1: Select NTM Dataset:

NTM Dataset Description	From	To
NTM AF09 Dataset	2003	2035
NTM AF08 Dataset	2003	2025

2: Select Areas to make up the geographic region:

☒ Havant

☒ Emsworth (24UH4)

3. Select area type:

☒ Urban

☐ Rural

☐ All

4. Select road type:

☐ Motorway

☐ Trunk

☒ Principal

☐ Minor

☐ All

5. Select which area it serves:

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Authority	Havant	1.0809
24UH4	Emsworth	1.0959