Isle of Wight Council

Isle of Wight Junction Assessment and Design

Junction Feasibility Study – Binstead Road / Pellhurst Road

A090129-99

February 2018

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1 Introduction

General

1.1 WYG have been appointed by the Isle of Wight (IOW) Council to undertake a feasibility study for a series of highway junctions located throughout the island, with a particular focus on the towns of Newport, Ryde, Shanklin and Sandown. The study has been carried out to identify traffic management issues impacting on all road users and develop proposals that will form part of a package of schemes to be progressed as part of the Council's Local Implementation Plan (LIP) process.

1.2 IOW Council has identified 15 highway junctions which currently experience traffic issues such as congestion and queuing. The study considers where the main issues lie in relation to traffic movement, road safety, bus operation, pedestrian and cycle provision, public realm, parking provision and servicing. Each of the 15 highway junctions are to be supplemented by a feasibility study report, with traffic modelling software used to test the various proposals in order to identify a range of measures aimed at improving the behaviour and movement of traffic at each junction.

1.3 The study identified 15 key junctions, which are summarised in **Table 1.1** below:

Table 1.1 List of Junctions

ID Num	Junction Name	Area	Junction Type
1	St Mary's Roundabout	Newport	4 arm Roundabout
2	Coppins Bridge Gyratory	Newport	Gyratory
3	Hunnyhill/Hunnycross Way	Newport	Signalised Crossroads
4	Hunnycross Way/Riverway	Newport	3x Roundabouts
5	Medina Way/Coppins Bridge Roundabout	Newport	Gyratory
6	Queens Road/West Street	Ryde	5 arm Signalised Jct
7	Argyll St/West St	Ryde	Signalised Crossroads
8	Binstead Road/Pellhurst Road	Ryde	3 arm Signalised Jct
9	Quarr Hill/Newnham Road	Ryde	4 arm Roundabout
10	Marlborough Road/Great Preston Road	Ryde	Signalised Crossroads
11	High Street/Victoria Avenue, Shanklin	Shanklin	3 arm Signalised Jct
12	Newport Road/Industrial Way	Shanklin	4 arm Roundabout
13	Newport Road/Sandown Road	Shanklin	3 arm Signalised Jct
14	Lake Hill/The Fairway	Shanklin	Triangular 3x Priority Jcts
15	Morton Common/Perowne Way	Sandown	3 arm Signalised Jct

Site Location & Background

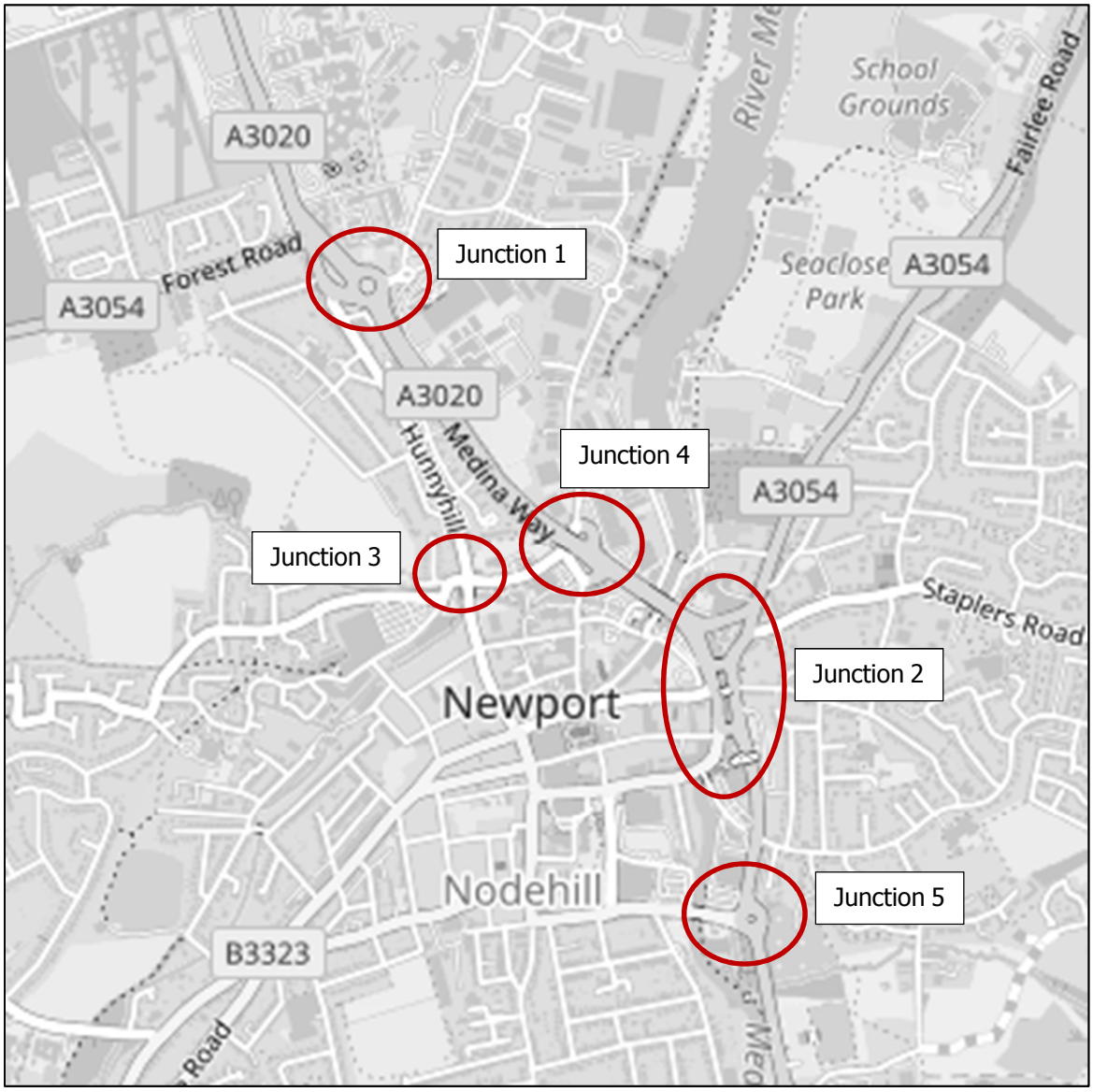
1.4 The Isle of Wight is an island located in the English Channel, approximately 6km off the Hampshire coast. It is England's largest and second most populous island. The towns of Newport, Ryde, Shanklin and Sandown comprise the project study area for this feasibility study.

1.5 The town of Newport is the largest town on the IOW and is located in the centre of the island, the town of Ryde is located approximately 10km to the east of Newport, on the north-eastern coast of the island whilst Shanklin and Sandown are located approximately 9km to the south of Ryde and 10km to the south east of Newport.

1.6 The IOW as a whole is characterised by high car ownership levels, with 77.5% of households on the island owning a car or van, as indicated by the 2011 Census. Thus, the private vehicle remains the most convenient and fastest way to travel around the island.

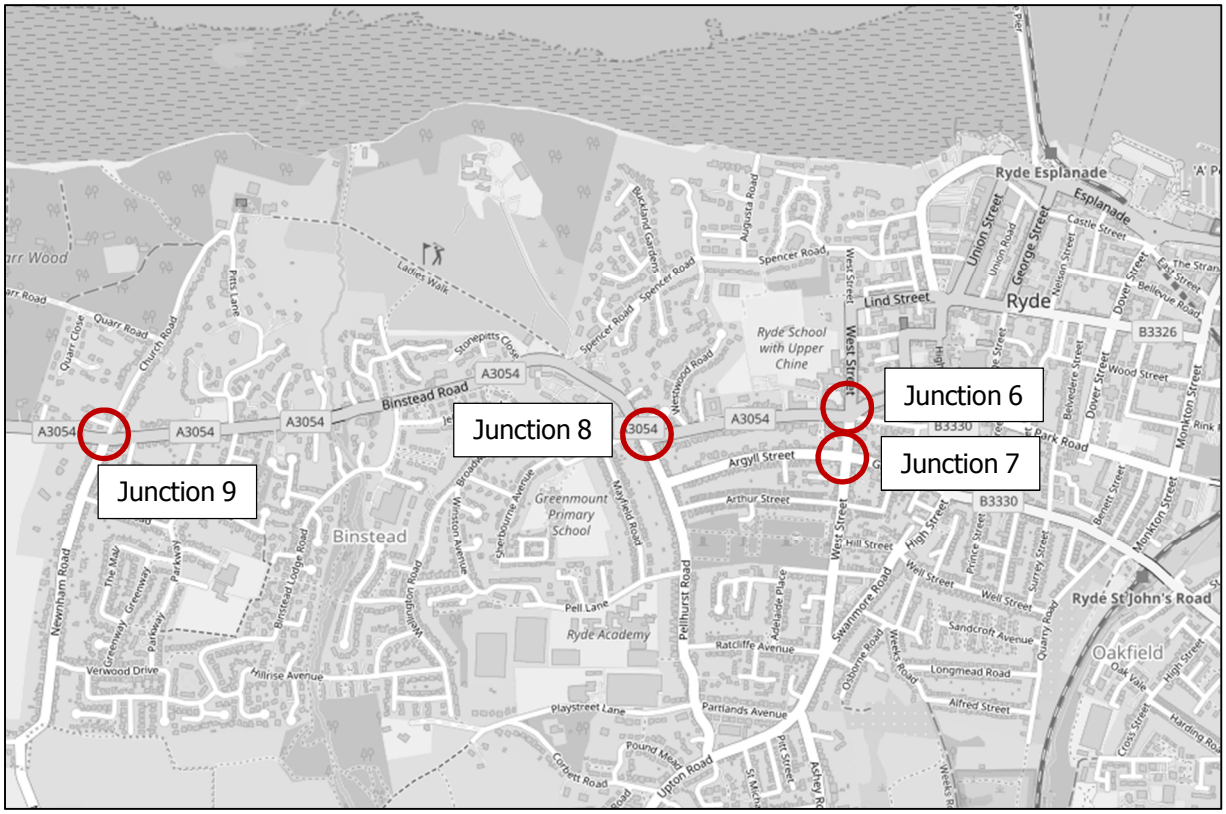
1.7 **Figures 1.1 – 1.3** presents the locations of all 15 junctions within Newport, Ryde and Shanklin & Sandown, which comprise the feasibility study area.

Figure 1.1 Feasibility Study Area – Newport Junctions



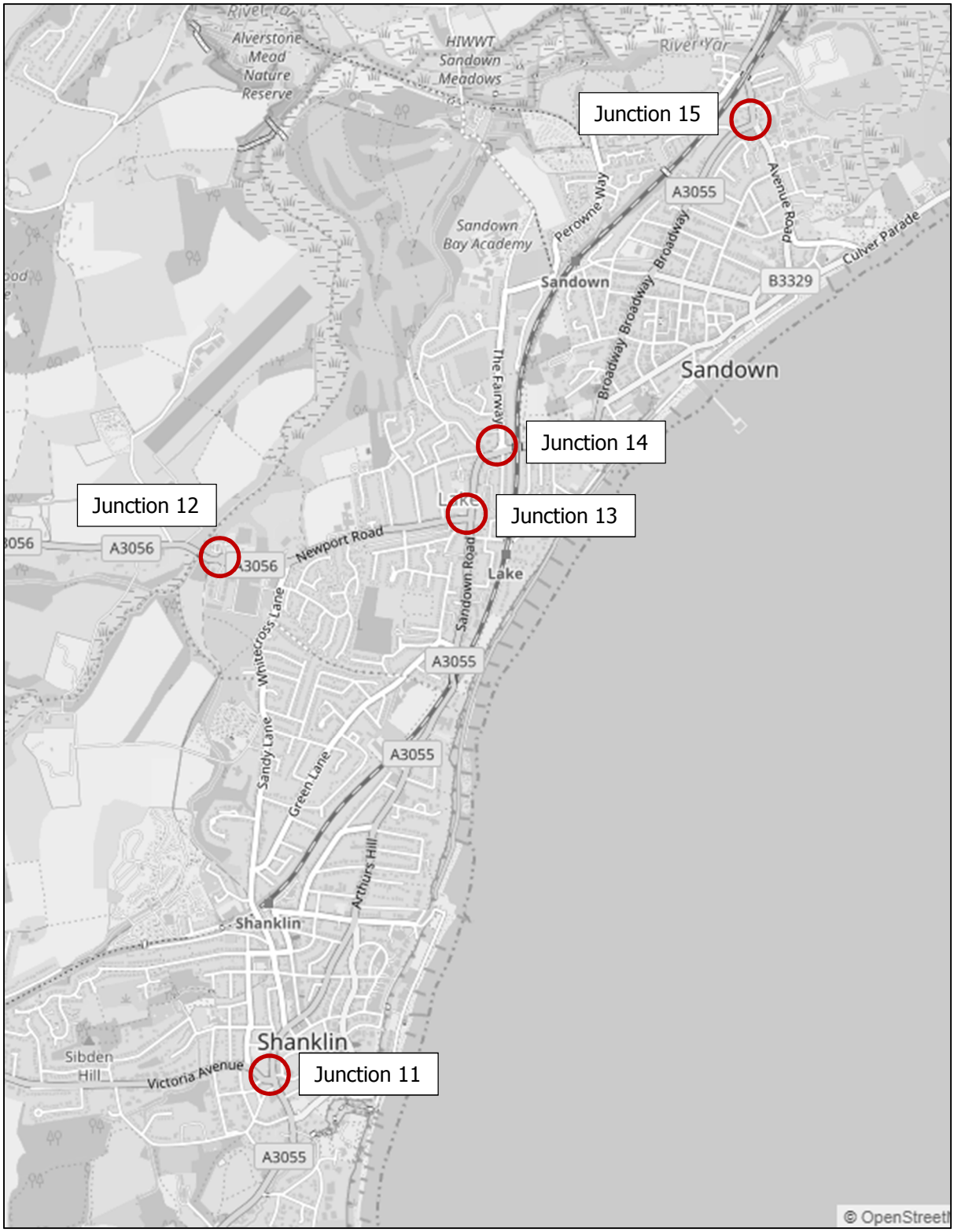
Source: OpenStreetMap with WYG Annotations, September 2017

Figure 1.2 Feasibility Study Area – Ryde Junctions



Source: OpenStreetMap, September 2017

Figure 1.3 Feasibility Study Area – Sandown & Shanklin Junctions

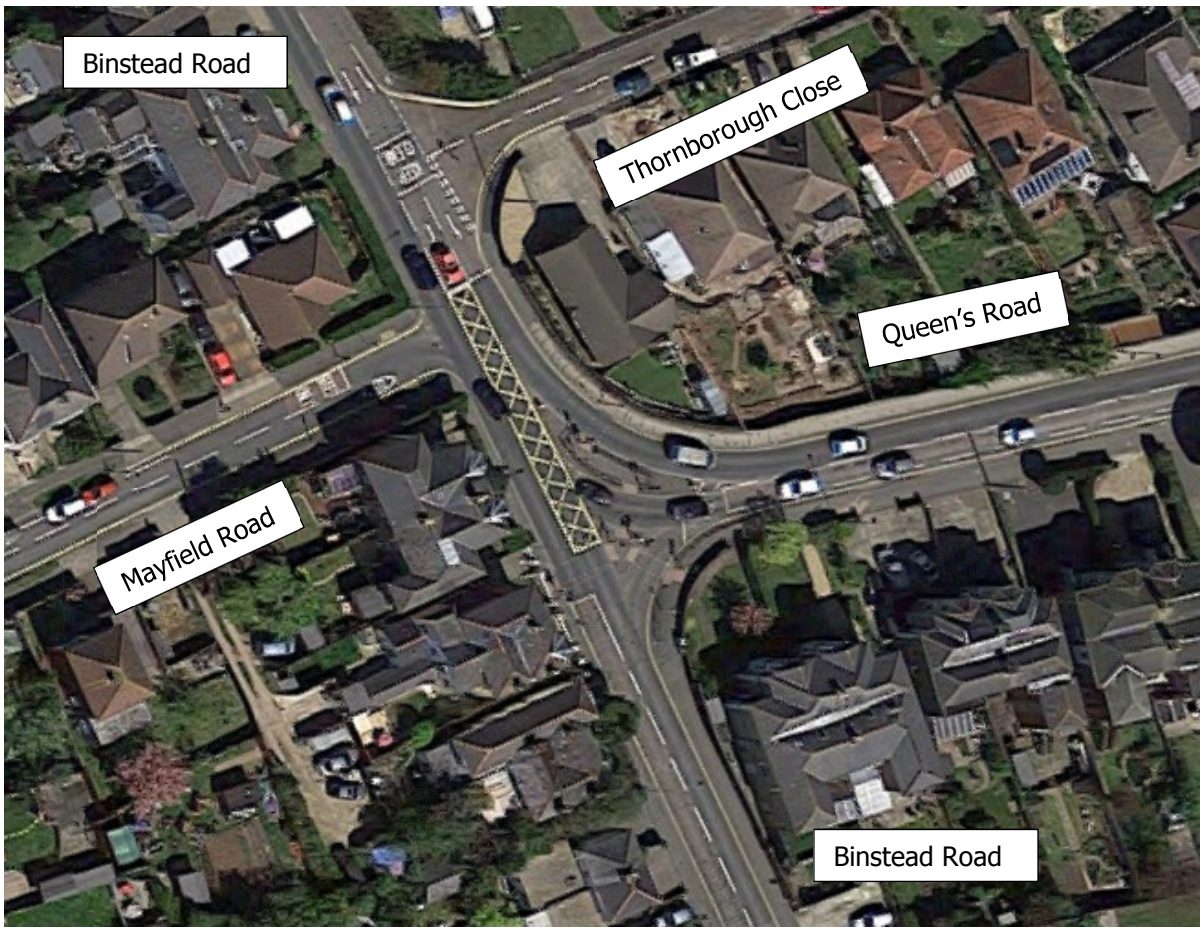


Source: OpenStreetMap, September 2017

1.8 Each of the 15 junctions are to be addressed within an individual feasibility study report. This report focuses on Junction 8, the highway junction of Binstead Road / Pellhurst Road / Queen's Road which comprises a signalised junction in Ryde.

1.9 **Figure 1.4** presents a site location plan of the junction.

Figure 1.4 Junction Location Plan



Source: Google Satellite Image, August 2017

Scope/Purpose of Study

1.10 The purpose of the study is to identify through traffic modelling software, where the main issues lie in terms of capacity, congestion and queuing at the junction. As part of the traffic modelling, this is to inform the type of highway improvements and design required at each junction.

Report Structure

1.11 The remainder of this document is structured as follows:

- **Chapter 2: Existing Conditions** - summarising the existing conditions at the junction, providing background to the junction, local highway network and detailing the current traffic issues experienced at the junction;
- **Chapter 3: Modelling Methodology** - setting-out details of tasks undertaken to build traffic models of the study area using specialist software, including results of option testing for the junction of interest;
- **Chapter 4: Preferred Scheme** - detailing the preferred scheme for highway improvements at the junction and their expected outcome; and
- **Chapter 5: Summary and Conclusions** - summarising the feasibility study process and outlining the key findings of the assessment.

1.12 All Appendices are included at the end of this report for information.

2 Existing Conditions

General

2.1 This chapter establishes the existing, or 'baseline', highway conditions which currently prevail in the area surrounding the junction. It describes the existing local highway network and any traffic issues present at the junction.

2.2 Baseline studies have been informed by detailed site visits and desk-based research carried out between August and September 2017.

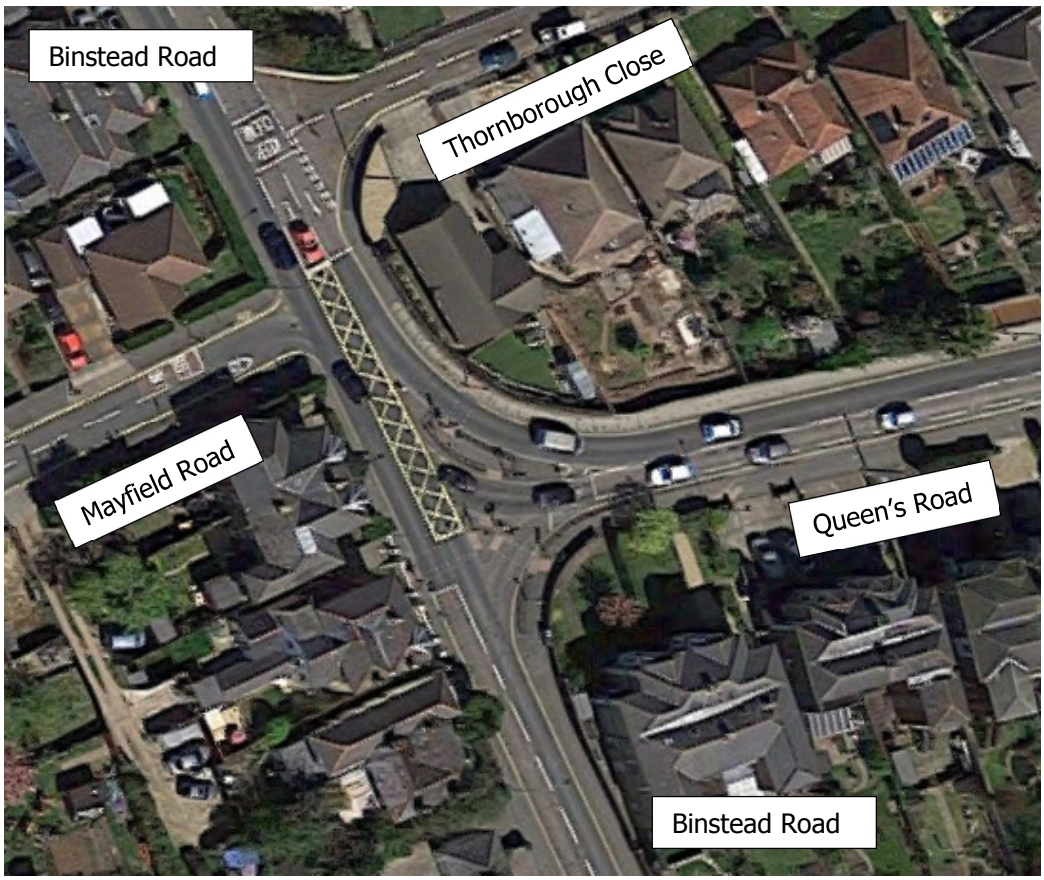
2.3 This report focuses on the 'T' junction at Queen's Road / Pellhurst Road / Binstead Road in Ryde.

Study Area/Junction Background

2.4 The Queen's Road / Pellhurst Road / Binstead Road 'T' junction is located on the south-western edge of Ryde, approximately 1km to Ryde town centre. The A3054 Binstead Road joins Pellhurst Road with Queen's Road forming the northern arm of the 'T' junction.

2.5 A3054 Binstead Road forms the main route to Fishbourne, Pellhurst Road provides the main access to the southern point of Ryde, allowing further access to numerous villages and small towns via Upton Road, to the north is Ryde Golf Club and Merrydale, to the east is Ryde School and Upper Chine and the town centre, to the south is Ryde Cemetery, Ryde Academy and Ryde Lawn Tennis and Croquet Club and to the west is Greenmount Community Primary School and Binstead. A location plan of the junction is provided in **Figure 2.1**.

Figure 2.1 Junction Location Plan



Source: Google Image, August 2017

Data Collection

2.6 Traffic flow surveys were undertaken by MHC Traffic Ltd on Thursday 20th July 2017 to establish the baseline traffic conditions for the local highway network on the IOW. A range of surveys were undertaken including:

- Manual Classified Counts (MCC) for turning flow information at 15 key junctions on the IOW;
- Automatic Traffic Counts (ATCs) were placed at strategic locations on the network allowing the speeds to be obtained at each of these junctions;
- Queue length surveys at stop lines of all 15 junctions; and
- Traffic video surveys at each of the 15 junctions.

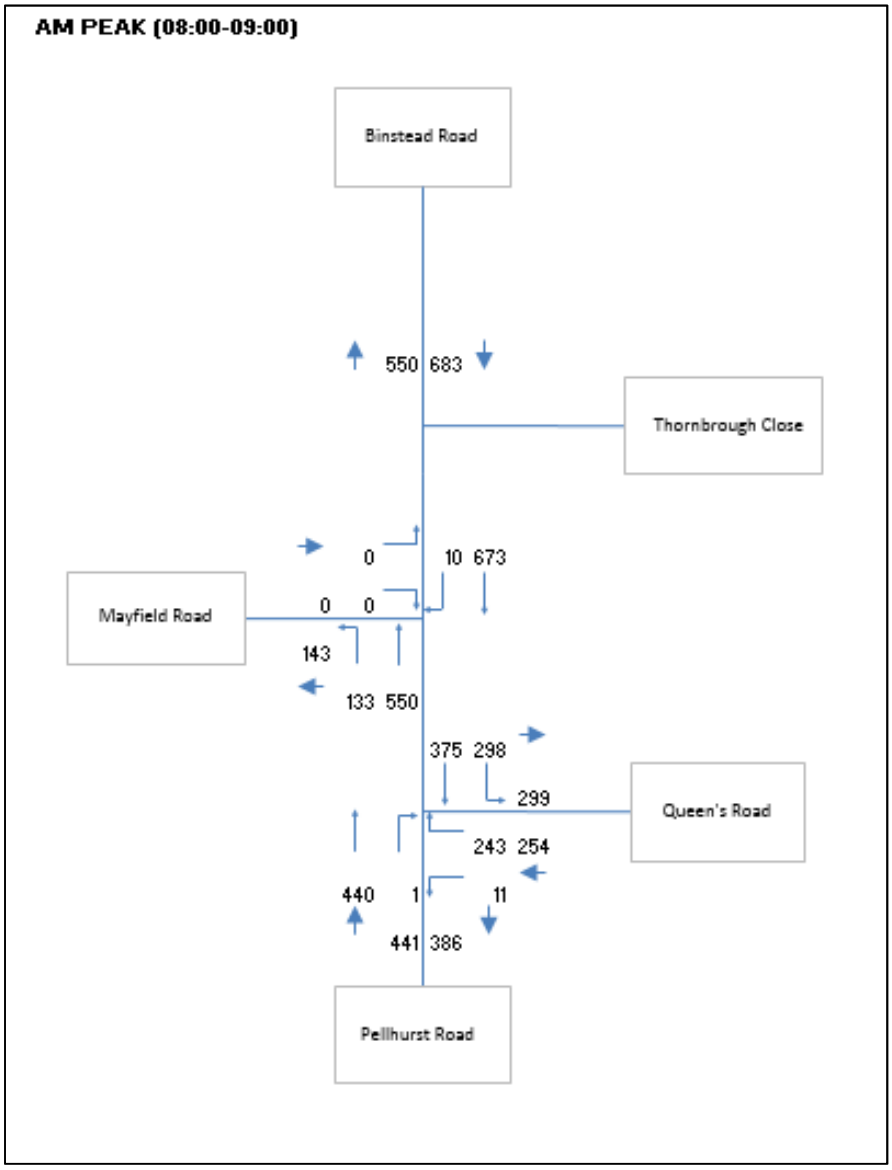
2.7 The surveys allowed for the identification of turning movements at all key junctions as well as routing within the IOW. Signal timing data was additionally supplied by the IOW Council for use for the correct modelling of signal timing data.

2.8 The data collected as part of the surveys was used directly for calibrating and validating the base scenario for both the Junctions 9 and LinSig models. Video footage of the surveyed junctions was additionally reviewed to ensure that the base models reflect the on-street road conditions as closely as possible.

Base Traffic Flows

2.9 This section details the current traffic flows and queuing at the junction, as indicated by the survey data. These are shown in **Figures 2.2** and **2.3**.

Figure 2.2 AM Traffic Flows (PCUs)

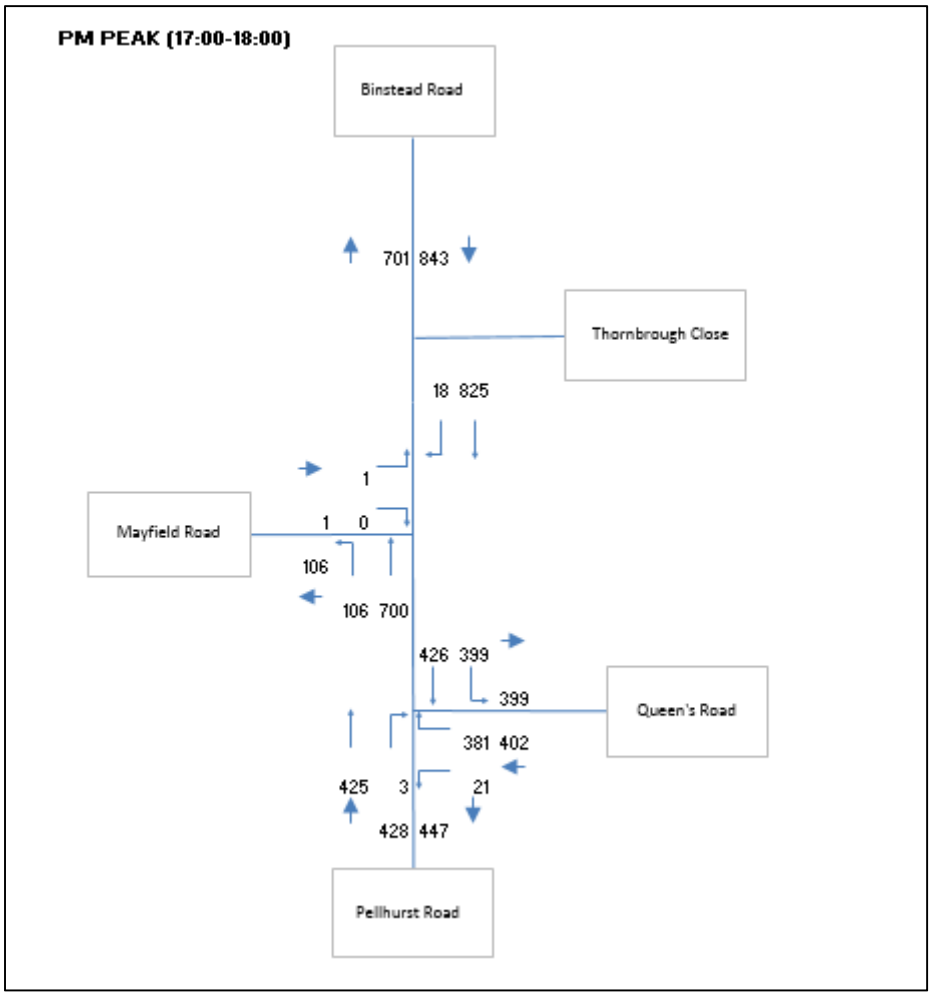


2.10 As shown in Figure 2.2, the highest traffic flows are those travelling northbound in the AM peak (08:00-09:00) with 550 PCUs undertaking this movement. The high northbound flows are likely to be associated with those commuting to Newport for work. Southbound flows are also particularly high, with 375 PCUs undertaking this movement.

2.11 In terms of queues, the majority of queuing occurs on Pellhurst Road (S), which is largely due to high traffic flows travelling from Argyll Street to Pellhurst Road (northbound), at the Argyll Street junction located further to the south along Pellhurst Road. The maximum observed queue recorded on Pellhurst Road (S) was eight vehicles.

2.12 Some queuing also occurs on Queen's Road and Binstead Road, with a maximum observed queue of five vehicles recorded on these arms. **Figure 2.3** below shows the traffic flows for the PM peak (17:00-18:00).

Figure 2.3 PM Traffic Flows (PCUs)



2.13 As shown in Figure 2.3, the highest traffic flows are those travelling northbound in the PM peak (17:00-18:00), with 700 PCUs undertaking this movement. Southbound flows are also particularly high, with 426 PCUs recorded.

2.14 Again as observed in the AM peak, the majority of queuing also occurs on Pellhurst Road in the PM peak. The maximum observed queue recorded on Pellhurst Road was thirteen vehicles. Queuing also occurs on Binstead Road and Queen's Road, with maximum observed queues of nine and eight vehicles, respectively.

Existing Traffic Issues

2.15 At present, the junction is known to experience some queuing, of which has been informed by a site visit and traffic video surveys at the junction. It was observed that congestion and queuing is particularly evident on Pellhurst Road.

2.16 As previously noted, there is a significant flow of vehicles travelling northbound and southbound on Pellhurst Road/Binstead Road in both the AM (08:00-09:00) and PM (17:00-18:00) peaks, this is largely due to high traffic flows travelling from Argyll Street to Pellhurst Road (northbound).

2.17 In general, there is minimal queuing on Queen's Road in both the AM (08:00-09:00) and PM (17:00-18:00) peaks.

Local Highway Network

A3054 Binstead Road

2.18 Binstead Road is a two-way single carriageway road with footways either side of the carriageway and a signalised pedestrian island on the approach to Queen's Road. The road is subject to a 30mph speed restriction.

Mayfield Road

2.19 Mayfield Road is a two-way single carriageway road, however, access is permitted only for residents heading westbound onto the road, whilst vehicular access eastbound onto the junction is restricted to buses only. Vehicular access is permitted left and right into Mayfield Road, from Pellhurst/Binstead Road. Footways are provided either side of the carriageway. The road provides access to Greenmount Community Primary School and is subject to a 20mph speed restriction as a result.

Queen's Road

2.20 Queen's Road is a two-way single carriageway road with footways either side of the carriageway. Highfield Nursing Home, Ryde Junior School and All Saints church are all situated along Queen's Road.

2.21 There is a mandatory cycle lane approximately 50m in length that runs up until the stop line at the western end of Queen's Road, leading onto Binstead Road. The road is also subject to a 30mph speed restriction.

Pellhurst Road

2.22 Pellhurst Road is a two-way single carriageway road with footways either side of the carriageway. Ryde Academy, Ryde Sports Centre, Ryde Health and Wellbeing Centre can all be accessed via Pellhurst Road. It forms one of the main routes to the south leading to Upton, via Upton Road. The road is subject to a 30mph speed restriction.

Utilities Assessment

2.23 A utilities assessment has been carried out at the junction as an indication of which utilities are present within the vicinity of the junction. The following utilities which may be affected by improvements at the junction are listed below:

- Isle of Wight Council
- Openreach – (British Telecommunications)
- Scottish and Southern Electricity – Gas
- Scottish and Southern Electricity – High Voltage
- Scottish and Southern Electricity – Low Voltage
- SGN – Southern Gas Networks
- Southern Water – Sewer
- Southern Water – Water

3 Modelling Methodology

Introduction

3.1 Traffic modelling has been undertaken as part of the feasibility study, identifying how the local highway network on the Isle of Wight currently operates and how it might operate following the proposed improvements to the identified junctions. LinSig v3 is the latest version of JCT's industry-standard software for modelling signalised junctions and urban road networks and has therefore been used to model this junction.

3.2 The modelling has been undertaken for two weekday periods considered to be the network peaks in terms of traffic volumes, with the AM peak between 08:00 and 09:00 and the PM peak between 17:00 and 18:00. These peaks were identified through analysis of traffic count data. Initially, Base Year modelling was using survey data collected in July 2017. Future Year modelling was subsequently carried out in order to test the proposed changes to the network and assess the scale of impact on road traffic.

Explanation of Results

3.3 Queue lengths at junction approaches are usually expressed in terms of 'Passenger Car Equivalent' (PCE) or 'Passenger Car Unit' (PCU). A standard car typically has a PCE/PCU value of 1.0; larger vehicles, such as goods vehicles, typically have PCE/PCU values greater than 1.0 and smaller vehicles, such as motorcycles, typically have PCE/PCU values less than 1.0.

3.4 The Degree of Saturation (DoS) is a ratio of demand to capacity on each approach to a signalised junction, with a value of 100% meaning that demand and capacity are equal and no further traffic is able to progress through the junction. Values over 85% are typically regarded as suffering from traffic congestion, with queues of vehicles beginning to form. The term Practical Reserve Capacity (PRC) is often used to refer to the available spare capacity at a junction. A negative PRC indicates that the junction is over capacity.

3.5 It is noted that a DoS of 90% or over recorded on an approach to the junction is deemed as approaching capacity and therefore a DoS of under 90% is considered acceptable.

Base Year Modelling

3.6 Data was collected as part of the surveys was compared to the base year outputs to match modelled flows and queue patterns to those observed, within acceptable variations. The results for the A3054 Binstead Road / Pellhurst Road / Queen's Road junctions are summarised in **Table 3.1**, with full output results included in **Appendix B**.

LinSig Modelling Results – 2017 Base Year

Table 3.1 2017 Base Year Assessment: Existing Junction

Arm Cycle time 55 secs	AM peak			PM peak		
	Deg Sat (%)	Mean Max Queue (pcu)	Av. Delay Per PCU (s/pcu)	Deg Sat (%)	Mean Max Queue (pcu)	Av. Delay Per PCU (s/pcu)
1/2+1/1 – Binstead Road	60.7%	5.4	9.8	80.1%	9.9	16.8
2/1 – Queen's Road	61.5%	4.2	30.0	78.6%	7.3	33.9
3/1 – Pellhurst Road	41.4%	4.2	10.3	45.3%	4.7	12.7
PRC	46.3%			12.3%		
Total Delay (pcu/hr)	5.19			9.10		

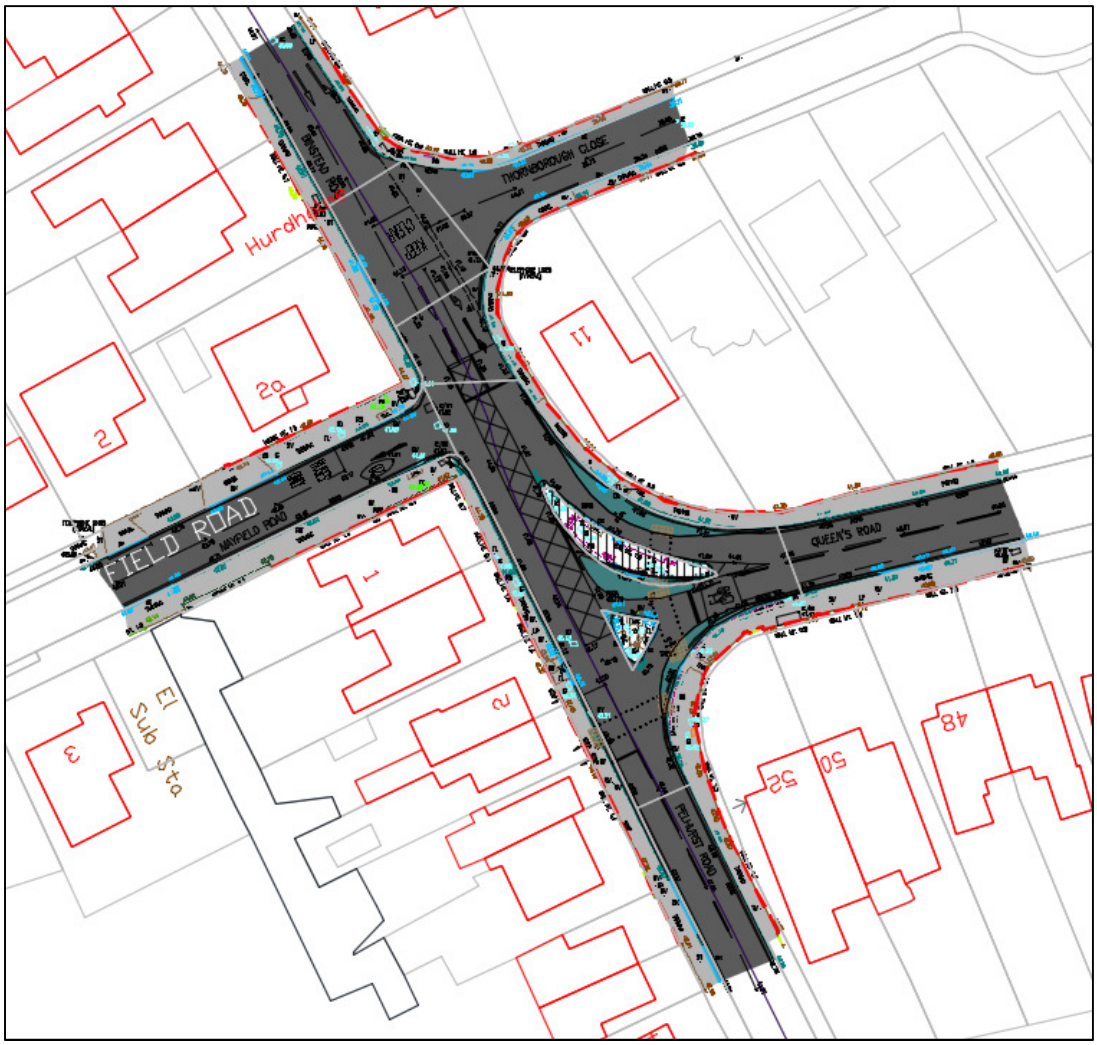
3.7 The base year results as shown in Table 3.1, indicate that the existing junction operates within recommended capacity during the AM and PM peaks. For instance, the junction currently records a PRC of 46.3% in the AM peak and a PRC of 12.3% in the PM peak. The highest modelled queues were recorded on Binstead Road in the PM peak, which comprised 10 vehicles. Overall, the junction performs well with sufficient spare capacity in the 2017 Base Year, however it is noted that the PM peak exhibits lower reserve capacity in comparison to the AM peak.

Proposed Scheme

3.8 A proposed scheme has been developed and is to be tested as part of the traffic modelling. This scheme includes relocating the pedestrian crossings on Queen's Road and Pellhurst Road, with one of the central pedestrian islands removed, resulting in a reduction of two pedestrian crossings. There is also to be a realignment of the kerb line between Queen's Road and Binstead Road / Pellhurst Road, on the northern and southern side of the carriageway. Mayfield Road is to be made one-way eastbound only, with traffic only permitted onto the junction. This scheme is primarily focused on improving the crossing facilities and public realm for pedestrians.

3.9 The proposed layout is presented below in **Figure 3.1**. The 1:200 drawing is included at **Appendix A**.

Figure 3.1 Proposed Junction Layout



Source: WYG Drawing A090129-99-008, August 2017

Forecast/Future Year Modelling

3.10 Forecast or Future Year modelling was undertaken for the existing junction and the proposed junction design (as shown in Figure 3.1), to provide a comparison between the two junction designs. The results for the existing and proposed junction design are summarised in **Tables 3.2** and **3.3**, with full output results included in **Appendix B**.

LinSig Modelling Results - Future Year

Table 3.2 2034 Future Year Assessment: Existing Junction

Arm Cycle time 55 secs	AM peak			PM peak		
	Deg Sat (%)	Mean Max Queue (pcu)	Av. Delay Per PCU (s/pcu)	Deg Sat (%)	Mean Max Queue (pcu)	Av. Delay Per PCU (s/pcu)
1/2+1/1 – Binstead Road	92.9%	15.8	34.4	115.0%	86.9	270.5
2/1 – Queen's Road	80.6%	6.4	43.3	116.9%	47.3	320.6
3/1 – Pellhurst Road	54.5%	5.7	11.6	52.8%	5.6	11.9
PRC	-3.2%			-29.8%		
Total Delay (pcu/hr)	13.40			121.77		

3.11 The Future Year scenario indicates that the existing junction is expected to exceed maximum capacity in both peak periods, particularly so in the PM peak. Binstead Road suffers the largest reduction in capacity, with its DoS recorded as over 90% in the AM and over 100% in the PM. There is also predicted to be a significant worsening in queuing on Binstead Road and Queen's Road. Overall, the PRC is predicted to be -3.2% in the AM peak and -29.8% in the PM peak.

LinSig Modelling Results – Proposals

Table 3.3 2034 Future Year Assessment: Proposed Junction

Arm Cycle time 55 secs	AM peak			PM peak		
	Deg Sat (%)	Mean Max Queue (pcu)	Av. Delay Per PCU (s/pcu)	Deg Sat (%)	Mean Max Queue (pcu)	Av. Delay Per PCU (s/pcu)
1/2+1/1 – Binstead Road	195.6%	221.9	941.2	191.0%	266.0	917.5
2/1 – Queen's Road	123.7%	37.8	411.4	194.2%	132.0	955.1
3/1 – Pellhurst Road	76.8%	8.6	25.2	71.9%	7.9	22.7
PRC	-117.4%			-115.8%		
Total Delay (pcu/hr)	256.60			392.66		

3.12 As shown in Table 3.3 above, the proposed junction design actually does not provide any improvements to junction capacity, and in fact it worsens capacity significantly, in comparison to the existing junction design. Thus, it can be concluded that the proposed junction design is not feasible.

Outcome / Conclusions

3.13 The Base Year scenario demonstrated that the existing junction currently operates with sufficient spare capacity in both peak periods, however, the junction is expected to go over capacity in the Future Year scenario. A proposed junction design was tested whereby the public realm and pedestrian crossings at the junction were enhanced, this results in a reduction of two pedestrian crossings. It was found that this design actually causes the junction to perform a lot worse than the existing junction. It is considered that the cause of this is due to there being fewer pedestrian crossings, which means

there are fewer opportunities for traffic phases to run, therefore reducing its efficiency. With the existing junction, there were a number of pedestrian crossings which could run independently of each other, and thus allowing the traffic phases to operate more independently as a result. Subsequently, it can be concluded that there is little that can be done physically to the junction to improve its efficiency and capacity.

4 Summary and Conclusions

Summary

4.1 WYG have been appointed by the Isle of Wight (IOW) Council to undertake a feasibility study for a series of highway junctions located throughout the island, with a particular focus on the towns of Newport, Ryde, Shanklin and Sandown. The study has been carried out to identify traffic management issues impacting on all road users and develop proposals that will form part of a package of schemes to be progressed as part of the Council's Local Implementation Plan (LIP) process.

4.2 IOW Council has identified 15 highway junctions which currently experience traffic issues such as congestion and queuing. The study considers where the main issues lie in relation to traffic movement, road safety, bus operation, pedestrian and cycle provision, public realm, parking provision and servicing. Each of the 15 highway junctions are to be supplemented by a feasibility study report, with traffic modelling software used to test the various proposals in order to identify a range of measures aimed at improving the behaviour and movement of traffic at each junction.

4.3 The Queen's Road / Pellhurst Road / Binstead Road 'T' junction is located on the south-western edge of Ryde, approximately 1km to Ryde town centre. The A3054 Binstead Road joins Pellhurst Road with Queen's Road forming the northern arm of the 'T' junction.

4.4 A3054 Binstead Road forms the main route to Fishbourne, whilst Pellhurst Road provides the main access to the southern point of Ryde, and further onto numerous villages and small towns via Upton Road. To the north is Ryde Golf Club and Merrydale, to the east is Ryde School and Upper Chine and the town centre, to the south is Ryde Cemetery, Ryde Academy, Ryde Lawn Tennis and Croquet Club and to the west is Greenmount Community Primary School and Binstead. At present, the junction is known to experience some queuing, of which has been informed by a site visit and traffic video surveys at the junction. It was observed that congestion and queuing is particularly evident on Pellhurst Road.

4.5 The traffic signalling software LinSig V3 was used to model this signalised junction. The modelling was undertaken for two weekday periods considered to be the network peaks in terms of traffic volumes, with the AM peak between 08:00 and 09:00 and the PM peak between 17:00 and 18:00. The Base Year results indicated that the existing junction currently performs well with sufficient spare capacity, however it is noted that the PM peak exhibits lower reserve capacity in comparison to the AM peak. For instance, the junction records a PRC of 46.3% in the AM peak and a PRC of 12.3% in the PM peak. In terms of queuing, the highest modelled queues were recorded on Binstead Road, which comprised 10 vehicles.

4.6 A proposed scheme was developed and tested as part of the traffic modelling. This scheme included relocating the pedestrian crossings on Queen's Road and Pellhurst Road, with one of the central pedestrian islands removed, resulting in a reduction of two pedestrian crossings. As well as this, there would be a realignment of the kerb line between Queen's Road and Binstead Road / Pellhurst Road, on the northern and southern side of the carriageway. Mayfield Road would be made one-way eastbound only, with traffic only permitted onto the junction. This scheme is primarily focused on improving the crossing facilities and public realm for pedestrians.

4.7 With the proposed junction design tested, the results demonstrated that the proposed junction design actually does not provide any improvements to junction capacity, and in fact it worsens capacity significantly, in comparison to the existing junction. It is noted that due to there being fewer pedestrian crossings, there are fewer opportunities for traffic phases to run, therefore reducing the junction's efficiency. With the existing junction, there were a number of pedestrian crossings which could run independently of each other, and thus allowing the traffic phases to operate more independently as a result. Therefore, it can be concluded that the proposed junction design is not feasible.

Conclusions

4.8 As part of this feasibility study, it has been demonstrated from the traffic modelling that there is little that can be done physically to the junction to improve its efficiency and capacity. As a result, it is recommended that the junction should remain in its existing form, as this is deemed the most efficient design for overall junction capacity. It is also recommended that non-physical measures such as extending the cycle time at the junction should be explored as an alternative, in potentially providing additional capacity.

Appendix A
1:200 DRAWINGS

Option 1

Option 2

Proposed access to be one way only

stop line relocated

Proposed new kerbline

Proposed new kerbline

Proposed pedestrian crossing with dropped kerbs and tactile paving

Chamber to be relocated

Island and pedestrian crossing to be removed

Proposed pedestrian crossing with dropped kerbs and tactile paving

Proposed pedestrian crossing with dropped kerbs and tactile paving

Proposed new kerbline

R13.190

R9.000

BINSTEAD ROAD

THORNBOROUGH CLOSE

FIELD ROAD

MAYFIELD ROAD

QUEEN'S ROAD

PELHURST ROAD

TELEPHONE LINES (TYPICAL)

Notes:

General

1. Do not scale from drawing.
2. All dimensions are in metres, unless stated otherwise.
3. This drawing is to be read & printed in colour.
4. This drawing is for illustrative purposes only.

Disclaimer

1. The information contained in this drawing is based on a combination of OS and data provided by others and WYG shall not be liable for any inaccuracies or deficiencies.

KEY:

- Extent of highway boundary
- Existing carriageway
- Existing footway / public realm
- Existing road marking
- Proposed road marking
- New carriageway construction
- New footway construction

INDICATIVE

REV	DETAILS	DRAWN BY	CHECKED BY	DATE

CLIENT: Isle of Wight Council

PROJECT: IOW

DRAWING TITLE: Junction 8 Ryde

SCALES:	SHEET SIZE:
1:200	A1

DRAWN:	CHECKED:	DATE:
SJR	NW	15.12.2017

WYG Transport
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DRAWING NUMBER: A090129-99-008

REVISION:

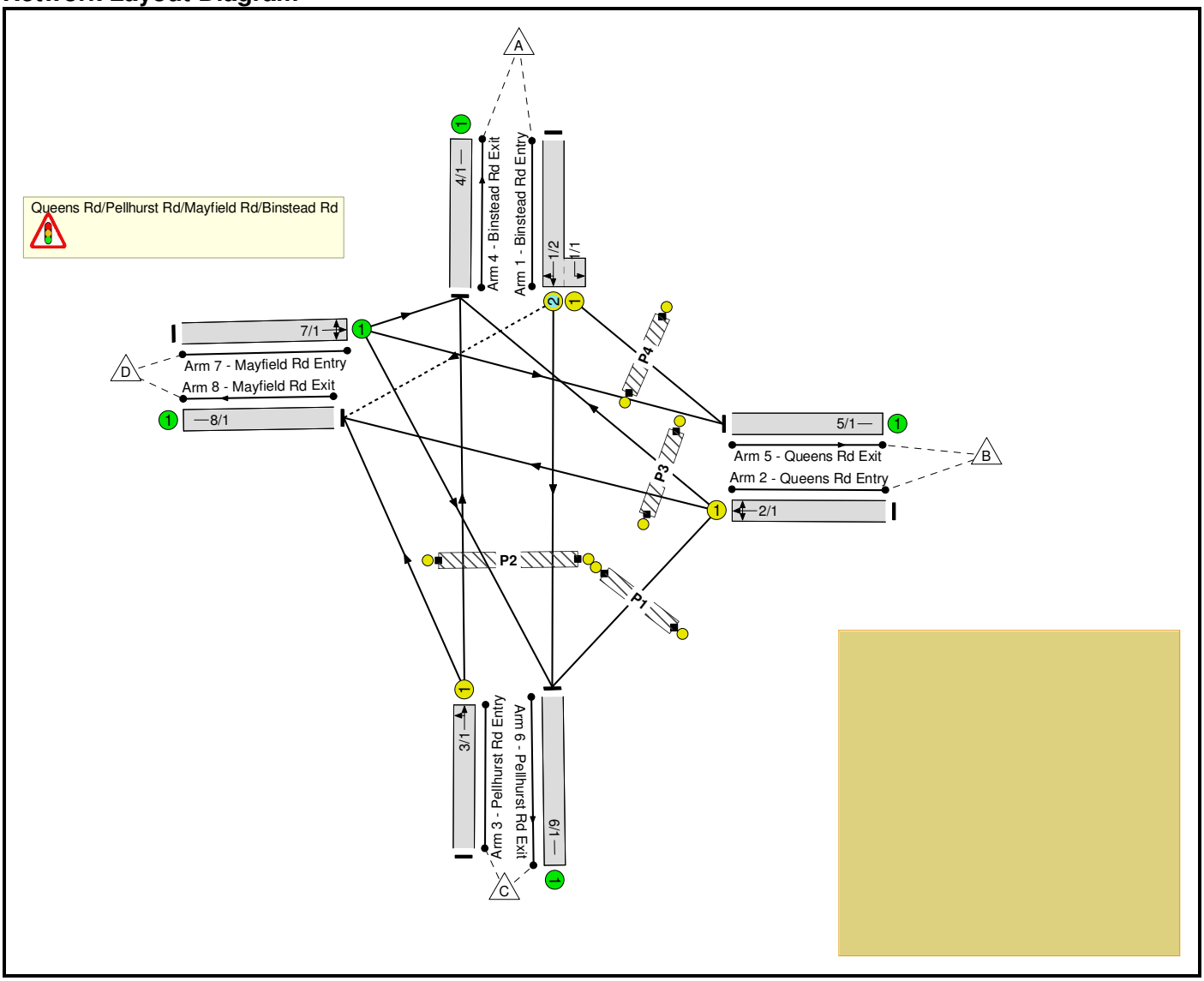
Appendix B
MODELLING OUTPUT RESULTS

Full Input Data And Results

User and Project Details

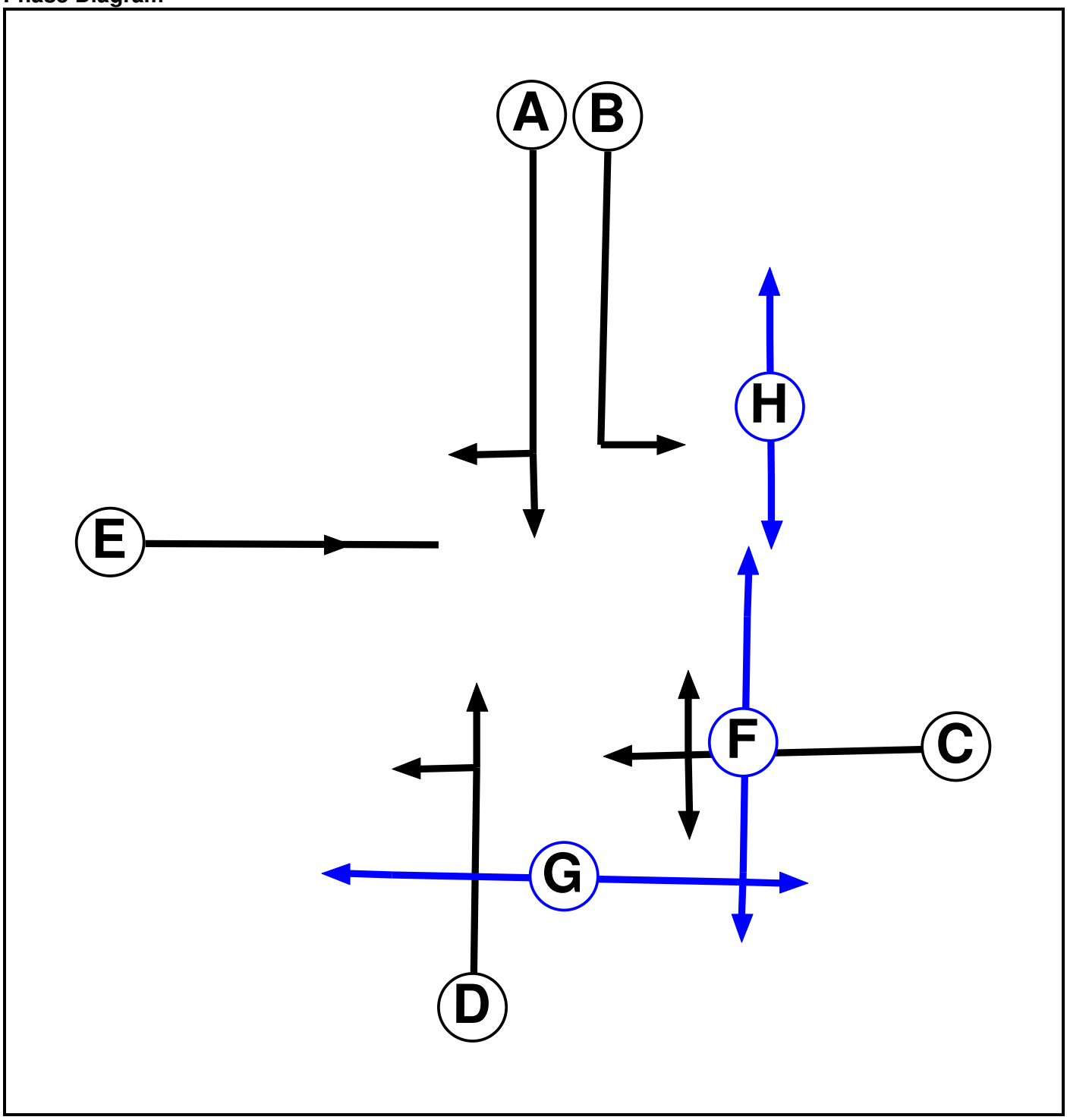
Project:	**A090129-60**
Title:	**HCA Tender IoW**
Location:	
Additional detail:	
File name:	Junction 8 - Binstead Rd Pellhurst Rd AG - Existing Junction.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Pedestrian		6	6
G	Pedestrian		6	6
H	Pedestrian		6	6

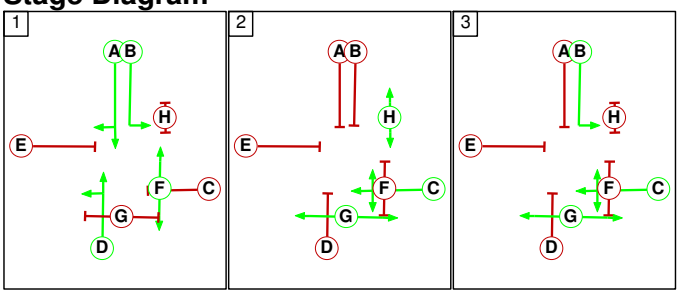
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Binstead Rd Entry)	8/1 (Right)	1439	0	3/1	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd												
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 (Binstead Rd Entry)	U	B	2	3	2.0	Geom	-	2.37	0.00	Y	Arm 5 Left	15.00
1/2 (Binstead Rd Entry)	O	A	2	3	60.0	Geom	-	2.50	0.00	Y	Arm 6 Ahead	Inf
											Arm 8 Right	5.00
2/1 (Queens Rd Entry)	U	C	2	3	60.0	Geom	-	2.60	0.00	Y	Arm 4 Right	21.00
											Arm 6 Left	12.50
											Arm 8 Ahead	Inf
3/1 (Pellhurst Rd Entry)	U	D	2	3	60.0	Geom	-	2.90	0.00	Y	Arm 4 Ahead	Inf
											Arm 8 Left	4.00
4/1 (Binstead Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Queens Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Pellhurst Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Mayfield Rd Entry)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Mayfield Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2016 - AM'	08:00	09:00	01:00	
2: '2016 - PM'	17:00	18:00	01:00	
3: '2034- AM - Base'	08:00	09:00	01:00	
4: '2034 - PM - Base'	17:00	18:00	01:00	
5: '20XX - AM - DS'	08:00	09:00	01:00	
6: '20XX - PM - DS'	17:00	18:00	01:00	
7: '2017 - AM Base'	08:00	09:00	01:00	
8: '2017 - PM Base'	17:00	18:00	01:00	

Scenario 1: '2017 AM Base' (FG7: '2017 - AM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	298	375	0	673
	B	243	0	11	0	254
	C	430	0	0	0	430
	D	0	0	0	0	0
	Tot.	673	298	386	0	1357

Traffic Lane Flows

Lane	Scenario 1: 2017 AM Base
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	298
1/2 (with short)	673(In) 375(Out)
2/1	254
3/1	430
4/1	673
5/1	298
6/1	386
7/1	0
8/1	0

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.37	0.00	Y	Arm 5 Left	15.00	100.0 %	1684	1684
1/2 (Binstead Rd Entry)	2.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1865	1865
				Arm 8 Right	5.00	0.0 %		
2/1 (Queens Rd Entry)	2.60	0.00	Y	Arm 4 Right	21.00	95.7 %	1747	1747
				Arm 6 Left	12.50	4.3 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1905	1905
				Arm 8 Left	4.00	0.0 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2017 PM Base ' (FG8: '2017 - PM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	398	425	0	823
	B	378	0	21	0	399
	C	424	0	0	0	424
	D	0	0	0	0	0
	Tot.	802	398	446	0	1646

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 PM Base
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	398
1/2 (with short)	823(In) 425(Out)
2/1	399
3/1	424
4/1	802
5/1	398
6/1	446
7/1	0
8/1	0

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.37	0.00	Y	Arm 5 Left	15.00	100.0 %	1684	1684
1/2 (Binstead Rd Entry)	2.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1865	1865
				Arm 8 Right	5.00	0.0 %		
2/1 (Queens Rd Entry)	2.60	0.00	Y	Arm 4 Right	21.00	94.7 %	1746	1746
				Arm 6 Left	12.50	5.3 %		
				Arm 8 Ahead	Inf	0.0 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1905	1905
				Arm 8 Left	4.00	0.0 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2034 AM Base' (FG3: '2034- AM - Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	363	458	11	832
	B	267	0	13	29	309
	C	404	0	0	132	536
	D	0	0	0	0	0
	Tot.	671	363	471	172	1677

Traffic Lane Flows

Lane	Scenario 3: 2034 AM Base
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	363
1/2 (with short)	832(In) 469(Out)
2/1	309
3/1	536
4/1	671
5/1	363
6/1	471
7/1	0
8/1	172

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.37	0.00	Y	Arm 5 Left	15.00	100.0 %	1684	1684
1/2 (Binstead Rd Entry)	2.50	0.00	Y	Arm 6 Ahead	Inf	97.7 %	1852	1852
				Arm 8 Right	5.00	2.3 %		
2/1 (Queens Rd Entry)	2.60	0.00	Y	Arm 4 Right	21.00	86.4 %	1758	1758
				Arm 6 Left	12.50	4.2 %		
				Arm 8 Ahead	Inf	9.4 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	75.4 %	1744	1744
				Arm 8 Left	4.00	24.6 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2034 PM Base' (FG4: '2034 - PM - Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	485	518	20	1023
	B	418	0	25	42	485
	C	430	0	0	86	516
	D	1	0	0	0	1
	Tot.	849	485	543	148	2025

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2034 PM Base
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	485
1/2 (with short)	1023(In) 538(Out)
2/1	485
3/1	516
4/1	849
5/1	485
6/1	543
7/1	1
8/1	148

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.37	0.00	Y	Arm 5 Left	15.00	100.0 %	1684	1684
1/2 (Binstead Rd Entry)	2.50	0.00	Y	Arm 6 Ahead	Inf	96.3 %	1844	1844
				Arm 8 Right	5.00	3.7 %		
2/1 (Queens Rd Entry)	2.60	0.00	Y	Arm 4 Right	21.00	86.2 %	1756	1756
				Arm 6 Left	12.50	5.2 %		
				Arm 8 Ahead	Inf	8.7 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	83.3 %	1793	1793
				Arm 8 Left	4.00	16.7 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2034 AM Base (80 seconds)' (FG3: '2034- AM - Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	363	458	11	832
	B	267	0	13	29	309
	C	404	0	0	132	536
	D	0	0	0	0	0
	Tot.	671	363	471	172	1677

Traffic Lane Flows

Lane	Scenario 5: 2034 AM Base (80 seconds)
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	363
1/2 (with short)	832(In) 469(Out)
2/1	309
3/1	536
4/1	671
5/1	363
6/1	471
7/1	0
8/1	172

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.37	0.00	Y	Arm 5 Left	15.00	100.0 %	1684	1684
1/2 (Binstead Rd Entry)	2.50	0.00	Y	Arm 6 Ahead	Inf	97.7 %	1852	1852
				Arm 8 Right	5.00	2.3 %		
2/1 (Queens Rd Entry)	2.60	0.00	Y	Arm 4 Right	21.00	86.4 %	1758	1758
				Arm 6 Left	12.50	4.2 %		
				Arm 8 Ahead	Inf	9.4 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	75.4 %	1744	1744
				Arm 8 Left	4.00	24.6 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2034 PM Base (80 seconds)' (FG4: '2034 - PM - Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	485	518	20	1023
	B	418	0	25	42	485
	C	430	0	0	86	516
	D	1	0	0	0	1
	Tot.	849	485	543	148	2025

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2034 PM Base (80 seconds)
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	485
1/2 (with short)	1023(In) 538(Out)
2/1	485
3/1	516
4/1	849
5/1	485
6/1	543
7/1	1
8/1	148

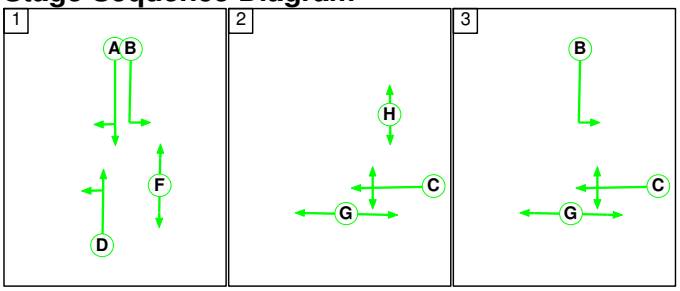
Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.37	0.00	Y	Arm 5 Left	15.00	100.0 %	1684	1684
1/2 (Binstead Rd Entry)	2.50	0.00	Y	Arm 6 Ahead	Inf	96.3 %	1844	1844
				Arm 8 Right	5.00	3.7 %		
2/1 (Queens Rd Entry)	2.60	0.00	Y	Arm 4 Right	21.00	86.2 %	1756	1756
				Arm 6 Left	12.50	5.2 %		
				Arm 8 Ahead	Inf	8.7 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	83.3 %	1793	1793
				Arm 8 Left	4.00	16.7 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Entry Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2017 AM Base' (FG7: '2017 - AM Base', Plan 1: 'Network Control Plan 1')

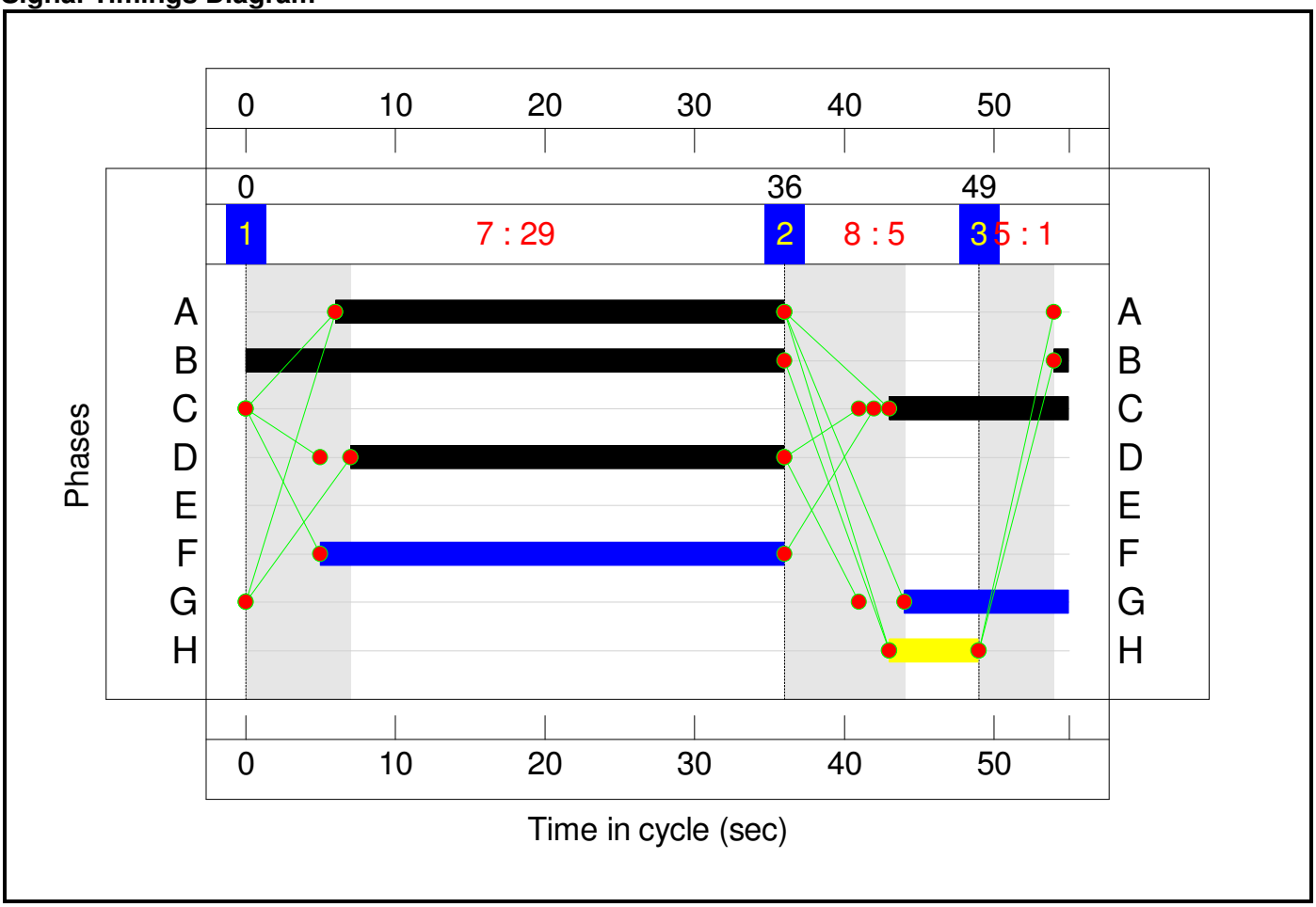
Stage Sequence Diagram



Stage Timings

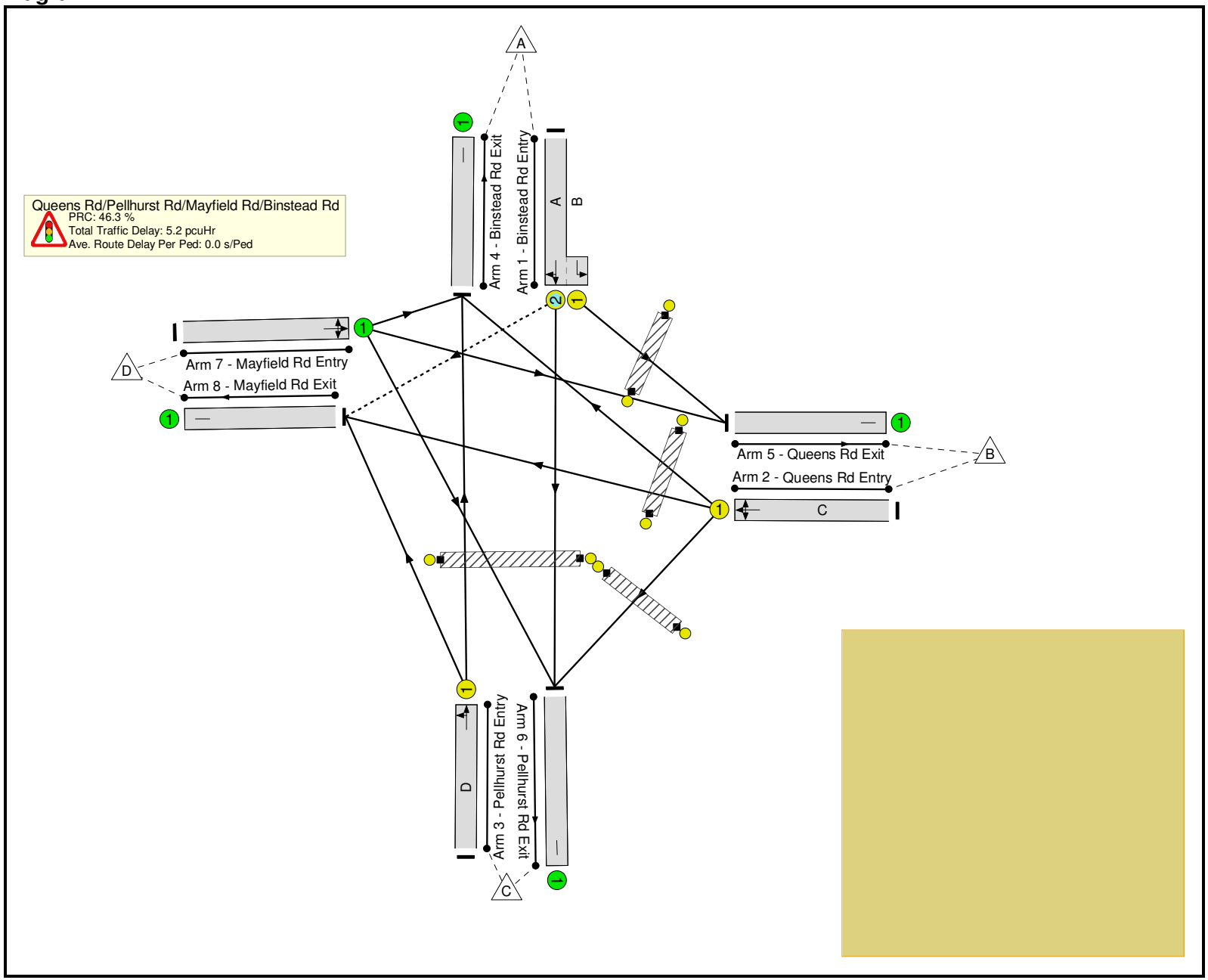
Stage	1	2	3
Duration	29	5	1
Change Point	0	36	49

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: HCA Tender IoW	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.5%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.5%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	30:37	-	673	1865:1684	1109	60.7%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	12	-	254	1747	413	61.5%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	29	-	430	1905	1039	41.4%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	673	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	298	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	386	Inf	Inf	0.0%
7/1	Mayfield Rd Entry Left Ahead Right	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	31	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	31	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

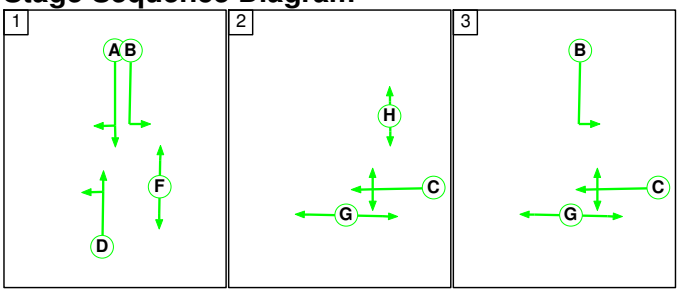
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**0**	**0**	**0**	**3.3**	**1.9**	**0.0**	**5.2**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**0**	**0**	**0**	**3.3**	**1.9**	**0.0**	**5.2**	**-**	**-**	**-**	**-**
1/2+1/1	673	673	0	0	0	1.1	0.8	-	1.8	9.8	4.6	0.8	5.4
2/1	254	254	-	-	-	1.3	0.8	-	2.1	30.0	3.5	0.8	4.2
3/1	430	430	-	-	-	0.9	0.4	-	1.2	10.3	3.8	0.4	4.2
4/1	673	673	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	386	386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 46.3 Total Delay for Signalled Lanes (pcuHr): 5.19 Cycle Time (s): 55
PRC Over All Lanes (%): 46.3 Total Delay Over All Lanes(pcuHr): 5.19

Full Input Data And Results

Scenario 2: '2017 PM Base ' (FG8: '2017 - PM Base', Plan 1: 'Network Control Plan 1')

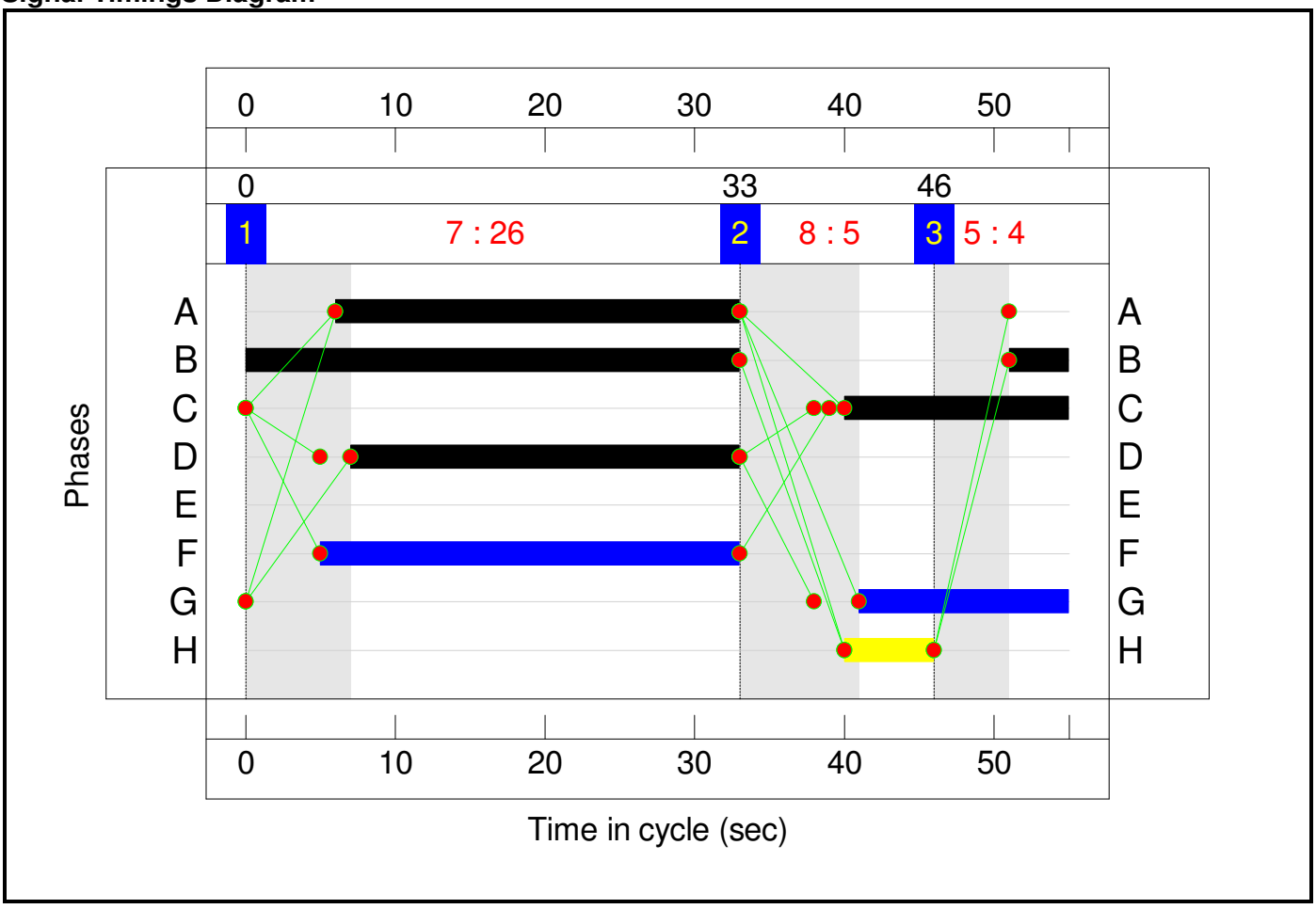
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	5	4
Change Point	0	33	46

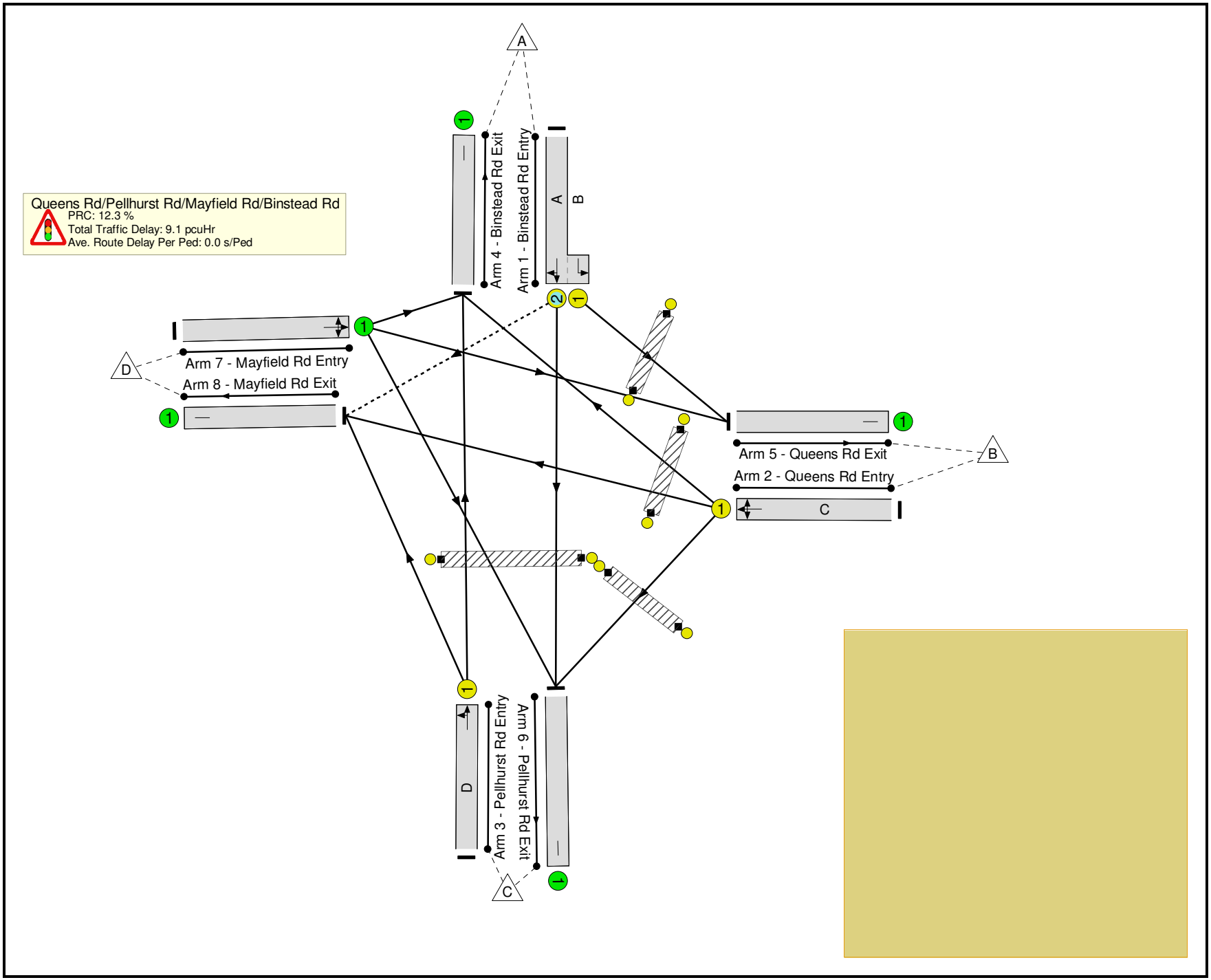
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: HCA Tender IoW	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.1%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.1%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	27:37	-	823	1865:1684	1027	80.1%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	15	-	399	1746	508	78.6%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	26	-	424	1905	935	45.3%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	802	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	398	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	446	Inf	Inf	0.0%
7/1	Mayfield Rd Entry Left Ahead Right	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	28	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	14	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	28	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

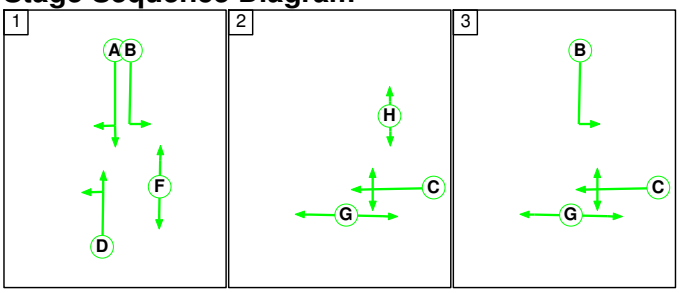
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**0**	**0**	**0**	**4.9**	**4.2**	**0.0**	**9.1**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**0**	**0**	**0**	**4.9**	**4.2**	**0.0**	**9.1**	**-**	**-**	**-**	**-**
1/2+1/1	823	823	0	0	0	1.9	2.0	-	3.8	16.8	8.0	2.0	9.9
2/1	399	399	-	-	-	2.0	1.8	-	3.8	33.9	5.5	1.8	7.3
3/1	424	424	-	-	-	1.1	0.4	-	1.5	12.7	4.2	0.4	4.7
4/1	802	802	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	398	398	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 12.3 Total Delay for Signalled Lanes (pcuHr): 9.10 Cycle Time (s): 55
PRC Over All Lanes (%): 12.3 Total Delay Over All Lanes(pcuHr): 9.10

Full Input Data And Results

Scenario 3: '2034 AM Base' (FG3: '2034- AM - Base', Plan 1: 'Network Control Plan 1')

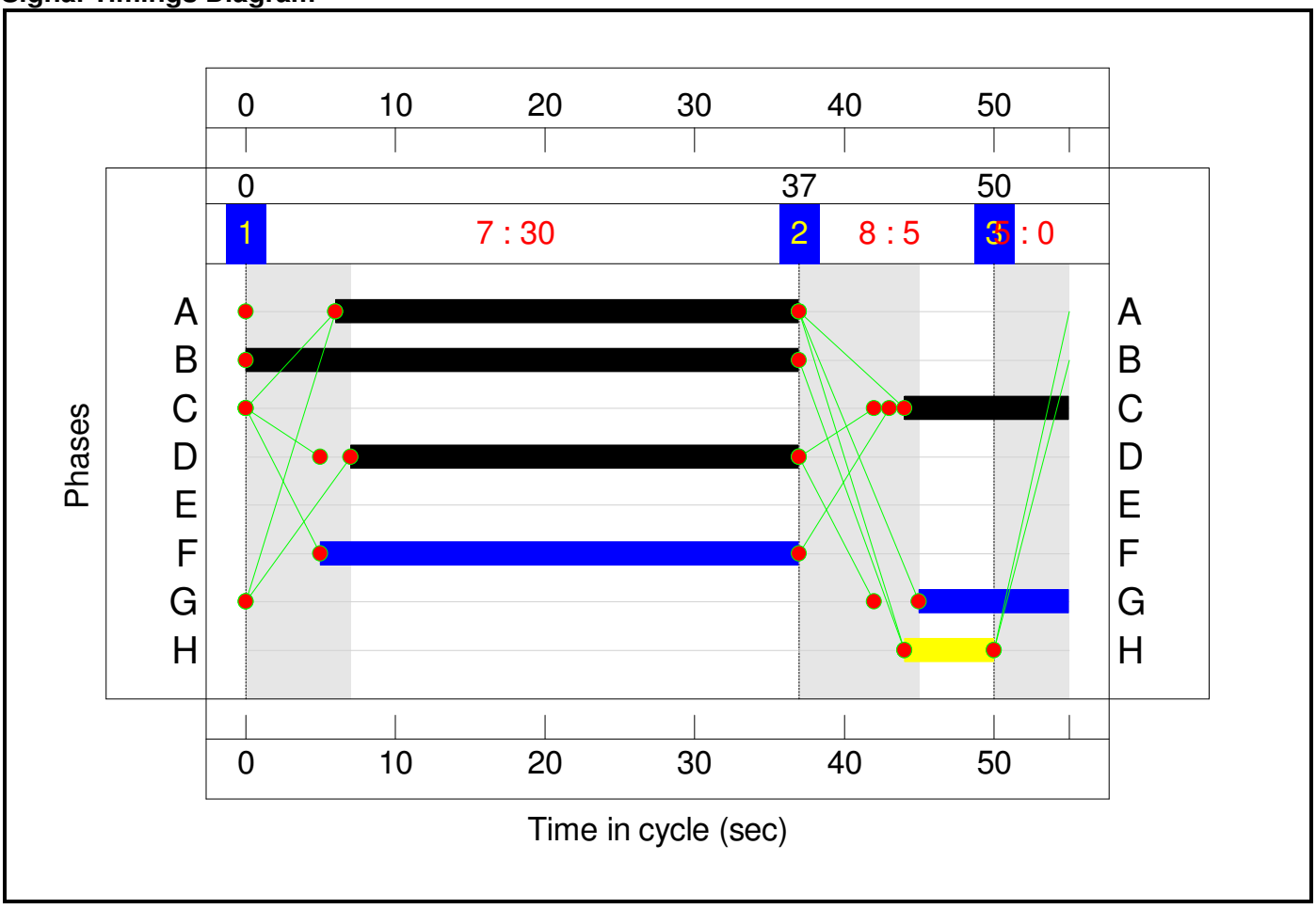
Stage Sequence Diagram



Stage Timings

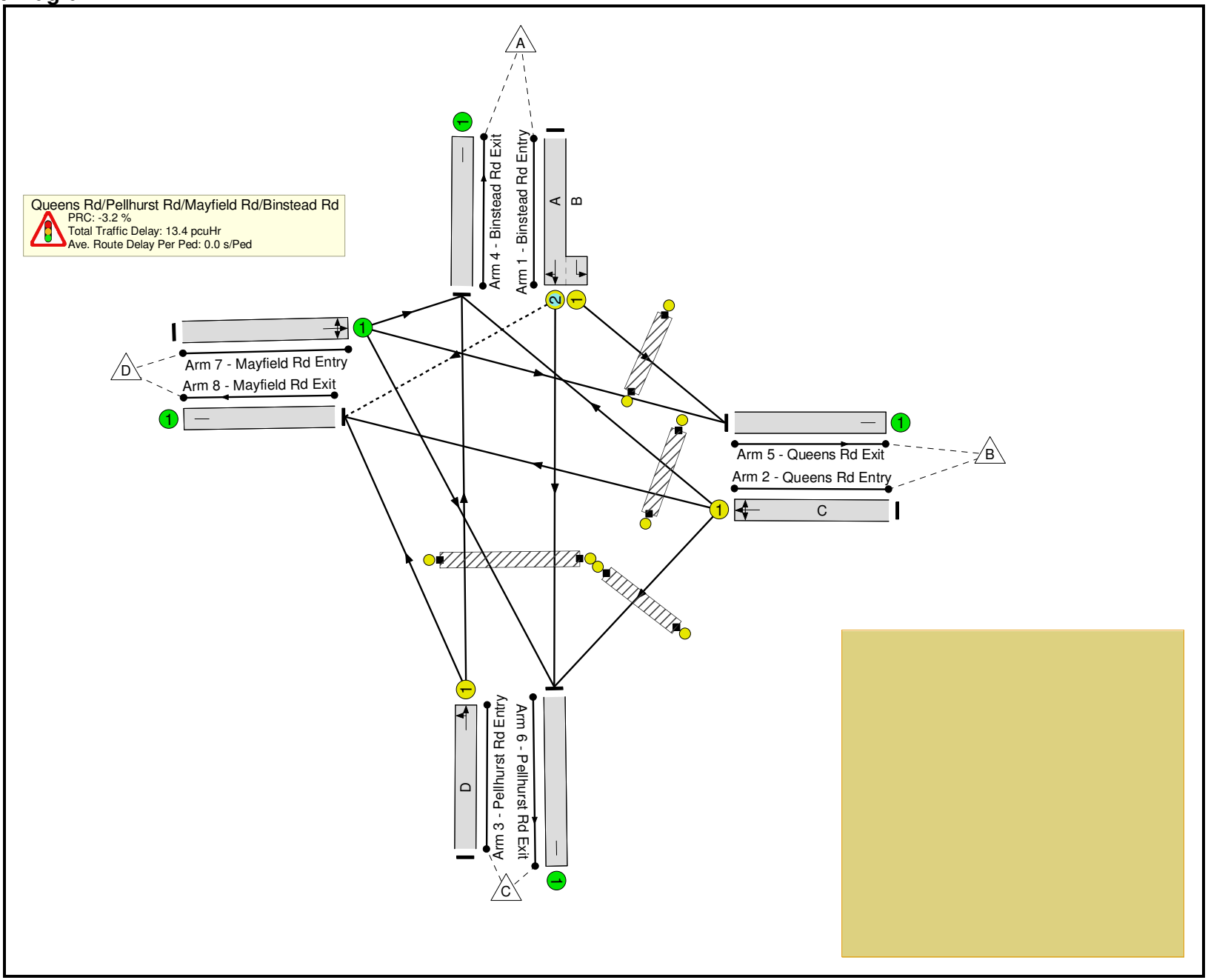
Stage	1	2	3
Duration	30	5	0
Change Point	0	37	50

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: HCA Tender IoW	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.9%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.9%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	31:37	-	832	1852:1684	895	92.9%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	11	-	309	1758	384	80.6%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	30	-	536	1744	983	54.5%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	363	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	471	Inf	Inf	0.0%
7/1	Mayfield Rd Entry Left Ahead Right	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	172	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	32	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	32	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

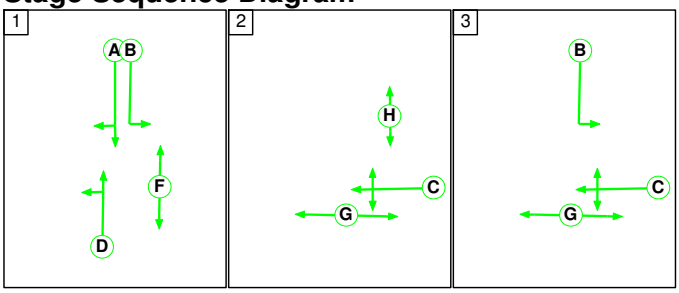
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**9**	**2**	**0**	**5.3**	**8.1**	**0.0**	**13.4**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**9**	**2**	**0**	**5.3**	**8.1**	**0.0**	**13.4**	**-**	**-**	**-**	**-**
1/2+1/1	832	832	9	2	0	2.4	5.6	-	8.0	34.4	10.2	5.6	15.8
2/1	309	309	-	-	-	1.8	2.0	-	3.7	43.3	4.5	2.0	6.4
3/1	536	536	-	-	-	1.1	0.6	-	1.7	11.6	5.1	0.6	5.7
4/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	363	363	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	471	471	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	172	172	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -3.2 Total Delay for Signalled Lanes (pcuHr): 13.40 Cycle Time (s): 55
PRC Over All Lanes (%): -3.2 Total Delay Over All Lanes(pcuHr): 13.40

Full Input Data And Results

Scenario 4: '2034 PM Base' (FG4: '2034 - PM - Base', Plan 1: 'Network Control Plan 1')

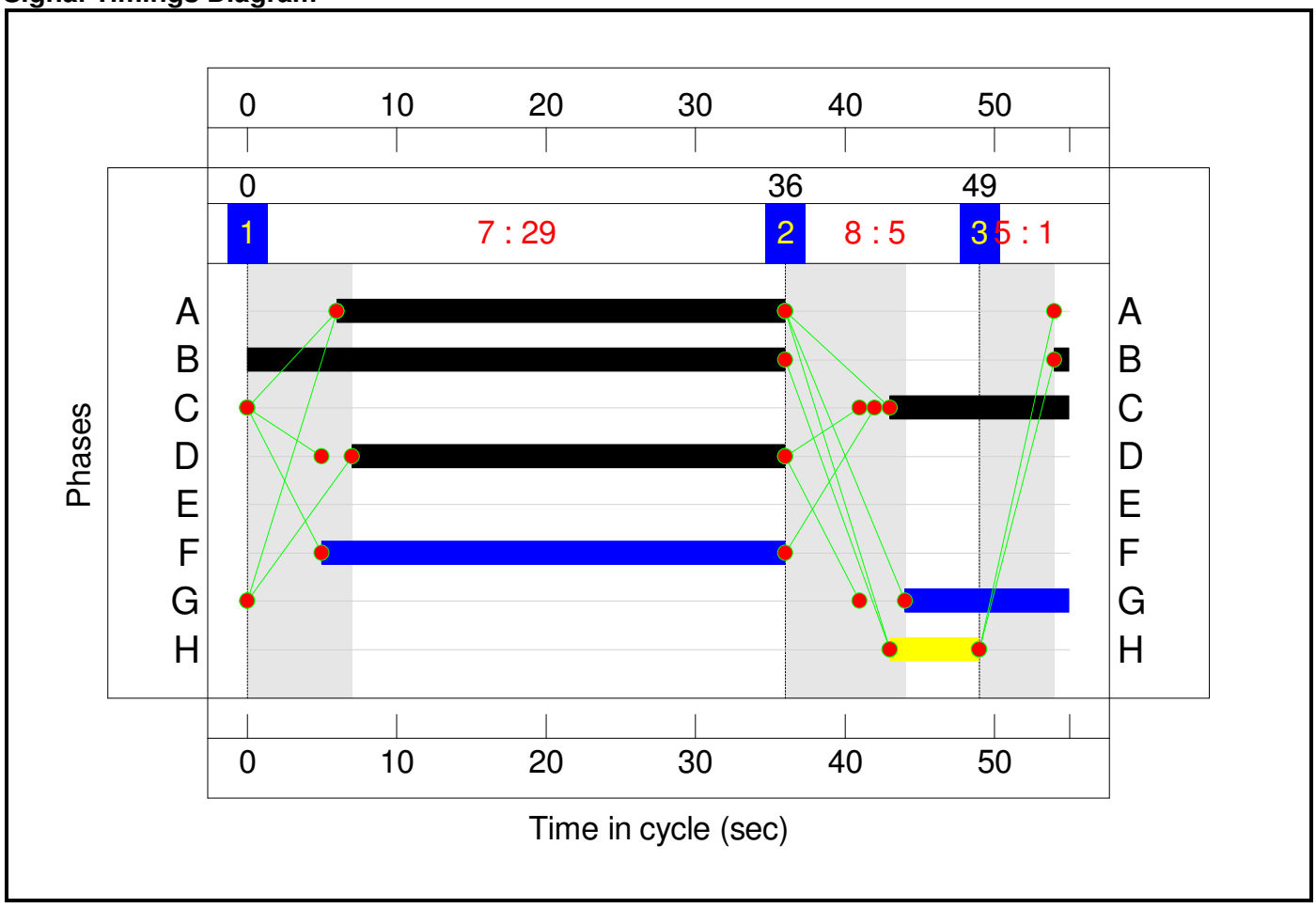
Stage Sequence Diagram



Stage Timings

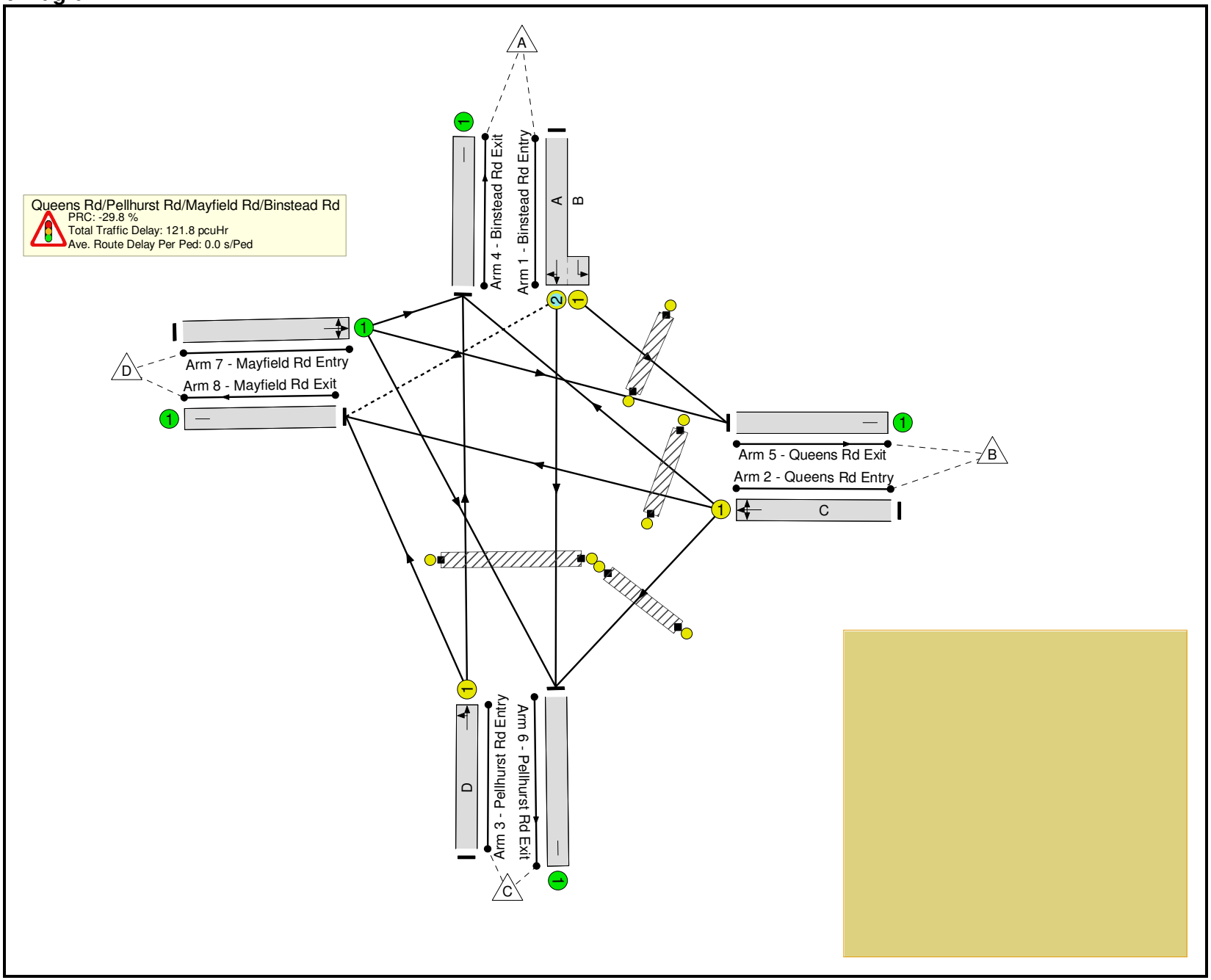
Stage	1	2	3
Duration	29	5	1
Change Point	0	36	49

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: HCA Tender IoW	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.9%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.9%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	30:37	-	1023	1844:1684	889	115.0%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	12	-	485	1756	415	116.9%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	29	-	516	1793	978	52.8%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	849	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	485	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
7/1	Mayfield Rd Entry Left Ahead Right	U	N/A	N/A	-		-	-	-	1	Inf	Inf	0.0%
8/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	148	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	31	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	11	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	31	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

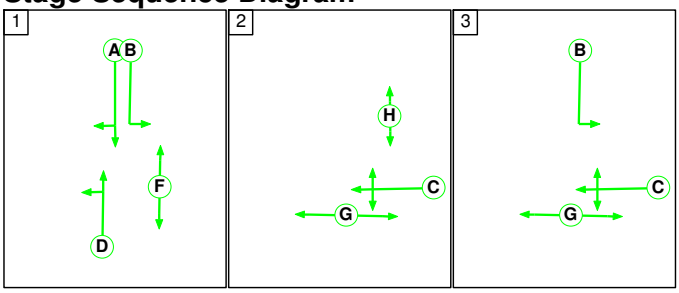
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**14**	**4**	**0**	**12.6**	**109.2**	**0.0**	**121.8**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**14**	**4**	**0**	**12.6**	**109.2**	**0.0**	**121.8**	**-**	**-**	**-**	**-**
1/2+1/1	1023	889	14	4	0	6.4	70.5	-	76.9	270.5	16.4	70.5	86.9
2/1	485	415	-	-	-	5.0	38.2	-	43.2	320.6	9.1	38.2	47.3
3/1	516	516	-	-	-	1.1	0.6	-	1.7	11.9	5.0	0.6	5.6
4/1	789	789	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	422	422	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	472	472	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1	1	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	139	139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -29.8 Total Delay for Signalled Lanes (pcuHr): 121.77 Cycle Time (s): 55
PRC Over All Lanes (%): -29.8 Total Delay Over All Lanes(pcuHr): 121.77

Full Input Data And Results

Scenario 5: '2034 AM Base (80 seconds)' (FG3: '2034- AM - Base', Plan 1: 'Network Control Plan 1')

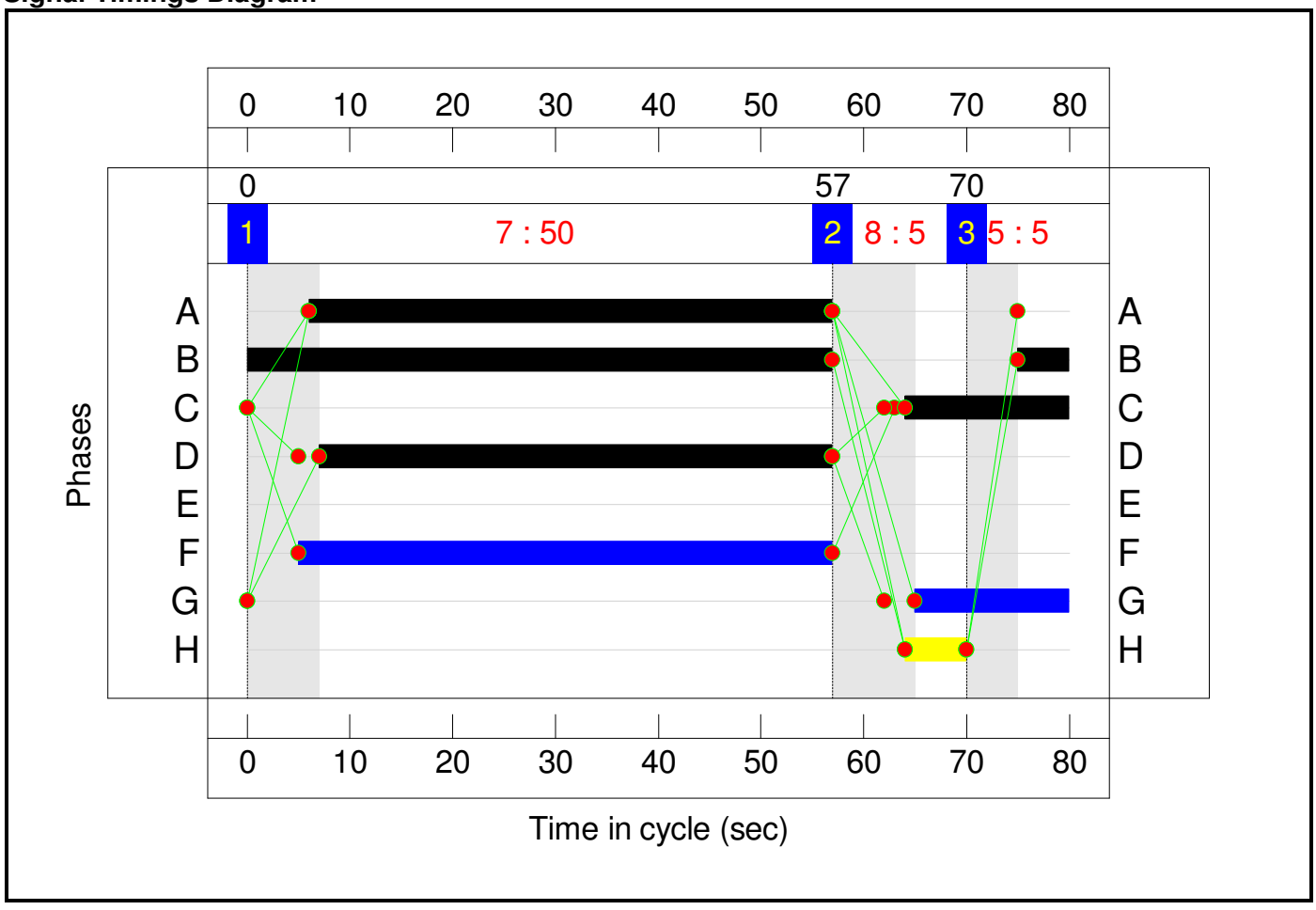
Stage Sequence Diagram



Stage Timings

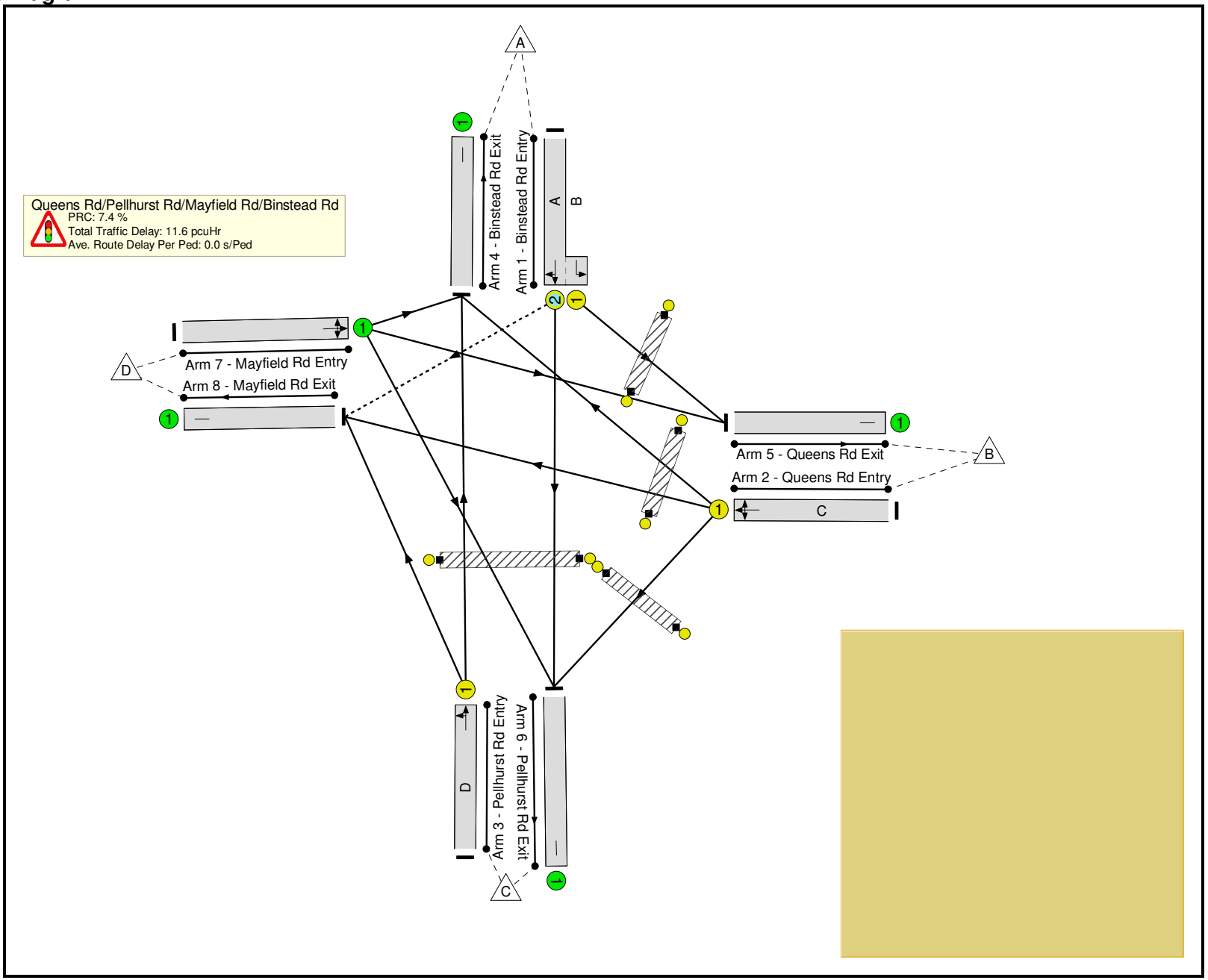
Stage	1	2	3
Duration	50	5	5
Change Point	0	57	70

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: HCA Tender IoW	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.8%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.8%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	51:62	-	832	1852:1684	993	83.8%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	16	-	309	1758	374	82.7%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	50	-	536	1744	1112	48.2%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	363	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	471	Inf	Inf	0.0%
7/1	Mayfield Rd Entry Left Ahead Right	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	172	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	52	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	15	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	52	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

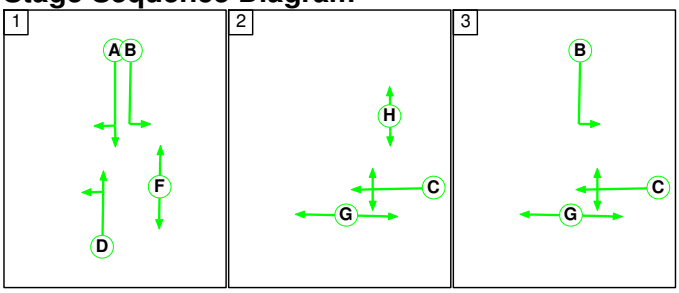
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**9**	**2**	**0**	**6.4**	**5.2**	**0.0**	**11.6**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**9**	**2**	**0**	**6.4**	**5.2**	**0.0**	**11.6**	**-**	**-**	**-**	**-**
1/2+1/1	832	832	9	2	0	2.7	2.5	-	5.2	22.6	13.7	2.5	16.2
2/1	309	309	-	-	-	2.6	2.2	-	4.8	56.2	6.5	2.2	8.8
3/1	536	536	-	-	-	1.1	0.5	-	1.6	10.7	6.1	0.5	6.6
4/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	363	363	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	471	471	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	172	172	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 7.4 Total Delay for Signalled Lanes (pcuHr): 11.63 Cycle Time (s): 80
PRC Over All Lanes (%): 7.4 Total Delay Over All Lanes(pcuHr): 11.63

Full Input Data And Results

Scenario 6: '2034 PM Base (80 seconds)' (FG4: '2034 - PM - Base', Plan 1: 'Network Control Plan 1')

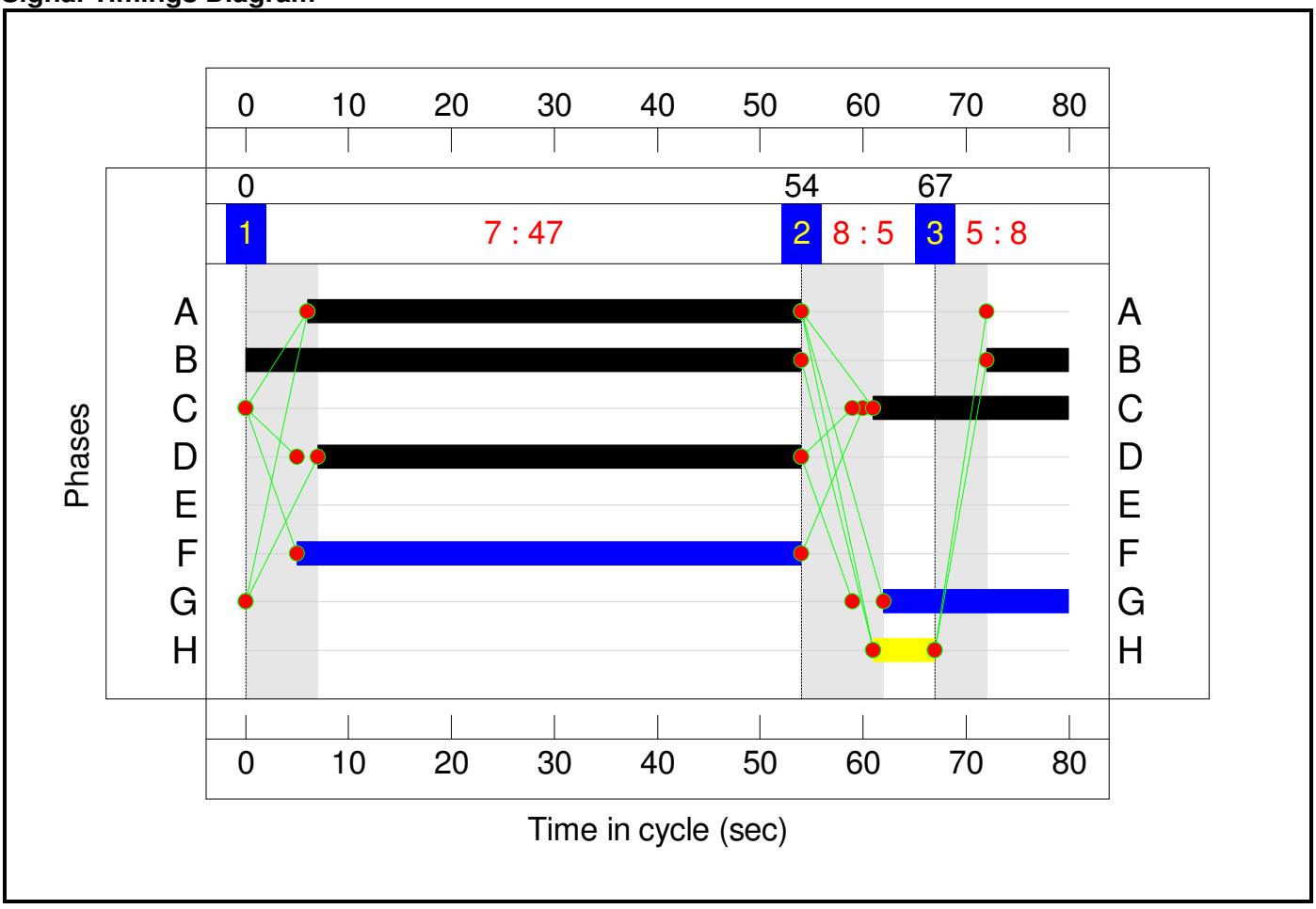
Stage Sequence Diagram



Stage Timings

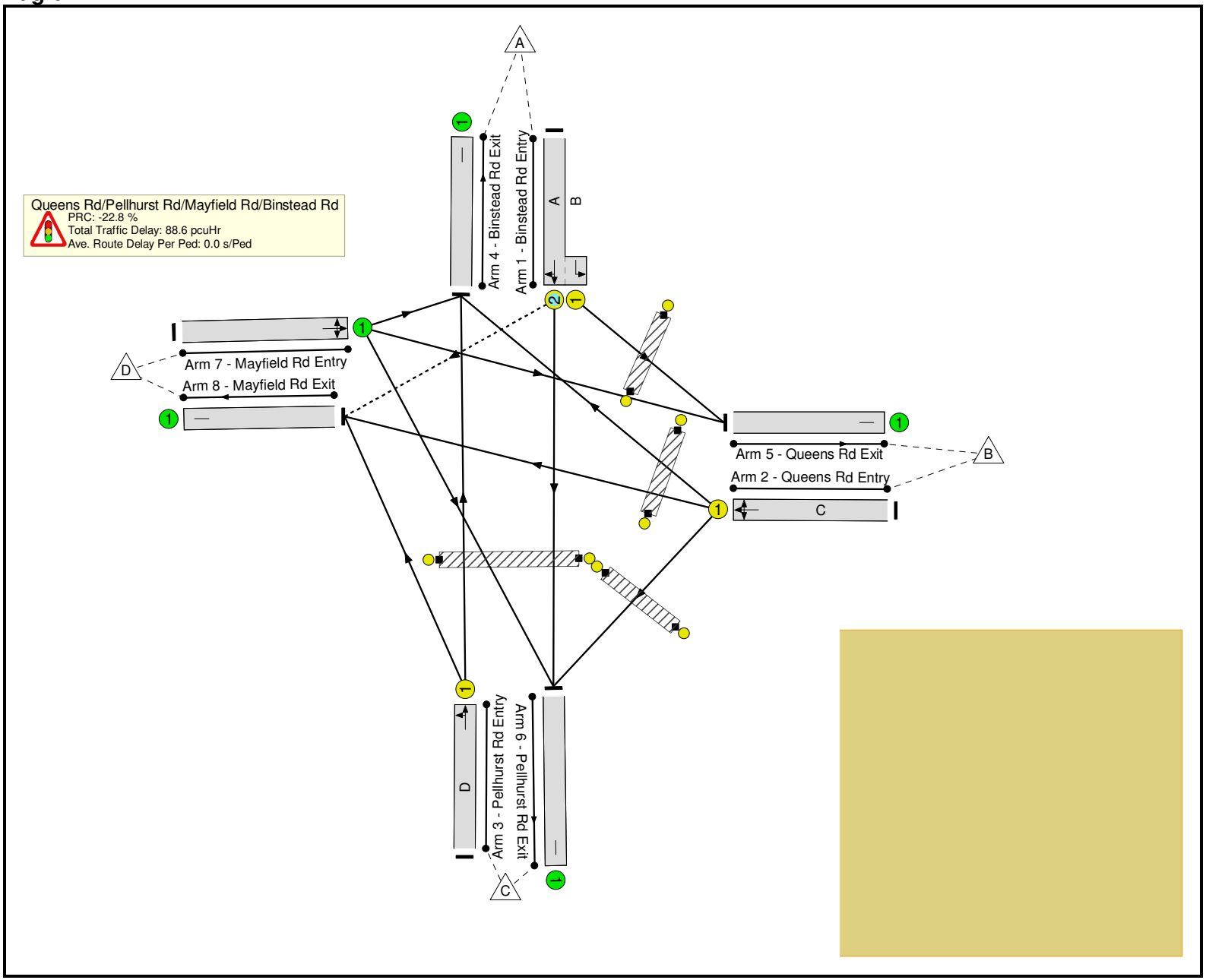
Stage	1	2	3
Duration	47	5	8
Change Point	0	54	67

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: HCA Tender IoW	-	-	**N/A**	-	-		-	-	-	-	-	-	**110.5%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**110.5%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	48:62	-	1023	1844:1684	942	108.6%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	19	-	485	1756	439	110.5%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	47	-	516	1793	1076	48.0%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	849	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	485	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
7/1	Mayfield Rd Entry Left Ahead Right	U	N/A	N/A	-		-	-	-	1	Inf	Inf	0.0%
8/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	148	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	49	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	G		1	18	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	49	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**16**	**3**	**0**	**14.8**	**73.8**	**0.0**	**88.6**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**16**	**3**	**0**	**14.8**	**73.8**	**0.0**	**88.6**	**-**	**-**	**-**	**-**
1/2+1/1	1023	942	16	3	0	7.3	45.9	-	53.3	187.4	23.3	45.9	69.2
2/1	485	439	-	-	-	6.2	27.4	-	33.6	249.4	12.4	27.4	39.8
3/1	516	516	-	-	-	1.3	0.5	-	1.7	12.2	6.3	0.5	6.8
4/1	809	809	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	500	500	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1	1	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	142	142	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1

PRC for Signalled Lanes (%): -22.8
PRC Over All Lanes (%): -22.8

Total Delay for Signalled Lanes (pcuHr): 88.61
Total Delay Over All Lanes(pcuHr): 88.61

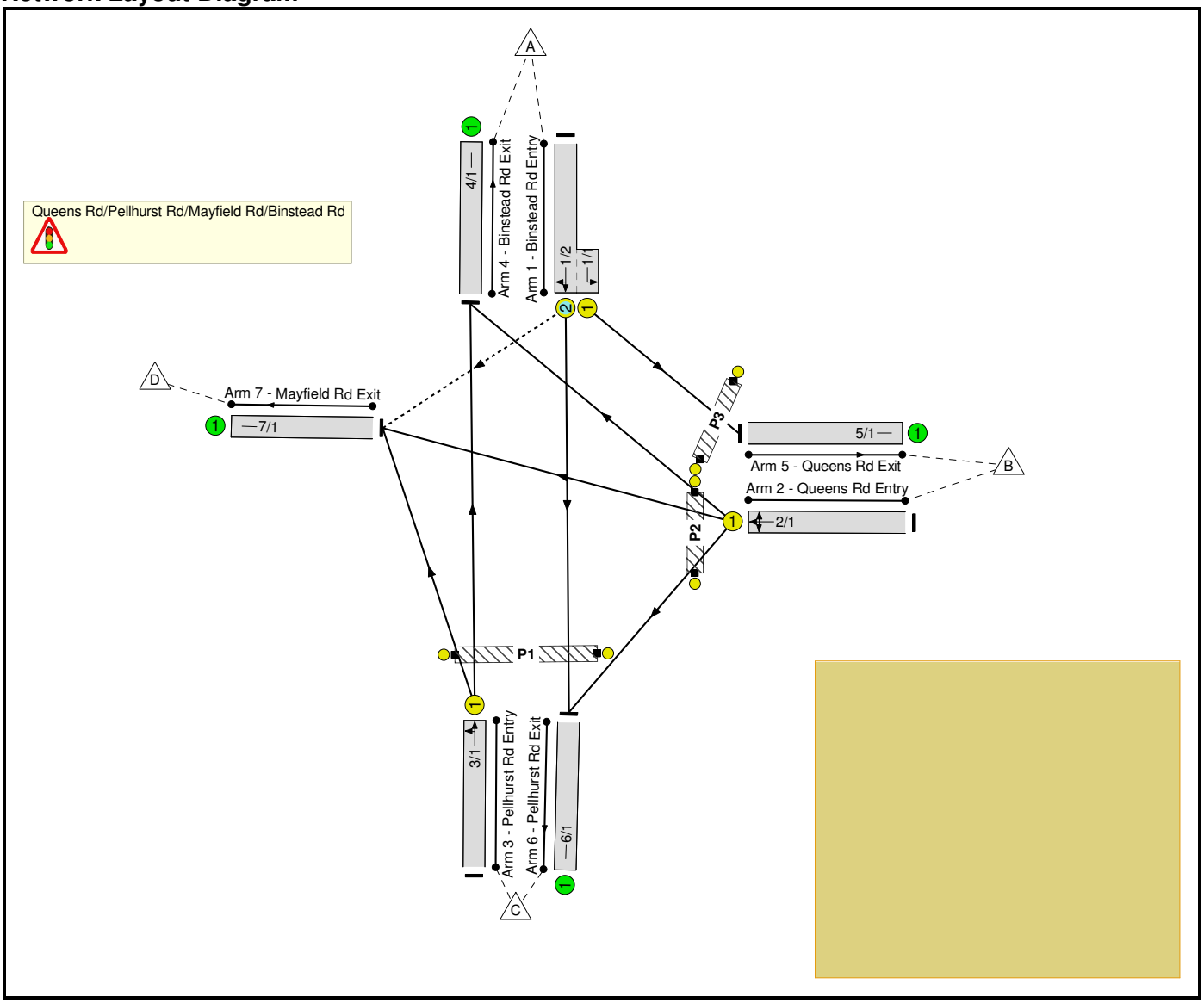
Cycle Time (s): 80

Full Input Data And Results

User and Project Details

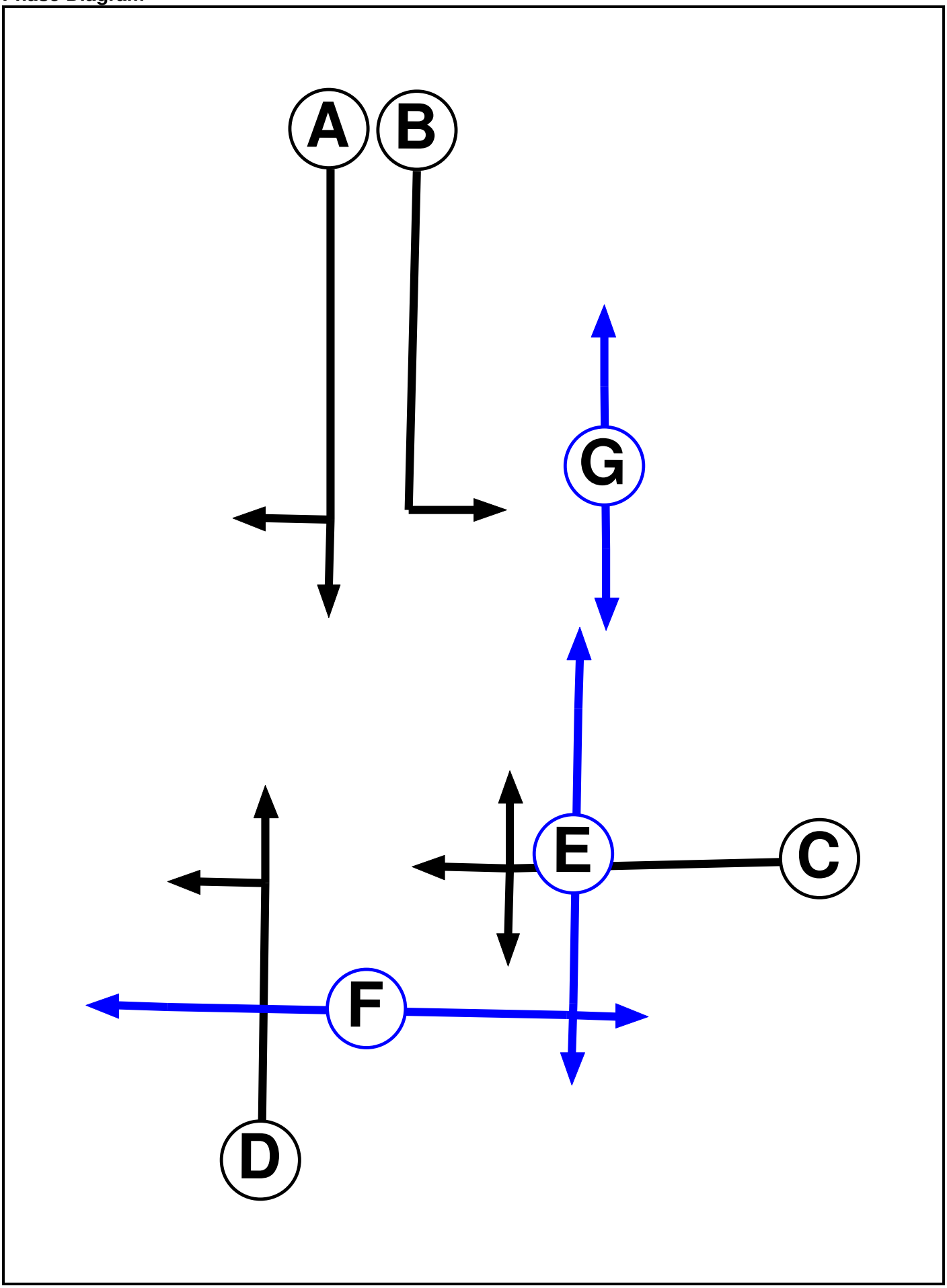
Project:	**A090129-60**
Title:	**HCA Tender IoW**
Location:	
Additional detail:	
File name:	Junction 8 - Binstead Rd Pellhurst Rd Proposed.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		6	6
F	Pedestrian		6	6
G	Pedestrian		6	6

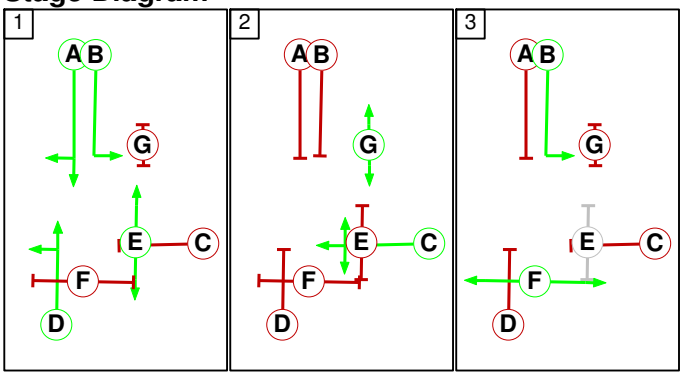
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Binstead Rd Entry)	7/1 (Right)	1439	0	3/1	1.09	All	-	-	-	-	-

Full Input Data And Results

Lane Input Data

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd												
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 (Binstead Rd Entry)	U	B	2	3	3.0	Geom	-	2.80	0.00	Y	Arm 5 Left	13.00
1/2 (Binstead Rd Entry)	O	A	2	3	60.0	Geom	-	2.60	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Right	Inf
2/1 (Queens Rd Entry)	U	C	2	3	60.0	Geom	-	3.20	0.00	Y	Arm 4 Right	12.00
											Arm 6 Left	9.00
											Arm 7 Ahead	12.00
3/1 (Pellhurst Rd Entry)	U	D	2	3	60.0	Geom	-	2.90	0.00	Y	Arm 4 Ahead	Inf
											Arm 7 Left	4.00
4/1 (Binstead Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Queens Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Pellhurst Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Mayfield Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2034 - AM - DS'	08:00	09:00	01:00	
2: '2034 - PM - DS'	17:00	18:00	01:00	
3: '2017 - AM Base'	08:00	09:00	01:00	
4: '2017 - PM Base'	17:00	18:00	01:00	

Scenario 1: '2017 AM Base' (FG3: '2017 - AM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	297	374	9	680
	B	218	0	11	24	253
	C	330	0	0	108	438
	D	0	0	0	0	0
	Tot.	548	297	385	141	1371

Traffic Lane Flows

Lane	Scenario 1: 2017 AM Base
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	297
1/2 (with short)	680(In) 383(Out)
2/1	253
3/1	438
4/1	548
5/1	297
6/1	385
7/1	141

Full Input Data And Results

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.80	0.00	Y	Arm 5 Left	13.00	100.0 %	1699	1699
1/2 (Binstead Rd Entry)	2.60	0.00	Y	Arm 6 Ahead	Inf	97.7 %	1875	1875
				Arm 7 Right	Inf	2.3 %		
2/1 (Queens Rd Entry)	3.20	0.00	Y	Arm 4 Right	12.00	86.2 %	1717	1717
				Arm 6 Left	9.00	4.3 %		
				Arm 7 Ahead	12.00	9.5 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	75.3 %	1744	1744
				Arm 7 Left	4.00	24.7 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2017 PM Base ' (FG4: '2017 - PM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	398	425	17	840
	B	343	0	21	35	399
	C	353	0	0	71	424
	D	0	0	0	0	0
	Tot.	696	398	446	123	1663

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 PM Base
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	398
1/2 (with short)	840(In) 442(Out)
2/1	399
3/1	424
4/1	696
5/1	398
6/1	446
7/1	123

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.80	0.00	Y	Arm 5 Left	13.00	100.0 %	1699	1699
1/2 (Binstead Rd Entry)	2.60	0.00	Y	Arm 6 Ahead	Inf	96.2 %	1875	1875
				Arm 7 Right	Inf	3.8 %		
2/1 (Queens Rd Entry)	3.20	0.00	Y	Arm 4 Right	12.00	86.0 %	1717	1717
				Arm 6 Left	9.00	5.3 %		
				Arm 7 Ahead	12.00	8.8 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	83.3 %	1792	1792
				Arm 7 Left	4.00	16.7 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2034 - AM - DS' (FG1: '2034 - AM - DS', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	363	458	11	832
	B	267	0	13	29	309
	C	404	0	0	132	536
	D	0	0	0	0	0
	Tot.	671	363	471	172	1677

Traffic Lane Flows

Lane	Scenario 3: 2034 - AM - DS
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	363
1/2 (with short)	832(In) 469(Out)
2/1	309
3/1	536
4/1	671
5/1	363
6/1	471
7/1	172

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.80	0.00	Y	Arm 5 Left	13.00	100.0 %	1699	1699
1/2 (Binstead Rd Entry)	2.60	0.00	Y	Arm 6 Ahead	Inf	97.7 %	1875	1875
				Arm 7 Right	Inf	2.3 %		
2/1 (Queens Rd Entry)	3.20	0.00	Y	Arm 4 Right	12.00	86.4 %	1717	1717
				Arm 6 Left	9.00	4.2 %		
				Arm 7 Ahead	12.00	9.4 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	75.4 %	1744	1744
				Arm 7 Left	4.00	24.6 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2034 - PM - DS' (FG2: '2034 - PM - DS', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	485	518	20	1023
	B	418	0	25	42	485
	C	430	0	0	86	516
	D	0	0	0	0	0
	Tot.	848	485	543	148	2024

Traffic Lane Flows

Lane	Scenario 4: 2034 - PM - DS
Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	
1/1 (short)	485
1/2 (with short)	1023(In) 538(Out)
2/1	485
3/1	516
4/1	848
5/1	485
6/1	543
7/1	148

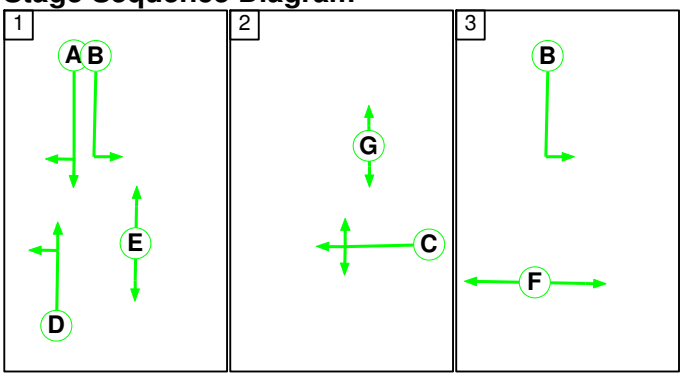
Full Input Data And Results

Lane Saturation Flows

Junction: Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd								
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 (Binstead Rd Entry)	2.80	0.00	Y	Arm 5 Left	13.00	100.0 %	1699	1699
1/2 (Binstead Rd Entry)	2.60	0.00	Y	Arm 6 Ahead	Inf	96.3 %	1875	1875
				Arm 7 Right	Inf	3.7 %		
2/1 (Queens Rd Entry)	3.20	0.00	Y	Arm 4 Right	12.00	86.2 %	1717	1717
				Arm 6 Left	9.00	5.2 %		
				Arm 7 Ahead	12.00	8.7 %		
3/1 (Pellhurst Rd Entry)	2.90	0.00	Y	Arm 4 Ahead	Inf	83.3 %	1793	1793
				Arm 7 Left	4.00	16.7 %		
4/1 (Binstead Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Queens Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Pellhurst Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Mayfield Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2017 AM Base' (FG3: '2017 - AM Base', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

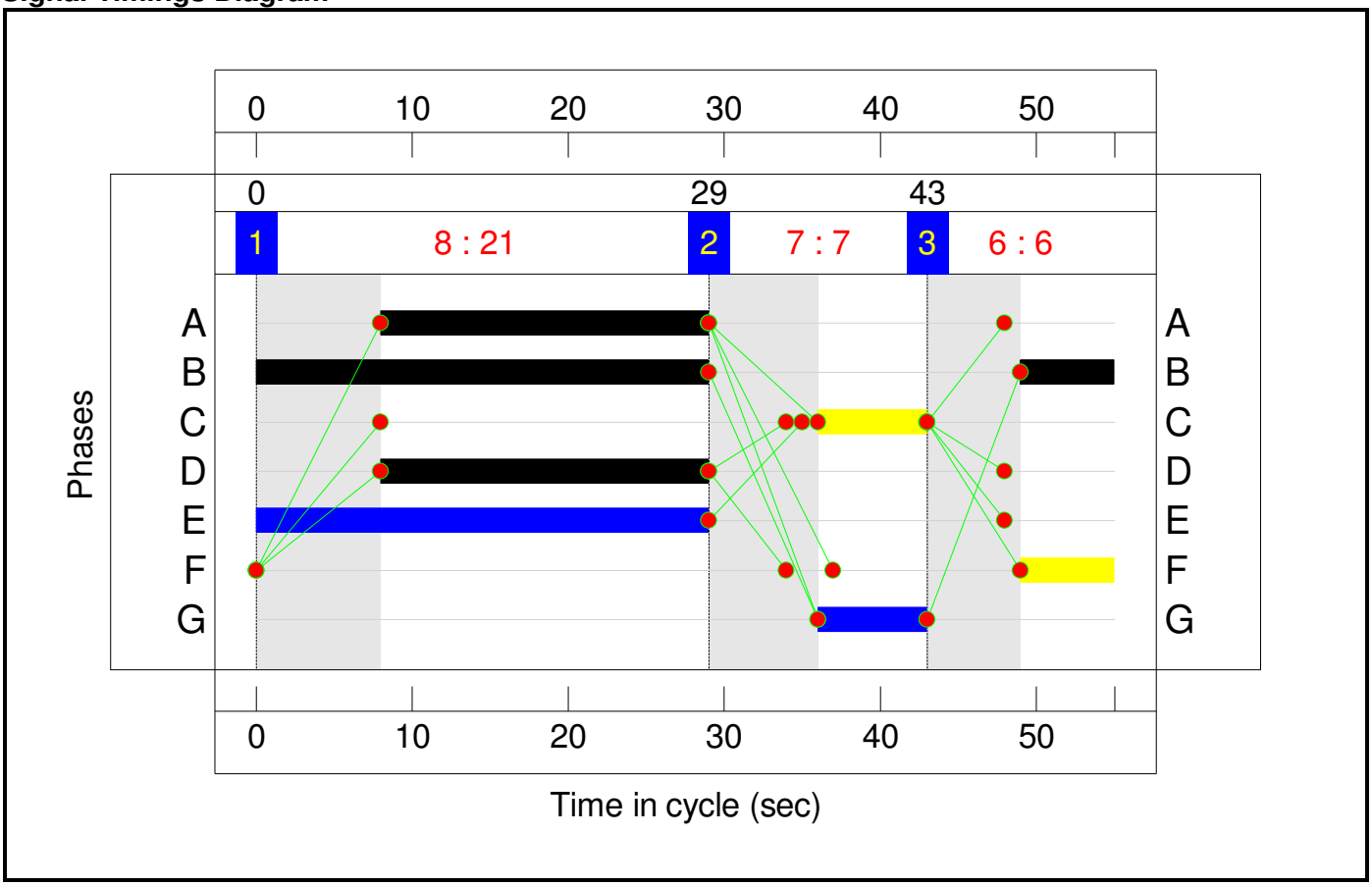


Stage Timings

Stage	1	2	3
Duration	21	7	6
Change Point	0	29	43

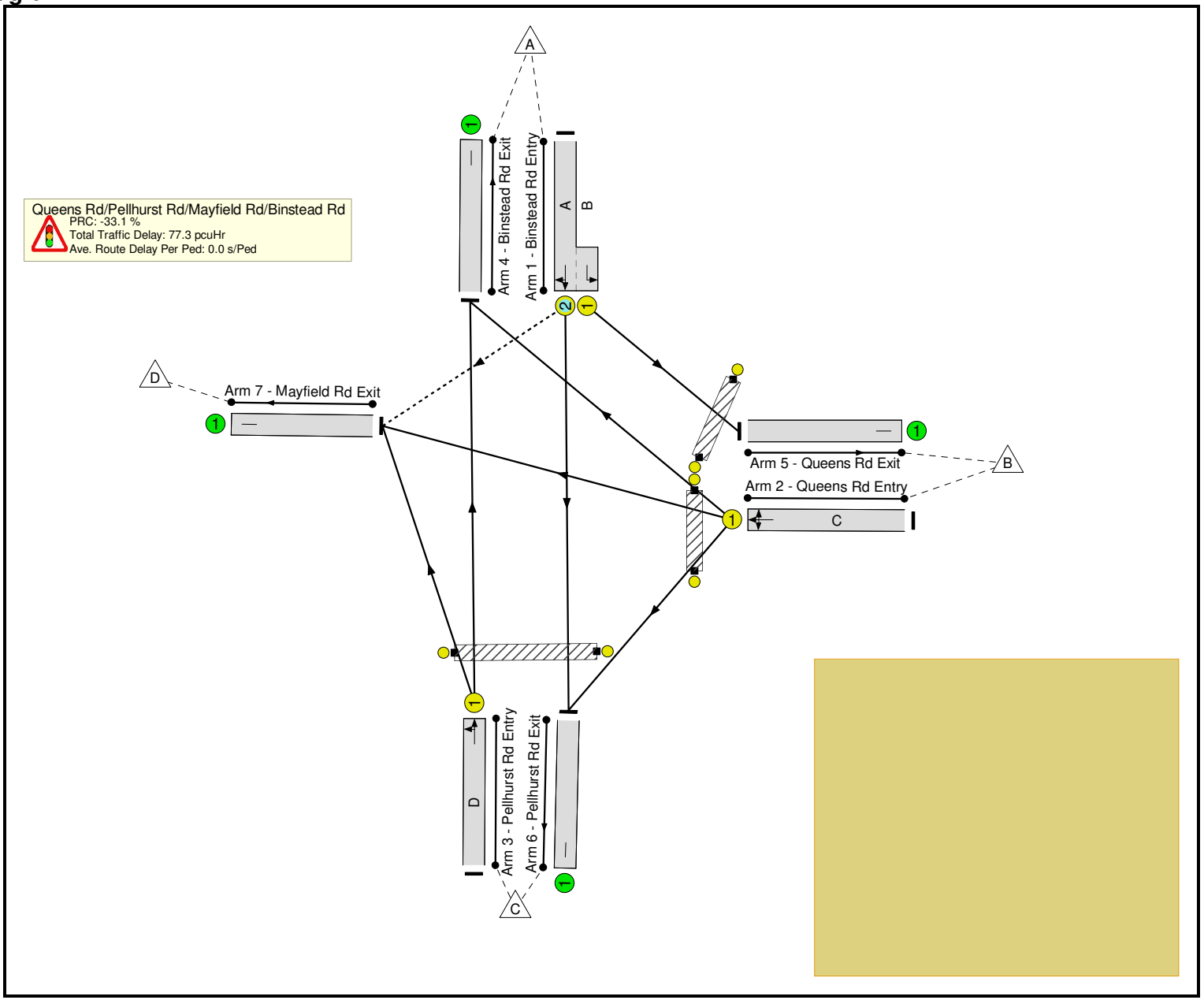
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: HCA Tender IoW	-	-	**N/A**	-	-		-	-	-	-	-	-	**119.8%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**119.8%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	21:35	-	680	1875:1699	568	119.8%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	7	-	253	1717	250	101.3%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	21	-	438	1744	698	62.8%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	548	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	385	Inf	Inf	0.0%
7/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	141	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	29	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

Full Input Data And Results

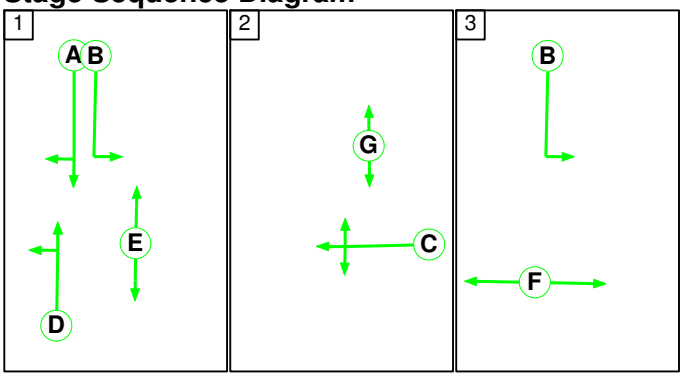
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**6**	**2**	**0**	**8.6**	**68.8**	**0.0**	**77.3**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**6**	**2**	**0**	**8.6**	**68.8**	**0.0**	**77.3**	**-**	**-**	**-**	**-**
1/2+1/1	680	568	6	2	0	5.2	59.1	-	64.3	340.7	10.3	59.1	69.5
2/1	253	250	-	-	-	1.7	8.8	-	10.5	149.7	3.9	8.8	12.7
3/1	438	438	-	-	-	1.6	0.8	-	2.4	20.1	5.4	0.8	6.2
4/1	545	545	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	248	248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	323	323	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	139	139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -33.1 Total Delay for Signalled Lanes (pcuHr): 77.32 Cycle Time (s): 55
PRC Over All Lanes (%): -33.1 Total Delay Over All Lanes(pcuHr): 77.32

Full Input Data And Results

Scenario 2: '2017 PM Base ' (FG4: '2017 - PM Base', Plan 1: 'Network Control Plan 1')

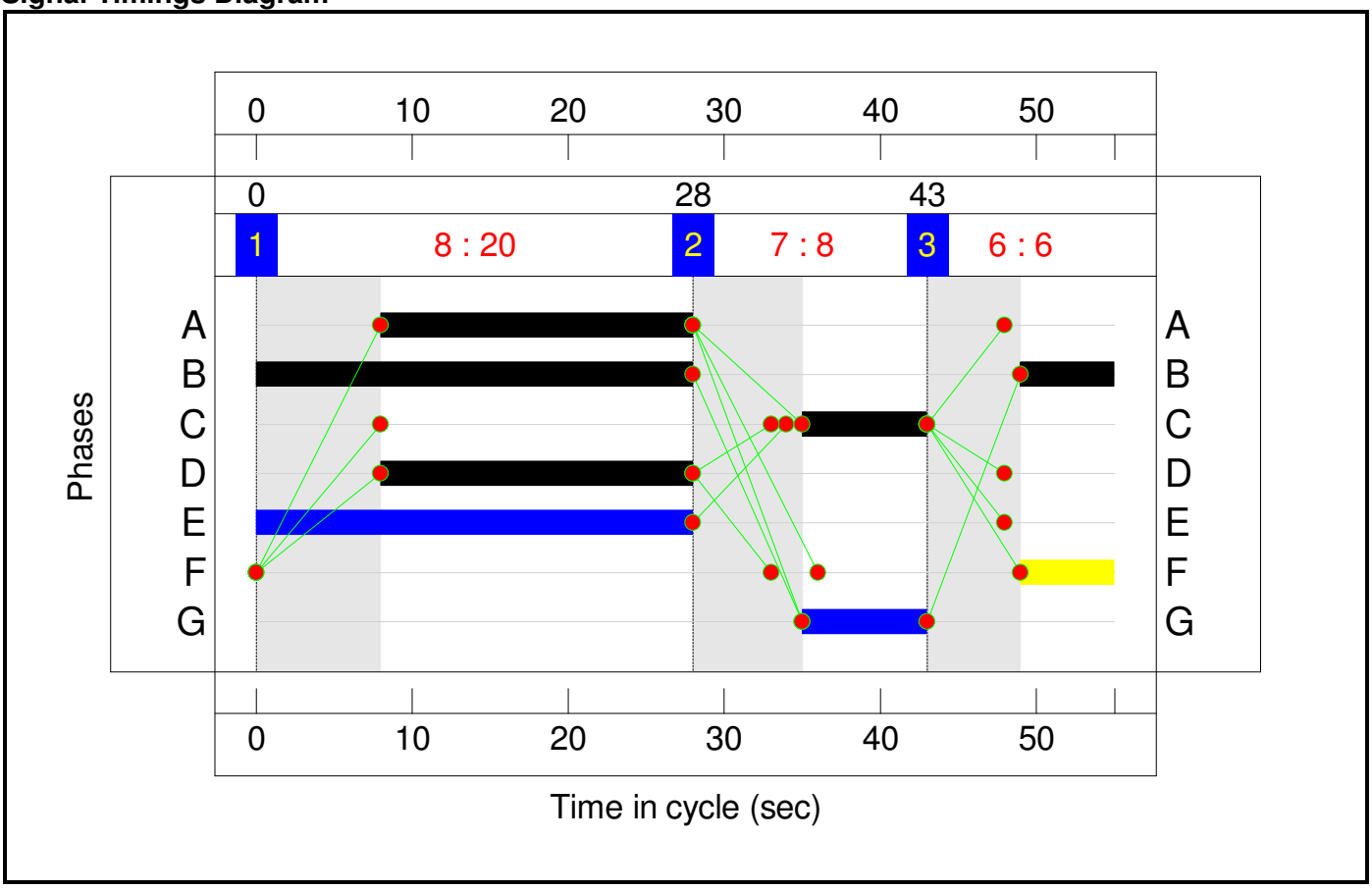
Stage Sequence Diagram



Stage Timings

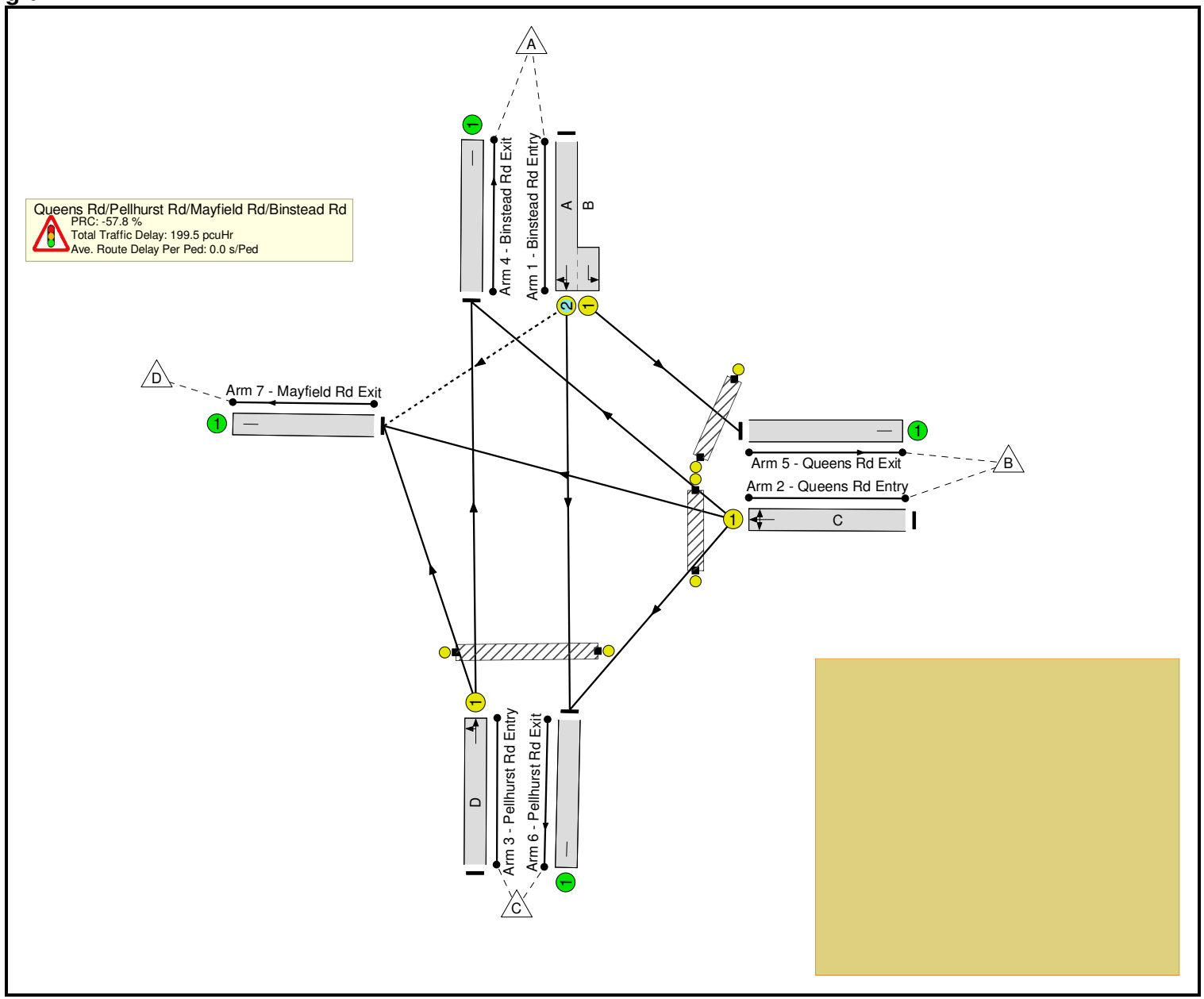
Stage	1	2	3
Duration	20	8	6
Change Point	0	28	43

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: HCA Tender IoW	-	-	**N/A**	-	-		-	-	-	-	-	-	**142.0%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**142.0%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	20:34	-	840	1875:1699	600	139.9%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	8	-	399	1717	281	142.0%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	20	-	424	1792	684	62.0%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	696	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	398	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	446	Inf	Inf	0.0%
7/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	123	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	28	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	8	-	0	-	0	0.0%

Full Input Data And Results

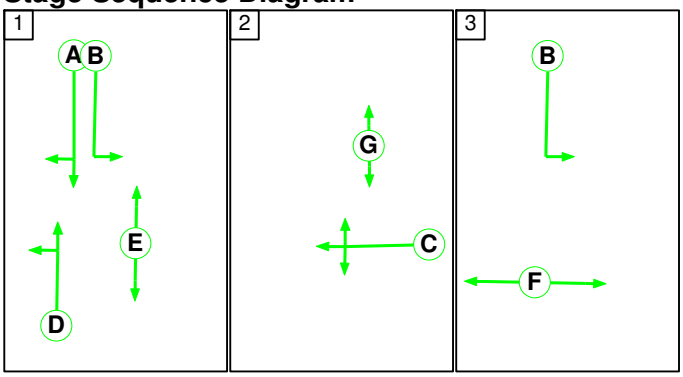
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**10**	**3**	**0**	**16.4**	**183.1**	**0.0**	**199.5**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**10**	**3**	**0**	**16.4**	**183.1**	**0.0**	**199.5**	**-**	**-**	**-**	**-**
1/2+1/1	840	600	10	3	0	9.2	121.6	-	130.8	560.4	14.5	121.6	136.1
2/1	399	281	-	-	-	5.6	60.7	-	66.3	598.0	8.7	60.7	69.4
3/1	424	424	-	-	-	1.6	0.8	-	2.4	20.6	5.2	0.8	6.0
4/1	595	595	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	284	284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	318	318	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	108	108	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -57.8 Total Delay for Signalled Lanes (pcuHr): 199.48 Cycle Time (s): 55
PRC Over All Lanes (%): -57.8 Total Delay Over All Lanes(pcuHr): 199.48

Full Input Data And Results

Scenario 3: '2034 - AM - DS' (FG1: '2034 - AM - DS', Plan 1: 'Network Control Plan 1')

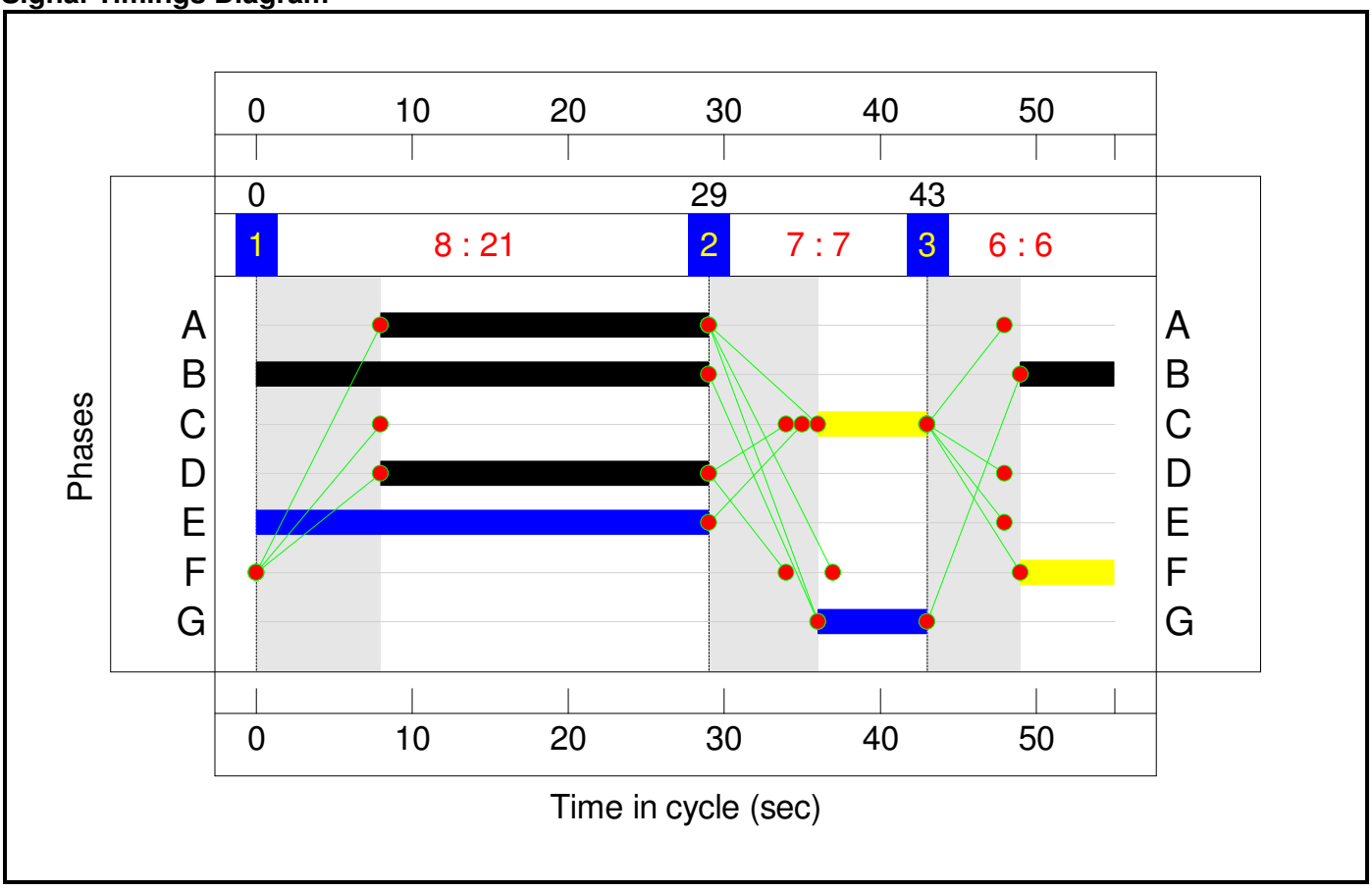
Stage Sequence Diagram



Stage Timings

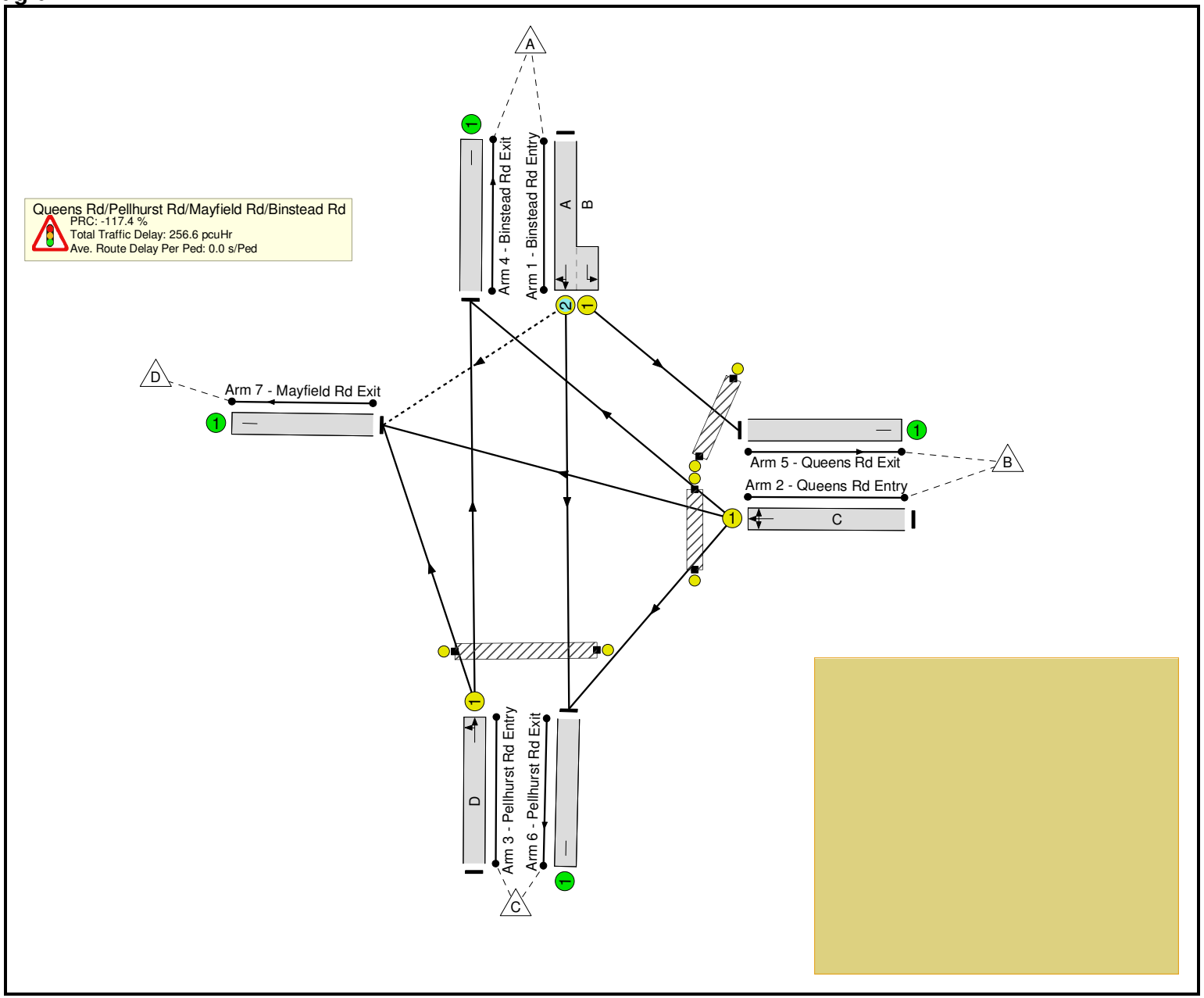
Stage	1	2	3
Duration	21	7	6
Change Point	0	29	43

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: HCA Tender IoW	-	-	**N/A**	-	-		-	-	-	-	-	-	**195.6%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**195.6%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	21:35	-	832	1875:1699	425	195.6%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	7	-	309	1717	250	123.7%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	21	-	536	1744	698	76.8%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	363	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	471	Inf	Inf	0.0%
7/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	172	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	29	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

Full Input Data And Results

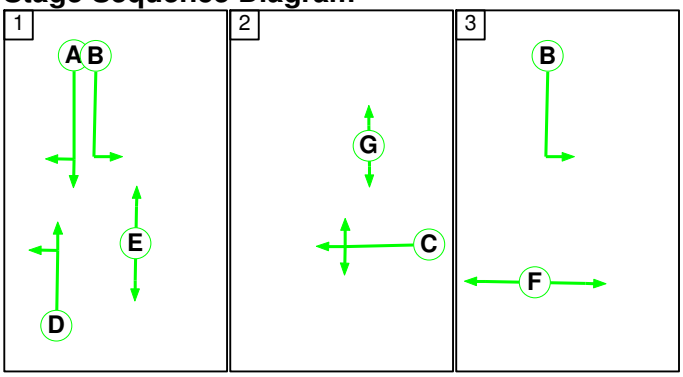
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**4**	**2**	**0**	**18.6**	**238.0**	**0.0**	**256.6**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**4**	**2**	**0**	**18.6**	**238.0**	**0.0**	**256.6**	**-**	**-**	**-**	**-**
1/2+1/1	832	425	4	2	0	13.1	204.4	-	217.5	941.2	17.5	204.4	221.9
2/1	309	250	-	-	-	3.3	32.0	-	35.3	411.4	5.8	32.0	37.8
3/1	536	536	-	-	-	2.1	1.6	-	3.8	25.2	7.0	1.6	8.6
4/1	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	186	186	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	161	161	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -117.4 Total Delay for Signalled Lanes (pcuHr): 256.60 Cycle Time (s): 55
PRC Over All Lanes (%): -117.4 Total Delay Over All Lanes(pcuHr): 256.60

Full Input Data And Results

Scenario 4: '2034 - PM - DS' (FG2: '2034 - PM - DS', Plan 1: 'Network Control Plan 1')

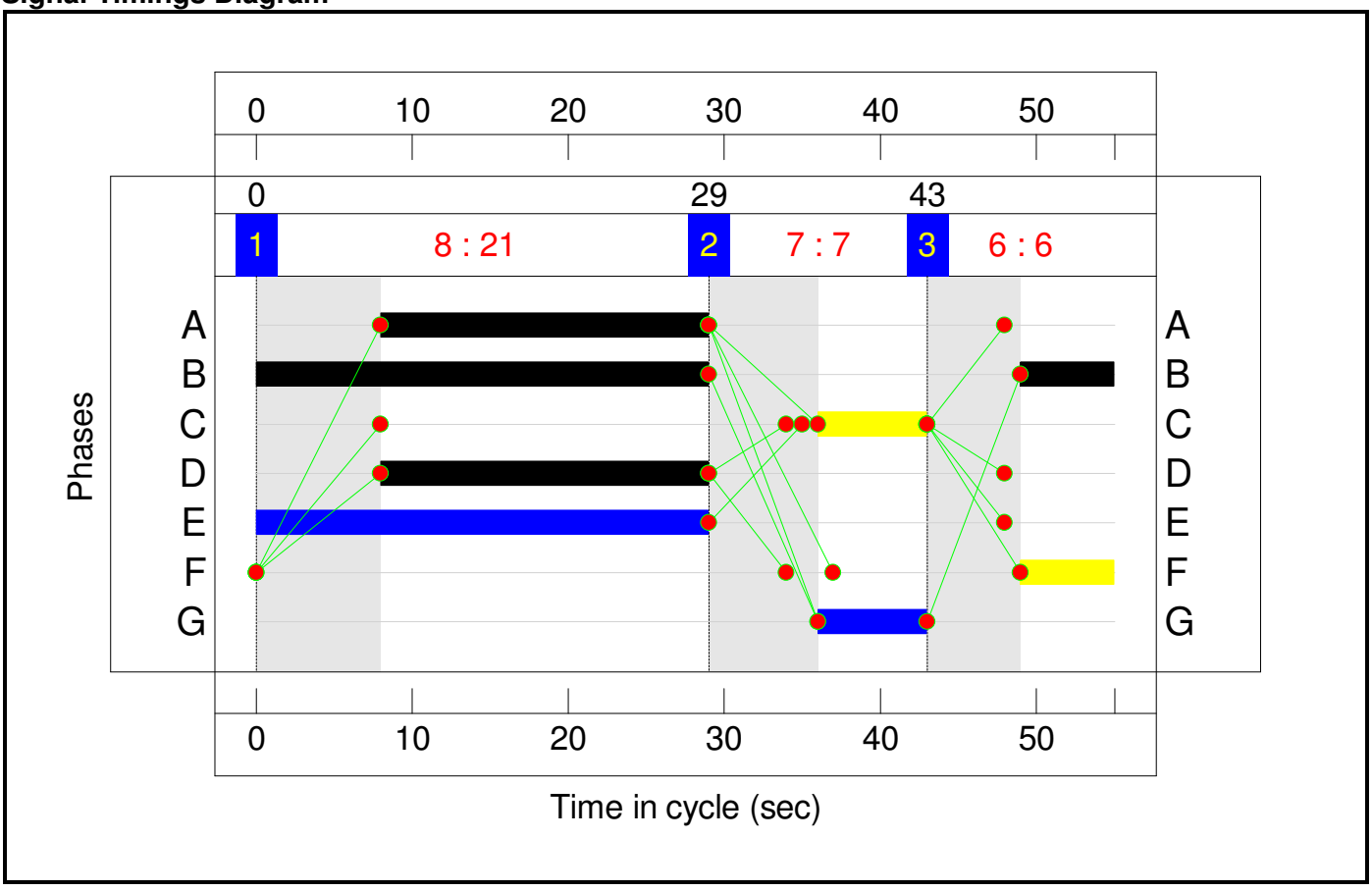
Stage Sequence Diagram



Stage Timings

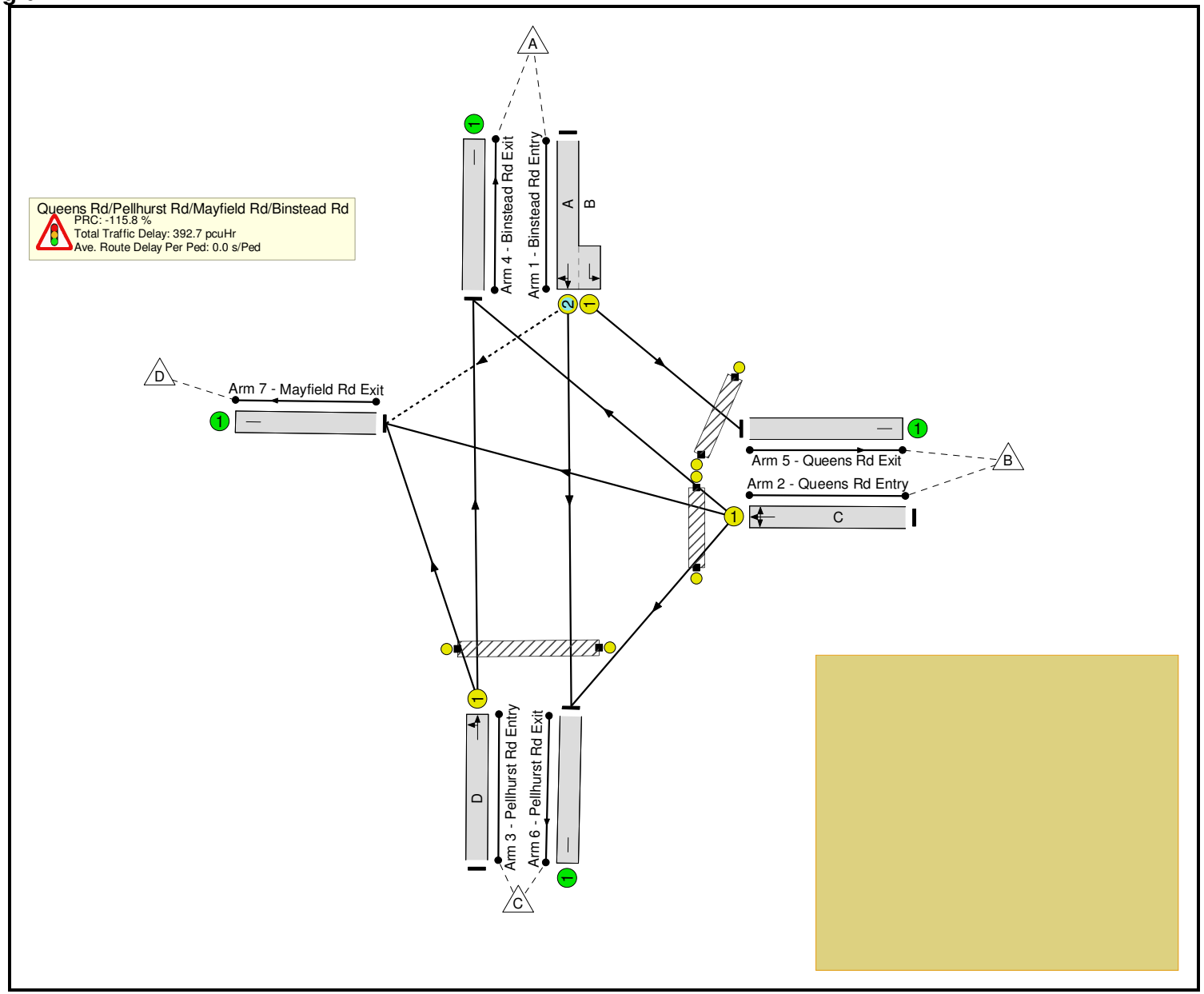
Stage	1	2	3
Duration	21	7	6
Change Point	0	29	43

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: HCA Tender IoW	-	-	**N/A**	-	-		-	-	-	-	-	-	**194.2%**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**194.2%**
1/2+1/1	Binstead Rd Entry Left Ahead Right	O+U	N/A	N/A	A B		1	21:35	-	1023	1875:1699	536	191.0%
2/1	Queens Rd Entry Right Left Ahead	U	N/A	N/A	C		1	7	-	485	1717	250	194.2%
3/1	Pellhurst Rd Entry Ahead Left	U	N/A	N/A	D		1	21	-	516	1793	717	71.9%
4/1	Binstead Rd Exit	U	N/A	N/A	-		-	-	-	848	Inf	Inf	0.0%
5/1	Queens Rd Exit	U	N/A	N/A	-		-	-	-	485	Inf	Inf	0.0%
6/1	Pellhurst Rd Exit	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
7/1	Mayfield Rd Exit	U	N/A	N/A	-		-	-	-	148	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	29	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: HCA Tender IoW	**-**	**-**	**8**	**3**	**0**	**28.0**	**364.7**	**0.0**	**392.7**	**-**	**-**	**-**	**-**
Queens Rd/Pellhurst Rd/Mayfield Rd/Binstead Rd	**-**	**-**	**8**	**3**	**0**	**28.0**	**364.7**	**0.0**	**392.7**	**-**	**-**	**-**	**-**
1/2+1/1	1023	536	8	3	0	15.9	244.8	-	260.7	917.5	21.2	244.8	266.0
2/1	485	250	-	-	-	10.0	118.6	-	128.7	955.1	13.4	118.6	132.0
3/1	516	516	-	-	-	2.0	1.3	-	3.3	22.7	6.6	1.3	7.9
4/1	645	645	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	254	254	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	284	284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	118	118	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -115.8 Total Delay for Signalled Lanes (pcuHr): 392.66 Cycle Time (s): 55
PRC Over All Lanes (%): -115.8 Total Delay Over All Lanes(pcuHr): 392.66