Bridgend Replacement Local Development Plan 2018-2033

Background Paper 24:

Strategic Transport Assessment

Table of Contents

1. Introduction

1.1 This background paper has been produced in connection with the Bridgend Replacement Local Development Plan 2018 to 2033 (RLDP). It evaluates the implications of the Strategic Transport Assessment (STA) produced by Mott MacDonald on behalf of Bridgend County Borough Council (BCBC).

1.2 Mott MacDonald was commissioned in January 2020 by BCBC to develop a series of technical notes to establish the impact of RLDP candidate sites on the highway network. The technical notes also considered the level of mitigation required to accommodate these sites over the plan period.

1.3 This background paper is intended to be read in conjunction with the STA and summarises the approach taken by BCBC to ensure the level of development identified in the RLDP can be suitably accommodated by the highway network.

2. Strategic Transport Assessment Highway Capacity Summary

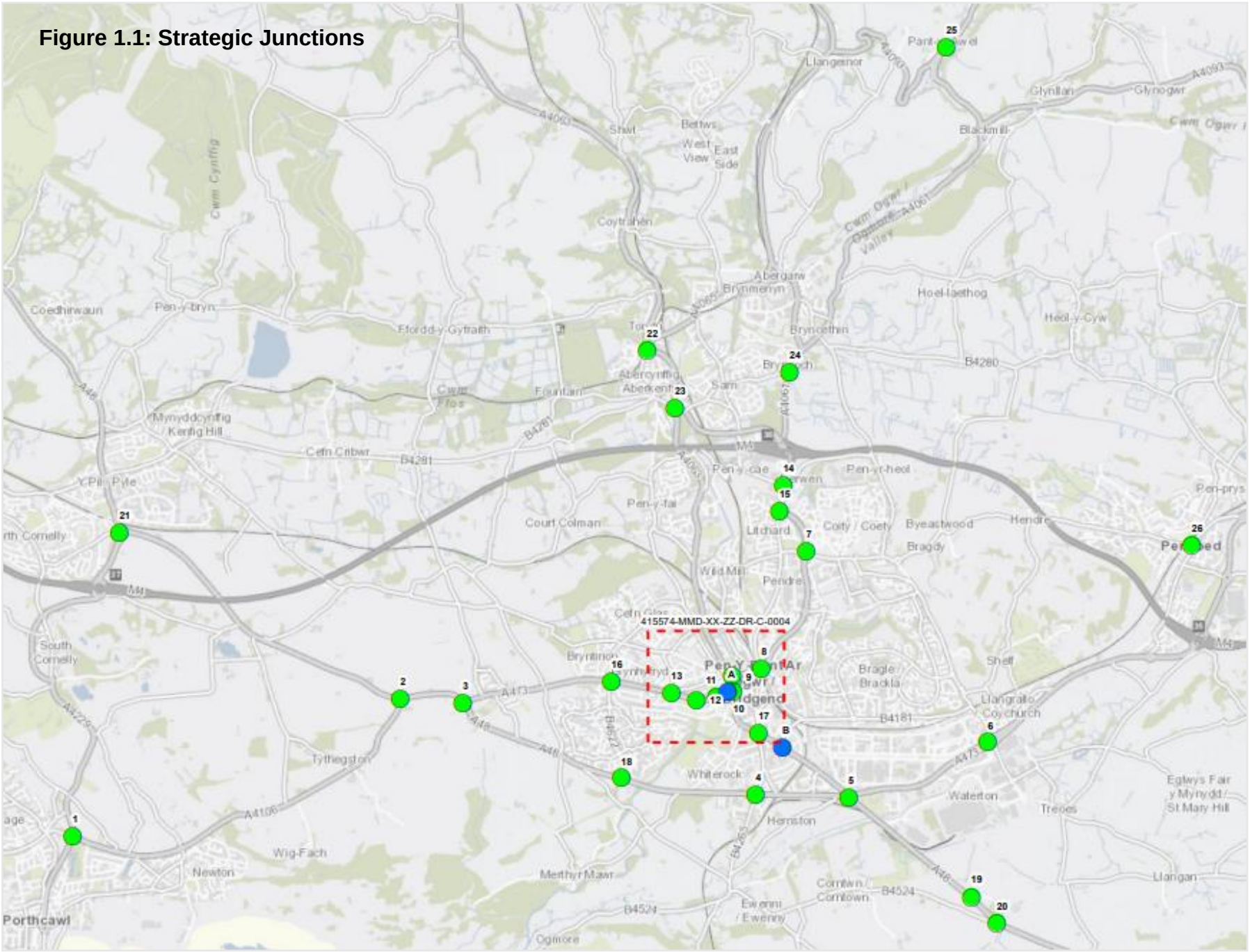
2.1 This section provides a high-level summary of the STA's key findings. For further detail, please refer to the full suite of technical notes that form the STA.

2.2 The STA provides a review of public transport service provision which did not show any significant gaps; however all proposed allocations are required to ensure that routes to access these modes of travel are provided. Equally, discussions with bus operators are required to take place at the application stage to seek new or diverted bus services to better serve the site(s).

2.3 Active travel provision currently has significant gaps in the BCBC area, but there are clear plans shown on the Active Travel Network map developed by BCBC. All proposed site allocations are required to consider active travel provision at the application stage and ensure accessibility by walking and cycling in line with the Active Travel (Wales) Act 2013.

2.4 The STA identified 26 junctions throughout the county borough which are deemed to be particularly sensitive to traffic increases, to an extent that highway safety and operation could be adversely affected to a material level (Figure 1.1).

Figure 1.1: Strategic Junctions



2.5 It should be noted that the three M4 motorway junctions within Bridgend County Borough (J35-37) were not modelled in the STA as they have been separately assessed by the Welsh Government (WG).

2.6 The reporting on these junctions forms part of a wider WelTAG Stage 1 study, which has confirmed there are no proposed highway changes required at Pencoed Junction 35 and Pyle Junction 37. The WG WelTAG Stage 2 assessment of Sarn Junction 36 was in production but not available at the time of writing.

2.7 The STA provides base year capacity analysis, which uses traffic data collected in October 2020, factored with a Covid uplift of 1.23 to account for lower than typical traffic volumes. This assessment demonstrated that, of the 26 junctions assessed, eight were demonstrated to have exceeded their theoretical capacity limit.

2.8 The next step in the process was to review the network with committed development incorporated (i.e. unimplemented planning consents) using approved TAs or the TRICS database where data was absent.

2.9 Committed development traffic was distributed using Middle Super Output Area Census data and assigned to the network according to the fastest route. Where there was more than one likely route between zones, traffic was split equally.

2.10 The reference case assessment scenario includes committed development traffic. The results concluded that 17 of the 26 study junctions were forecast to be over capacity.

2.11 To determine the impact of the proposed allocations traffic, the next step was to add this traffic in line with the committed development traffic distribution and assignment methodology.

2.12 The conclusion of the RLDP traffic scenario revealed that the network is forecast to be heavily saturated, with 21 of the 26 junctions over capacity, some of which are shown to be significantly so.

3. Proposed RLDP Allocations – Traffic Impact

3.1 The STA identified the impact of each proposed allocations on the junctions that were forecast to be over capacity. All proposed allocations with an impact of >4% (derived with reference to STA Technical Note 9) on these junctions were identified as having potential to create a ‘material’ adverse impact on highway operation, which would justify further consideration towards strategic highway mitigation.

3.2 However, due to several robust assumptions in the STA methodology and the overarching policy and legislative context towards sustainable modal shift, BCBC undertook a qualitative sifting exercise.

3.3 The sifting process further interrogated the capacity analysis outputs to identify junctions that were deemed to be significantly over capacity to an extent that wider policy (e.g. modal shift and home working) could not be considered realistic mitigation (derived with reference to STA Technical Note 9). Junctions were removed from the equation if one or more of the following criteria were met:

1. The junction was, despite robust STA assumptions, shown to be only marginally over capacity to an extent whereby it could be reasonably reassessed using an alternative methodology and found to operate satisfactorily.
2. The junctions' forecast queueing and delay was shown to be constrained to appropriate locations (e.g. A-roads away from residential properties) or could be managed through recalibrating traffic signal timings.
3. There are sustainable transport opportunities in the vicinity to influence existing and future modal shifts away from private car use.
4. The junction is being mitigated through another funding source (e.g. developer, or an air quality management plan, as is the case with Park Street/A483 signals).

3.4 Furthermore, the sifting exercise considered whether the adverse effects were to be materially compounded by the proposed allocations. This was undertaken on the basis that nil detriment was unlikely to be achievable across the network due to the high levels of traffic growth applied, the high costs and third-party land requirements associated with some junction upgrades.

3.5 This exercised revealed that there are junctions identified in the STA (deemed critical to the fundamental operation of the highway network) that are forecast to operate with unacceptable levels of delay as a result of proposed allocation site traffic. These junctions are concluded to require significant mitigation to prevent economic, environmental and social issues.

3.6 The identified junctions that have been concluded to require strategic highway mitigation contributions are summarised in Table 3.1 overleaf.

Table 3.1: RLDP Essential Strategic Junction Improvements

Ref No	Survey Location	Junction Type
4	A48 Bypass Road/ B4265 (Ewenny Roundabout)	Signalised roundabout
5	A473/A48 Roundabout	Signalised roundabout
6	A473 Waterton Road / Brocastle Avenue/ A473 Waterton Road/ B4181 Coychurch Road	Signalised roundabout
16	A473/B4622/Bright Hill	Signalised junction
17	A483 Cowbridge Road/B4265 Ewenny Road/ A473 Langenau Strasse/Nolton Street	Signalised junction
18	A48 Bypass Road/B4622 (Broadlands Roundabout)	Roundabout

4. Mitigation Requirements for Proposed Allocations

4.1 The STA has developed high level costings for the junctions that were deemed to require mitigation. The estimates were based on the following:

- estimates were compiled by experienced cost estimators using current market values.
- estimates have been provided based on the indicative increase in highway requirements from the schematic mitigation plans shown in the STA.
- estimates are for the capital works only with a percentage allowance made for elements such as preliminaries, traffic management and small-scale diversions of utilities (not requiring major C3 diversions) as might reasonably be expected to be associated with these levels of minor highway junction improvements.
- a 20% uplift has been included to cover the rising cost of the construction materials based on current market values in South Wales.
- No allowance has been made for any land take not already in the control of the highway authority (BCBC) or the developers associated with the need for the highway improvement.

- the estimates exclude any associated costs needed to establish a formal Section 278 Agreement with BCBC as the highway authority, and which the developers will need to pay.

4.2 Table 4.1 provides the cost estimates without the inclusion of any optimism bias that should be applied for designs based on surface observations, without the support of all the required on-site surveys and investigations. This would include C3 utility surveys, land ownership payments and appropriate environmental assessments. At programme entry level the Treasury would set the optimism bias at 44%.

Table 4.1: Strategic Junction Improvement Cost Estimate

Ref No	Survey Location	Cost Estimate at Q2 2021
4	Ewenny Roundabout	£5m*
5	A473/A48 Roundabout	£15,000
6	A473 Waterton Road / Brocastle Avenue/ A473 Waterton Road/ B4181 Coychurch Road	£15,000
16	A473/B4622/Bright Hill	£15,000
17	A483 Cowbridge Road/B4265 Ewenny Road/ A473 Langenau Strasse/Nolton Street	£15,000
18	Broadlands Roundabout	£5m*

** These are high level estimates, which have subsequently been refined with the benefit of preliminary design and detailed cost estimation, discussed later in the background paper.*

4.3 Based on Table 4.1, the total required strategic highway costs equate to a high-level estimate of £10,060,000 to mitigate the proposed allocation site traffic at sensitive junctions.

4.4 However, as will be noted in the following sections, further design and cost estimations have been undertaken for the affected proposed allocations. This resulted in a more accurate value for the S278 works, which informed the site-specific viability assessments.

4.5 It should be noted that in addition to the above, all proposed allocations will be expected to demonstrate (at the planning application stage) that they are accessible in line with the user hierarchy of Planning Policy Wales (Ed 11, February 2021). This would typically require localised active travel improvements, public transport enhancements and a travel plan.

5. Funding Mechanism

5.1 There were a number of potential cost apportionment solutions that were considered when determining how the required mitigation will be secured and delivered. However, the proposed allocation sites were subject to changes following completion of the STA and during the production of this background paper as follows:

Table 5.1: RLDP Proposed Allocations

Proposed Allocation Sites (Deposit Stage)	Proposed Allocation Sites (Submission Stage)
Porthcawl Waterfront	Porthcawl Waterfront
Land South of Bridgend (Island Farm)	Land South of Bridgend (Island Farm)
Land West of Bridgend	Land West of Bridgend
Parc Afon Ewenni	-
Land East of Pencoed	Land East of Pencoed
Land East of Pyle	Land East of Pyle
Craig y Parcau	Craig y Parcau
Land SE of Pont Rhyd-y-cyff	Land SE of Pont Rhyd-y-cyff
Land S of Pont Rhyd-y-cyff	Land S of Pont Rhyd-y-cyff
Land SW of Pont Rhyd-y-cyff	Land SW of Pont Rhyd-y-cyff

5.2 As outlined in Table 5.1, Parc Afon Ewenni was no longer proposed as an allocation within the Replacement LDP due to flood risk Issues (refer to the Candidate Site Assessment, 2022).

5.3 Therefore, the STA proposed allocation site impact outputs were proportionately revised to discount Parc Afon Ewenni from all sensitive junctions.

5.4 Once the revised impacts had been calculated the following delivery methodologies were considered:

1. Full mitigation to be delivered by the proposed allocation site in closest proximity to the sensitive strategic junction (S278);
2. Equal cost apportionment to all proposed allocation sites which had a material impact on a sensitive strategic junction (S106);
3. Proposed allocation site with the largest traffic impact on each identified sensitive junction to deliver full mitigation (S278); and

4. Combination of S106 for minor junction mitigation and S278 for significant interventions based on a combination of geographic proximity and STA impact.

5.5 Option 1 was discounted on the basis that the STA distribution and assignment methodology demonstrated that the geographic proximity to a junction did not accurately reflect the traffic impact of a proposed allocation site. Therefore, such an approach would not be fair, reasonable or defendable.

5.6 Option 2 was given significant consideration, with all proposed allocation sites contributing a material impact being expected to contribute proportionately to the estimated combined junction mitigation costs (total of £10,060,000). This would be delivered by S106 contributions and the junction mitigation delivered by the local highway authority.

5.7 However, there were significant concerns with the risks of Option 2, summarised as follows:

1. Some proposed allocation sites may not come forward in tandem, which would leave a shortfall of funds such that junction mitigation could be unviable;
2. There could be significant congestion and delay at some sensitive junctions during the short term until all S106 funding is received (which could be at the end of the plan period) and the intervention implemented; and
3. There are significant resourcing constraints within the local authority that will be further adversely impacted by the burden of delivering these major transport interventions.

5.8 On balance of the above, Option 2 was discounted.

5.9 Option 3 appeared to offer a favourable and workable solution as it was considered a fair method for site promoters as well as being low risk and low burden on the local authority.

5.10 However, there was residual risk that the fine margins involved with the traffic distribution and assignment could be challenged. For instance, an alternative methodology could be proposed by a developer which could alter the STA conclusions. The altered conclusions could affect which of the proposed allocation sites would be responsible for delivering mitigation at certain junctions. Furthermore, it was evident that many of the traffic-controlled junctions that have been identified for signal controller reconfiguration were

equally impacted by more than one site to the extent that cost apportionment via S106 is the only reasonable option.

5.11 It was therefore determined that Option 3 be discounted in favour of Option 4, which was subsequently adopted as the preferred methodology of strategic highway mitigation.

5.12 Prior to finalising this approach, the land promoters associated with the S278 works (i.e. Broadlands Roundabout and Ewenny Roundabout) were consulted on this methodology.

5.13 The engagement exercise set out the following:

1. The key findings of the STA;
2. The identified junctions that require mitigation on a strategic level;
3. The obligations of each developer in delivering the required mitigation;
4. Acknowledgement from BCBC that there are alternative methodologies for calculating respective proposed allocation site traffic impact at the identified junctions, but that the methodology used in the STA is robust and justified by the information available at the time;
5. Acknowledgement from BCBC that there are demand influencing factors that may occur in reality, such as sustainable modal shift, reduced demand due to increased home working, traffic re-routing or altered journey patterns to avoid peak hours. However, it is difficult to quantify such influences at this stage and therefore a robust quantitative approach combined with professional judgement was deemed appropriate; and
6. The requirement for a collaborative approach between BCBC and all site promoters to ensure that the impacts of LDP traffic are suitably addressed in a consistent manner.

5.14 The results of the engagement and subsequent assessment and appraisal concluded that the site promoters were generally in agreement with the proposed mitigation approach. This was subject to further design, traffic modelling and construction cost estimation of the S278 works by their respective highways consultants, as discussed further in the following section.

6. Mitigation Viability

6.1 Additional assessments were undertaken in relation to the two key proposed site allocations responsible for delivering the two S278 strategic junction interventions at Broadlands Roundabout and Ewenny Roundabout. This was to ensure a suitable level of mitigation could be provided to align with the capacity analysis conclusions of the STA, within a viable budget.

6.2 The respective site promoters each focussed on a preliminary design that sought to maximise land within control of BCBC and with the aim of ensuring that the user hierarchy of Planning Policy Wales (Ed 11, February 2021) was adhered to. Namely, this was to ensure that controlled active travel crossing facilities would be provided at each junction.

6.3 The results of the Broadlands Roundabout assessment (Appendix A) demonstrates that the junction can be converted to a staggered traffic-controlled signal arrangement with all queuing retained on the A48. The junction is able to provide controlled crossing opportunities for active travel users, which is a significant upgrade over the current situation. Furthermore, the submitted design demonstrated that the upgrade will not prejudice an access into the proposed allocation site Craig Y Parcau, which is located to the south of the junction.

6.4 Subsequent discussions with the site promoters of Craig Y Parcau confirmed that there is no objection in principle to the staggered arrangement, although it is acknowledged by all parties that an alternative arrangement, such as a standard signalised crossroad layout, is also a viable option, subject to capacity analysis results at the application stage.

6.5 The site promoters of Land West of Bridgend further confirmed that the costs associated with the provisional mitigation could be viably delivered at the planning application stage.

6.6 The results of the Ewenny Roundabout assessment on behalf of the Island Farm site promoters (Appendix B) concluded that a signalised crossroad arrangement would provide adequate mitigation and that the estimated costs could be viably delivered at the application stage.

6.7 The proposed strategic highway contribution and delivery mechanism is summarised in Table 6.2. Please note that this table allows for the more detailed cost estimates of the Ewenny Roundabout and Broadlands Roundabout upgrade works.

Table 6.2: RLDP Proposed Allocation – Strategic Highway Mitigation Requirements

Proposed allocation sites	Strategic Highway Contribution	Mechanism	Mitigation Focus
Porthcawl Waterfront	£ 2,051	S106	A473/B4622/Bright Hill signal enhancements
Island Farm	£2,128,653	S278	Ewenny Roundabout Upgrade
	£19,930	S106	1. A483 Cowbridge Road/B4265 Ewenny Road/ A473 Langenau Strasse/Nolton Street signal enhancements 2. A473/A48 Roundabout signal enhancements 3. A473 Waterton Road / Brocastle Avenue/ A473 Waterton Road/ B4181 Coychurch Road signal enhancements
Land West of Bridgend	£2,846,000	S278	Broadlands Roundabout Upgrade
	£24,483	S106	1. A483 Cowbridge Road/B4265 Ewenny Road/ A473 Langenau Strasse/Nolton Street signal enhancements 2. A473/A48 Roundabout signal enhancements 3. A473 Waterton Road / Brocastle Avenue/ A473 Waterton Road/ B4181 Coychurch Road signal enhancements 4. A473/B4622/Bright Hill signal enhancements
Land East of Pyle	£13,536	S106	1. A483 Cowbridge Road/B4265 Ewenny Road/ A473 Langenau Strasse/Nolton Street signal enhancements 2. A473/B4622/Bright Hill signal enhancements

7. Conclusion

7.1 The results of the STA and subsequent interrogation of the results by BCBC officers and strategic land promotors has concluded that the level of development identified in the RLDP can be suitably accommodated by the highway network, subject to the interventions identified in this background paper, as well as localised mitigation at the planning application stage.

7.2 Furthermore, there is an agreed approach between BCBC and major land promoters that these works will be delivered via a combination of S106 and S278 agreements.

Appendix A

A48 / B4622 Junction Review (Vectos, August 2022)

STA Review (Bridgend CBC)
A48 / B4622 Junction Review

226542/N01
August 2022

Introduction

1. Vectos are appointed by Llanmoor Homes to provide highways and mobility advice in relation to the promotion of the site known as Land West of Bridgend.

2. Bridgend County Borough Council (BCBC) have requested that a detailed traffic study be undertaken of the Broadlands junction to understand what improvements could be made to mitigate the traffic effect of the cumulative committed developments and LDP candidate sites, of which, the Land West of Bridgend is one.

3. BCBC have provided traffic survey data which was recorded in April 2022, for use in the following assessments.

4. BCBC have also provided traffic flow data for the cumulative committed developments and LDP candidate sites which have been used in the following 'BCBC' scenarios. We have reviewed this data and found that there is a slight discrepancy between the traffic forecasts through the Broadlands junction for the Land West of Bridgend site when compared with that forecast in the supporting Vectos Transport Assessment. These differences are summarised in **Table 1**. As such we have sought to model scenarios using the Vectos forecast traffic movements from the Land West of Bridgend site, but all of sites forecasted traffic movements remain the same, which as labelled as 'Vectos TA', as well as using purely BCBC forecast traffic which are labelled as 'BCBC'.

Table 1 – Total Vehicles at Broadlands Junction

Total Vehicles	AM	PM
7th April 2022 survey	1,986	2,233
Committed / LDP candidate sites (excl LWoB / Craig Y Parc)	2,022	1,794
Craig Y Parc	56	55
LWoB – BCBC	199	205
LWoB – Vectos TA	103	93

Existing Roundabout

5. We have tested the existing Broadlands roundabout to understand the effects of the BCBC forecasted LDP traffic on the existing junction. To note the Craig y Parcau site was removed from the scenario as this cannot be accessed from the existing 3-arm roundabout.

6. The results of the existing junction are summarised in **Table 2** and contained in full in **Appendix A**.

Table 2 - Existing Roundabout

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	April 2022					
B4622	2	9	0.63	1	5	0.35
A48 (E)	1	3	0.32	2	5	0.65
A48 (W)	11	48	0.93	8	48	0.91
	April 2022 + Com					
B4622	7	26	0.88	1	6	0.46
A48 (E)	2	6	0.66	283	483	1.24
A48 (W)	1313	4842	2.42	571	2852	1.87
	April 2022 + Com + LWoB (BCBC)					
B4622	25	77	1.00	1	6	0.51
A48 (E)	3	6	0.69	411	676	1.32
A48 (W)	1357	5111	2.51	637	3366	1.98
	April 2022 + Com + LWoB (Vectos TA)					
B4622	14	47	0.95	1	6	0.48
A48 (E)	3	6	0.67	338	565	1.27
A48 (W)	1330	4950	2.45	601	3081	1.92

7. The results of the existing Broadlands roundabout summarised in **Table 2** demonstrate that in all tested scenarios that include the forecasted BCBC committed development / LDP site traffic flows, the junction operates significantly over capacity with large network delay and quantum of queuing predicted.

Staggered Traffic Signal-Controlled Junction

8. We have sought to develop a staggered traffic signal-controlled junction that improves active travel provision, offers betterment in terms of traffic capacity (over the existing roundabout) and provides access to the Craig Y Parcau site to the south. This junction layout is contained in **Appendix B**.

9. The results of the potential staggered arrangement are summarised in **Table 3** and contained in full in **Appendix C**. Craig Y Parcau is included within the committed developments for this junction assessment.

Table 3 – Staggered Traffic Signal-Controlled Junction Results

Arm	AM Peak				PM Peak			
	MMQ (PCU)	Delay (s/PCU)	DoS (%)	PRC (%)	MMQ (PCU)	Delay (s/PCU)	DoS (%)	PRC (%)
	April 2022 + Com + Dev (BCBC)							
B4622	17	73	85.3	-17.7	6	93	73.6	8.7
A48 (E)	10	53	63.4		26	33	82.8	
Craig Y Parcau	2	78	38.8		1	65	12.5	
A48 (W)	125	136	105.9		10	11	66.0	
	April 2022 + Com + Dev (Vectos TA)							
B4622	15	73	80.7	-17.2	6	93	73.6	10.3
A48 (E)	9	52	59.6		24	31	81.6	
Craig Y Parcau	2	78	38.8		1	71	15.7	
A48 (W)	122	130	121.1		10	10	66.3	

10. The results summarised in **Table 3** demonstrates that the junction is forecast to operate within capacity during the weekday PM peak periods in all tested scenarios. The AM peak is shown to operate over capacity, however this is with minimal delay and queuing. Most queued vehicles are also contained on the A48. This approach has been discussed with Officers at BCBC Highways and considered acceptable.

Crossroad Traffic Signal-Controlled Junction

11. For completeness, we have also tested a potential traffic signal-controlled crossroads arrangement, the results of which are summarised in **Table 4** and contained in full in **Appendix D**. Craig Y Parcau is included within the committed developments.

Table 4 – Crossroads Arrangement

Arm	AM Peak				PM Peak			
	MMQ (PCU)	Delay (s/PCU)	DoS (%)	PRC (%)	MMQ (PCU)	Delay (s/PCU)	DoS (%)	PRC (%)
	April 2022 + Com + Dev (BCBC)							
B4622	23	88	93.7	-18.1	6	82	66.9	-52.4
A48 (E)	13	71	79.7		290	567	137.2	
Craig Y Parcau	2	73	34.4		1	68	13.9	
A48 (W)	74	178	106.3		25	65	91.0	

Arm	AM Peak				PM Peak			
	MMQ (PCU)	Delay (s/PCU)	DoS (%)	PRC (%)	MMQ (PCU)	Delay (s/PCU)	DoS (%)	PRC (%)
	April 2022 + Com + Dev (Vectos TA)							
B4622	20	103	93.0	-9.7	6	82	66.9	-47.8
A48 (E)	13	82	83.6		269	540	133.0	
Craig Y Parcau	2	73	34.4		1	68	13.9	
A48 (W)	47	49	98.7		23	55	86.6	

12. **Table 4** demonstrates that whilst the AM peak is forecast to operate slightly better than the staggered junction arrangements, the PM peak operates significantly worse with much longer queuing and delay.

Conclusion

13. The analysis has shown that to accommodate the BCBC forecasted committed development and LDP site traffic forecasts for the Broadlands roundabout, the staggered traffic signal-controlled junction arrangement is the most suitable arrangement.

14. In addition to the staggered junction arrangements, an additional stand-alone, on-demand signal-controlled pedestrian / cycle crossing can also be accommodated to the east of the proposed junction, near the Broadlands – Merthyr Mawr desire line.

Appendix A

Junctions 10

ARCADY 10 - Roundabout Module

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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: 226542-Existing Roundabout-V2.j10
Path: H:\Projects\W220000\226542 - STA Review (Bridgend CBC)\Technical\A - STA Review Report\Modelling\Arcady
Report generation date: 25/08/2022 15:19:53

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
April 2022						
1 - B4622	1.7	8.44	0.63	0.6	4.23	0.35
2 - A48 (E)	0.5	2.75	0.32	1.9	4.93	0.65
3 - A48 (W)	10.5	47.13	0.93	8.0	47.65	0.91
April 2022 + Com						
1 - B4622	6.7	25.42	0.88	0.8	5.24	0.46
2 - A48 (E)	2.0	5.35	0.66	282.4	482.27	1.24
3 - A48 (W)	1312.9	4841.93	2.42	570.7	2851.85	1.87
April 2022 + Com + Dev (BCC)						
1 - B4622	24.5	76.60	1.00	1.0	5.63	0.51
2 - A48 (E)	2.3	5.79	0.69	410.7	675.08	1.32
3 - A48 (W)	1357.0	5110.02	2.51	637.0	3365.46	1.98
April 2022 + Com + Dev (TA)						
1 - B4622	13.1	46.18	0.95	0.9	5.43	0.48
2 - A48 (E)	2.1	5.54	0.67	337.2	564.57	1.27
3 - A48 (W)	1329.4	4949.96	2.45	600.5	3080.75	1.92
April 2022 + Dev (TA)						
1 - B4622	2.4	10.53	0.71	0.6	4.40	0.38
2 - A48 (E)	0.5	2.79	0.33	2.1	5.41	0.68

3 - A48 (W)	12.0	53.46	0.95	11.9	69.30	0.95

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

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

File summary

File Description

Title	
Location	
Site number	
Date	10/08/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\ben.stone
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D3	April 2022	AM	ONE HOUR	07:45	09:15	15	✓		
D4	April 2022	PM	ONE HOUR	16:15	17:45	15	✓		
D5	Com Dev (excl CYP)	AM	ONE HOUR	07:45	09:15	15			
D6	Com Dev (excl CYP)	PM	ONE HOUR	16:15	17:45	15			
D7	Dev (BCC)	AM	ONE HOUR	07:45	09:15	15			
D8	Dev (BCC)	PM	ONE HOUR	16:15	17:45	15			
D9	Dev (TA)	AM	ONE HOUR	07:45	09:15	15			
D10	Dev (TA)	PM	ONE HOUR	16:15	17:45	15			
D13	April 2022 + Com	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5
D14	April 2022 + Com	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D4+D6

D17	April 2022 + Com + Dev (BCC)	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D13+D7
D18	April 2022 + Com + Dev (BCC)	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D14+D8
D21	April 2022 + Com + Dev (TA)	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D13+D9
D22	April 2022 + Com + Dev (TA)	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D14+D10
D25	April 2022 + Dev (TA)	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D9
D26	April 2022 + Dev (TA)	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D4+D10

Analysis Set Details

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

April 2022, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	21.36	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	21.36	C

Arms

Arms

Arm	Name	Description	No give-way line
1	B4622		
2	A48 (E)		
3	A48 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B4622	3.72	6.22	12.0	32.3	40.0	15.9		
2 - A48 (E)	6.55	7.12	13.0	43.9	40.0	31.2		
3 - A48 (W)	3.20	3.20	0.0	30.8	40.0	19.5		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B4622	0.660	1688
2 - A48 (E)	0.745	2184
3 - A48 (W)	0.523	1022

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	April 2022	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	675	100.000
2 - A48 (E)		ONE HOUR	✓	612	100.000
3 - A48 (W)		ONE HOUR	✓	780	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	560	115
	2 - A48 (E)	173	0	439
	3 - A48 (W)	67	713	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	2
	2 - A48 (E)	2	0	11
	3 - A48 (W)	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.63	8.44	1.7	A	619	929
2 - A48 (E)	0.32	2.75	0.5	A	562	842

3 - A48 (W)	0.93	47.13	10.5	E	716	1074

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	508	127	531	1338	0.380	506	180	0.0	0.6	4.363	A
2 - A48 (E)	461	115	86	2120	0.217	460	950	0.0	0.3	2.347	A
3 - A48 (W)	587	147	130	954	0.616	581	416	0.0	1.6	9.945	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	607	152	636	1268	0.478	606	215	0.6	0.9	5.484	A
2 - A48 (E)	550	138	103	2107	0.261	550	1139	0.3	0.4	2.503	A
3 - A48 (W)	701	175	155	940	0.746	696	498	1.6	2.9	15.124	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	743	186	763	1185	0.627	740	262	0.9	1.7	8.135	A
2 - A48 (E)	674	168	126	2090	0.322	673	1377	0.4	0.5	2.752	A
3 - A48 (W)	859	215	190	922	0.931	835	609	2.9	8.9	35.838	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	743	186	779	1174	0.633	743	264	1.7	1.7	8.438	A
2 - A48 (E)	674	168	127	2090	0.322	674	1396	0.5	0.5	2.753	A
3 - A48 (W)	859	215	190	922	0.931	852	610	8.9	10.5	47.135	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	607	152	667	1248	0.486	610	218	1.7	1.0	5.732	A
2 - A48 (E)	550	138	104	2106	0.261	551	1173	0.5	0.4	2.508	A
3 - A48 (W)	701	175	156	940	0.746	730	499	10.5	3.3	20.014	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	508	127	542	1330	0.382	510	181	1.0	0.6	4.443	A
2 - A48 (E)	461	115	87	2119	0.217	461	965	0.4	0.3	2.353	A
3 - A48 (W)	587	147	130	953	0.616	593	418	3.3	1.7	10.649	B

April 2022, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	15.93	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.93	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	April 2022	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	428	100.000
2 - A48 (E)		ONE HOUR	✓	1251	100.000
3 - A48 (W)		ONE HOUR	✓	592	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	349	79
	2 - A48 (E)	528	0	723
	3 - A48 (W)	96	496	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	1
	2 - A48 (E)	1	0	2
	3 - A48 (W)	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.35	4.23	0.6	A	393	589
2 - A48 (E)	0.65	4.93	1.9	A	1148	1722
3 - A48 (W)	0.91	47.65	8.0	E	543	815

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	322	81	369	1445	0.223	321	468	0.0	0.3	3.233	A
2 - A48 (E)	942	235	59	2140	0.440	939	631	0.0	0.8	3.037	A
3 - A48 (W)	446	111	396	814	0.547	441	602	0.0	1.2	9.833	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	385	96	443	1396	0.276	384	560	0.3	0.4	3.593	A
2 - A48 (E)	1125	281	71	2131	0.528	1123	756	0.8	1.1	3.624	A
3 - A48 (W)	532	133	474	774	0.688	528	720	1.2	2.2	14.926	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	471	118	530	1339	0.352	471	683	0.4	0.5	4.186	A
2 - A48 (E)	1377	344	87	2119	0.650	1374	914	1.1	1.9	4.890	A
3 - A48 (W)	652	163	580	718	0.907	633	881	2.2	7.0	37.118	E

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	471	118	542	1330	0.354	471	686	0.5	0.6	4.231	A
2 - A48 (E)	1377	344	87	2119	0.650	1377	927	1.9	1.9	4.929	A
3 - A48 (W)	652	163	581	718	0.908	647	883	7.0	8.0	47.652	E

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	385	96	465	1382	0.278	385	566	0.6	0.4	3.650	A
2 - A48 (E)	1125	281	71	2131	0.528	1128	779	1.9	1.1	3.657	A
3 - A48 (W)	532	133	476	773	0.689	555	723	8.0	2.4	18.598	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	322	81	377	1440	0.224	323	471	0.4	0.3	3.255	A
2 - A48 (E)	942	235	60	2139	0.440	943	640	1.1	0.8	3.059	A
3 - A48 (W)	446	111	398	813	0.548	450	605	2.4	1.3	10.361	B

April 2022 + Com, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	2305.68	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2305.68	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D13	April 2022 + Com	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D5

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	910	100.000
2 - A48 (E)		ONE HOUR	✓	1238	100.000
3 - A48 (W)		ONE HOUR	✓	1941	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	762	148
	2 - A48 (E)	239	0	999
	3 - A48 (W)	110	1831	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	2
	2 - A48 (E)	1	0	5
	3 - A48 (W)	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.88	25.42	6.7	D	835	1253
2 - A48 (E)	0.66	5.35	2.0	A	1136	1704
3 - A48 (W)	2.42	4841.93	1312.9	F	1781	2672

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	685	171	869	1115	0.614	679	231	0.0	1.6	8.209	A
2 - A48 (E)	932	233	110	2102	0.443	929	1437	0.0	0.8	3.181	A
3 - A48 (W)	1461	365	179	928	1.575	921	860	0.0	135.1	271.249	F

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	818	205	858	1122	0.729	814	266	1.6	2.6	11.617	B
2 - A48 (E)	1113	278	132	2085	0.534	1112	1539	0.8	1.2	3.837	A
3 - A48 (W)	1745	436	215	909	1.919	909	1029	135.1	344.0	969.520	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

1 - B4622	1002	250	834	1138	0.881	988	313	2.6	6.2	22.232	C
2 - A48 (E)	1363	341	161	2064	0.660	1360	1661	1.2	2.0	5.288	A
3 - A48 (W)	2137	534	263	884	2.417	884	1258	344.0	657.2	2039.556	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	1002	250	834	1138	0.880	1000	313	6.2	6.7	25.422	D
2 - A48 (E)	1363	341	163	2063	0.661	1363	1671	2.0	2.0	5.345	A
3 - A48 (W)	2137	534	263	884	2.417	884	1262	657.2	970.4	3223.609	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	818	205	857	1123	0.729	833	267	6.7	2.8	13.167	B
2 - A48 (E)	1113	278	136	2083	0.534	1116	1555	2.0	1.2	3.883	A
3 - A48 (W)	1745	436	215	909	1.920	909	1036	970.4	1179.4	4195.128	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	685	171	875	1111	0.617	690	233	2.8	1.7	8.714	A
2 - A48 (E)	932	233	112	2100	0.444	934	1452	1.2	0.8	3.210	A
3 - A48 (W)	1461	365	180	927	1.576	927	865	1179.4	1312.9	4841.931	F

April 2022 + Com, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	1106.40	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS

Left	Normal/unknown	1106.40	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D14	April 2022 + Com	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D4+D6

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	533	100.000
2 - A48 (E)		ONE HOUR	✓	2354	100.000
3 - A48 (W)		ONE HOUR	✓	1178	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	413	120
	2 - A48 (E)	706	0	1648
	3 - A48 (W)	128	1050	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	1
	2 - A48 (E)	1	0	1
	3 - A48 (W)	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.46	5.24	0.8	A	489	734
2 - A48 (E)	1.24	482.27	282.4	F	2160	3240
3 - A48 (W)	1.87	2851.85	570.7	F	1081	1621

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	401	100	649	1260	0.318	399	605	0.0	0.5	4.206	A
2 - A48 (E)	1772	443	90	2117	0.837	1753	959	0.0	4.9	9.520	A
3 - A48 (W)	887	222	526	747	1.188	728	1317	0.0	39.7	110.542	F

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	479	120	626	1275	0.376	479	687	0.5	0.6	4.551	A
2 - A48 (E)	2116	529	108	2104	1.006	2036	997	4.9	24.9	34.964	D
3 - A48 (W)	1059	265	611	702	1.508	702	1533	39.7	128.9	444.098	F

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	587	147	619	1280	0.459	586	700	0.6	0.8	5.223	A
2 - A48 (E)	2592	648	132	2086	1.243	2083	1073	24.9	152.0	158.845	F
3 - A48 (W)	1297	324	625	695	1.866	695	1590	128.9	279.4	1065.693	F

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	587	147	619	1280	0.459	587	701	0.8	0.8	5.236	A
2 - A48 (E)	2592	648	132	2085	1.243	2085	1074	152.0	278.7	374.629	F
3 - A48 (W)	1297	324	625	695	1.867	695	1592	279.4	430.0	1844.750	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	479	120	617	1281	0.374	480	705	0.8	0.6	4.536	A
2 - A48 (E)	2116	529	108	2103	1.006	2101	989	278.7	282.4	482.265	F
3 - A48 (W)	1059	265	630	692	1.530	692	1579	430.0	521.7	2483.948	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

1 - B4622	401	100	616	1282	0.313	402	708	0.6	0.5	4.125	A
2 - A48 (E)	1772	443	90	2116	0.837	2109	927	282.4	198.2	410.780	F
3 - A48 (W)	887	222	632	691	1.283	691	1567	521.7	570.7	2851.855	F

April 2022 + Com + Dev (BCC), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	2340.76	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2340.76	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D17	April 2022 + Com + Dev (BCC)	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D13+D7

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	1051	100.000
2 - A48 (E)		ONE HOUR	✓	1290	100.000
3 - A48 (W)		ONE HOUR	✓	1947	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	903	148
	2 - A48 (E)	289	0	1001
	3 - A48 (W)	110	1837	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	2
	2 - A48 (E)	1	0	5
	3 - A48 (W)	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	1.00	76.60	24.5	F	964	1447
2 - A48 (E)	0.69	5.79	2.3	A	1184	1776
3 - A48 (W)	2.51	5110.02	1357.0	F	1787	2680

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	791	198	851	1127	0.702	782	268	0.0	2.3	10.265	B
2 - A48 (E)	971	243	110	2102	0.462	968	1523	0.0	0.9	3.285	A
3 - A48 (W)	1466	366	217	908	1.614	902	861	0.0	141.0	289.340	F

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	945	236	836	1137	0.831	936	309	2.3	4.5	17.322	C
2 - A48 (E)	1160	290	132	2086	0.556	1158	1640	0.9	1.3	4.021	A
3 - A48 (W)	1750	438	259	886	1.976	886	1030	141.0	357.1	1039.142	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	1157	289	807	1156	1.001	1105	366	4.5	17.5	47.449	E
2 - A48 (E)	1420	355	156	2068	0.687	1417	1757	1.3	2.2	5.703	A
3 - A48 (W)	2144	536	317	856	2.505	856	1255	357.1	679.1	2179.332	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	1157	289	807	1156	1.001	1129	366	17.5	24.5	76.597	F
2 - A48 (E)	1420	355	159	2065	0.688	1420	1777	2.2	2.3	5.788	A
3 - A48 (W)	2144	536	318	855	2.506	855	1261	679.1	1001.2	3411.023	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	945	236	835	1137	0.831	1020	311	24.5	5.7	40.278	E
2 - A48 (E)	1160	290	144	2077	0.558	1163	1712	2.3	1.3	4.106	A
3 - A48 (W)	1750	438	261	885	1.977	885	1046	1001.2	1217.5	4426.612	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	791	198	856	1123	0.704	804	269	5.7	2.5	11.784	B
2 - A48 (E)	971	243	113	2099	0.463	973	1547	1.3	0.9	3.320	A
3 - A48 (W)	1466	366	218	908	1.615	908	868	1217.5	1357.0	5110.023	F

April 2022 + Com + Dev (BCC), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	1325.13	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1325.13	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D18	April 2022 + Com + Dev (BCC)	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D14+D8

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	599	100.000
2 - A48 (E)		ONE HOUR	✓	2491	100.000
3 - A48 (W)		ONE HOUR	✓	1181	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	479	120
	2 - A48 (E)	837	0	1654
	3 - A48 (W)	128	1053	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	1
	2 - A48 (E)	1	0	1
	3 - A48 (W)	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.51	5.63	1.0	A	550	824
2 - A48 (E)	1.32	675.08	410.7	F	2286	3429
3 - A48 (W)	1.98	3365.46	637.0	F	1084	1626

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	451	113	609	1286	0.351	449	695	0.0	0.5	4.318	A
2 - A48 (E)	1875	469	90	2117	0.886	1848	968	0.0	6.9	12.429	B
3 - A48 (W)	889	222	621	697	1.276	684	1317	0.0	51.4	147.358	F

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	538	135	586	1302	0.414	538	769	0.5	0.7	4.741	A
2 - A48 (E)	2239	560	108	2104	1.065	2076	1016	6.9	47.9	56.416	F
3 - A48 (W)	1062	265	697	657	1.616	657	1486	51.4	152.6	569.288	F

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	660	165	584	1303	0.506	658	772	0.7	1.0	5.613	A
2 - A48 (E)	2743	686	132	2086	1.315	2085	1111	47.9	212.3	229.552	F
3 - A48 (W)	1300	325	701	655	1.984	655	1516	152.6	313.8	1289.520	F

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	660	165	584	1303	0.506	659	772	1.0	1.0	5.635	A
2 - A48 (E)	2743	686	132	2085	1.315	2085	1112	212.3	376.7	510.104	F
3 - A48 (W)	1300	325	701	655	1.984	655	1517	313.8	475.1	2173.579	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	538	135	582	1305	0.413	540	777	1.0	0.7	4.749	A
2 - A48 (E)	2239	560	108	2103	1.065	2103	1013	376.7	410.7	675.083	F
3 - A48 (W)	1062	265	707	652	1.628	652	1505	475.1	577.4	2915.643	F

17:30 - 17:45

Arm	Total Demand	Junction	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queu	End queu	Delay (s)	Unsignalised level of service

	(PCU/hr)	Arrivals (PCU)						e (PCU)	e (PCU)		
1 - B4622	451	113	580	1306	0.345	452	780	0.7	0.5	4.249	A
2 - A48 (E)	1875	469	90	2116	0.886	2111	941	410.7	351.8	650.306	F
3 - A48 (W)	889	222	709	651	1.366	651	1492	577.4	637.0	3365.459	F

April 2022 + Com + Dev (TA), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	2304.53	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2304.53	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D21	April 2022 + Com + Dev (TA)	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D13+D9

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	990	100.000
2 - A48 (E)		ONE HOUR	✓	1261	100.000
3 - A48 (W)		ONE HOUR	✓	1941	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	842	148
	2 - A48 (E)	262	0	999
	3 - A48 (W)	110	1831	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	2
	2 - A48 (E)	1	0	5
	3 - A48 (W)	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.95	46.18	13.1	E	908	1363
2 - A48 (E)	0.67	5.54	2.1	A	1157	1736
3 - A48 (W)	2.45	4949.96	1329.4	F	1781	2672

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	745	186	860	1121	0.665	738	248	0.0	1.9	9.296	A
2 - A48 (E)	949	237	110	2102	0.452	946	1488	0.0	0.9	3.226	A
3 - A48 (W)	1461	365	197	919	1.590	912	860	0.0	137.3	278.450	F

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	890	222	848	1129	0.788	884	286	1.9	3.5	14.420	B
2 - A48 (E)	1134	283	132	2085	0.544	1132	1599	0.9	1.2	3.915	A
3 - A48 (W)	1745	436	235	899	1.942	899	1029	137.3	348.9	997.600	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

1 - B4622	1090	273	822	1146	0.951	1060	337	3.5	10.9	34.022	D
2 - A48 (E)	1388	347	159	2066	0.672	1385	1724	1.2	2.1	5.463	A
3 - A48 (W)	2137	534	288	871	2.453	871	1256	348.9	665.4	2096.627	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	1090	273	821	1146	0.951	1081	338	10.9	13.1	46.185	E
2 - A48 (E)	1388	347	162	2063	0.673	1388	1741	2.1	2.1	5.536	A
3 - A48 (W)	2137	534	288	871	2.454	871	1261	665.4	981.9	3299.906	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	890	222	847	1129	0.788	926	287	13.1	4.0	20.449	C
2 - A48 (E)	1134	283	138	2081	0.545	1137	1635	2.1	1.3	3.976	A
3 - A48 (W)	1745	436	236	898	1.943	898	1039	981.9	1193.7	4288.752	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	745	186	866	1117	0.667	753	250	4.0	2.1	10.185	B
2 - A48 (E)	949	237	113	2100	0.452	951	1507	1.3	0.9	3.260	A
3 - A48 (W)	1461	365	198	918	1.591	918	866	1193.7	1329.4	4949.962	F

April 2022 + Com + Dev (TA), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	1201.31	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS

Left	Normal/unknown	1201.31	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D22	April 2022 + Com + Dev (TA)	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D14+D10

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	566	100.000
2 - A48 (E)		ONE HOUR	✓	2414	100.000
3 - A48 (W)		ONE HOUR	✓	1178	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	446	120
	2 - A48 (E)	766	0	1648
	3 - A48 (W)	128	1050	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	1
	2 - A48 (E)	1	0	1
	3 - A48 (W)	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.48	5.43	0.9	A	519	779
2 - A48 (E)	1.27	564.57	337.2	F	2215	3323
3 - A48 (W)	1.92	3080.75	600.5	F	1081	1621

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	426	107	631	1272	0.335	424	646	0.0	0.5	4.267	A
2 - A48 (E)	1817	454	90	2117	0.859	1795	965	0.0	5.6	10.631	B
3 - A48 (W)	887	222	570	724	1.225	708	1315	0.0	44.8	126.087	F

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	509	127	606	1288	0.395	508	727	0.5	0.7	4.646	A
2 - A48 (E)	2170	543	108	2104	1.032	2058	1007	5.6	33.8	43.472	E
3 - A48 (W)	1059	265	653	680	1.557	680	1512	44.8	139.5	498.906	F

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	623	156	602	1291	0.483	622	735	0.7	0.9	5.414	A
2 - A48 (E)	2658	664	132	2086	1.274	2084	1093	33.8	177.2	187.661	F
3 - A48 (W)	1297	324	661	676	1.919	676	1555	139.5	294.8	1164.830	F

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	623	156	602	1291	0.483	623	735	0.9	0.9	5.431	A
2 - A48 (E)	2658	664	132	2085	1.275	2085	1093	177.2	320.3	431.794	F
3 - A48 (W)	1297	324	662	676	1.919	676	1556	294.8	450.1	1990.904	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	509	127	600	1293	0.394	510	740	0.9	0.7	4.641	A
2 - A48 (E)	2170	543	108	2103	1.032	2103	1002	320.3	337.2	564.567	F
3 - A48 (W)	1059	265	667	673	1.574	673	1544	450.1	546.7	2676.235	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

1 - B4622	426	107	599	1293	0.329	427	743	0.7	0.5	4.189	A
2 - A48 (E)	1817	454	90	2116	0.859	2110	935	337.2	264.0	513.178	F
3 - A48 (W)	887	222	670	672	1.321	672	1531	546.7	600.5	3080.752	F

April 2022 + Dev (TA), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	23.70	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	23.70	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D25	April 2022 + Dev (TA)	AM	ONE HOUR	07:45	09:15	15	✓	Simple	D3+D9

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	755	100.000
2 - A48 (E)		ONE HOUR	✓	635	100.000
3 - A48 (W)		ONE HOUR	✓	780	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	640	115
	2 - A48 (E)	196	0	439
	3 - A48 (W)	67	713	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	2
	2 - A48 (E)	2	0	11
	3 - A48 (W)	2	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.71	10.53	2.4	B	693	1039
2 - A48 (E)	0.33	2.79	0.5	A	583	874
3 - A48 (W)	0.95	53.46	12.0	F	716	1074

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	568	142	531	1338	0.425	565	197	0.0	0.7	4.689	A
2 - A48 (E)	478	120	86	2120	0.226	477	1010	0.0	0.3	2.365	A
3 - A48 (W)	587	147	147	945	0.622	581	416	0.0	1.7	10.180	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	679	170	636	1269	0.535	677	236	0.7	1.1	6.131	A
2 - A48 (E)	571	143	103	2107	0.271	571	1210	0.3	0.4	2.529	A
3 - A48 (W)	701	175	176	930	0.754	696	498	1.7	3.0	15.767	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	831	208	760	1187	0.700	827	287	1.1	2.3	9.973	A

2 - A48 (E)	699	175	126	2090	0.335	699	1461	0.4	0.5	2.791	A
3 - A48 (W)	859	215	216	909	0.945	831	609	3.0	9.9	39.075	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	831	208	777	1175	0.707	831	289	2.3	2.4	10.535	B
2 - A48 (E)	699	175	127	2090	0.335	699	1482	0.5	0.5	2.795	A
3 - A48 (W)	859	215	216	909	0.945	850	610	9.9	12.0	53.457	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	679	170	672	1245	0.545	683	240	2.4	1.2	6.530	A
2 - A48 (E)	571	143	104	2106	0.271	571	1251	0.5	0.4	2.532	A
3 - A48 (W)	701	175	176	929	0.754	735	499	12.0	3.5	22.188	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	568	142	543	1330	0.427	570	199	1.2	0.8	4.800	A
2 - A48 (E)	478	120	87	2119	0.226	478	1026	0.4	0.3	2.371	A
3 - A48 (W)	587	147	148	944	0.622	594	418	3.5	1.8	10.958	B

April 2022 + Dev (TA), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D17 - April 2022 + Com + Dev (BCC), AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	21.21	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	21.21	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D26	April 2022 + Dev (TA)	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D4+D10

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B4622		ONE HOUR	✓	461	100.000
2 - A48 (E)		ONE HOUR	✓	1311	100.000
3 - A48 (W)		ONE HOUR	✓	592	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	382	79
	2 - A48 (E)	588	0	723
	3 - A48 (W)	96	496	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - B4622	2 - A48 (E)	3 - A48 (W)
From	1 - B4622	0	1	1
	2 - A48 (E)	1	0	2
	3 - A48 (W)	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B4622	0.38	4.40	0.6	A	423	635
2 - A48 (E)	0.68	5.41	2.1	A	1203	1804
3 - A48 (W)	0.95	69.30	11.9	F	543	815

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	347	87	369	1445	0.240	346	513	0.0	0.3	3.303	A
2 - A48 (E)	987	247	59	2140	0.461	984	656	0.0	0.9	3.151	A
3 - A48 (W)	446	111	441	791	0.563	440	602	0.0	1.3	10.466	B

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	414	104	442	1397	0.297	414	613	0.3	0.4	3.695	A
2 - A48 (E)	1179	295	71	2131	0.553	1177	785	0.9	1.2	3.823	A
3 - A48 (W)	532	133	528	746	0.714	528	720	1.3	2.4	16.719	C

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	508	127	523	1343	0.378	507	747	0.4	0.6	4.339	A
2 - A48 (E)	1443	361	87	2119	0.681	1440	943	1.2	2.1	5.352	A
3 - A48 (W)	652	163	646	684	0.953	624	881	2.4	9.4	47.997	E

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	508	127	538	1334	0.381	508	751	0.6	0.6	4.398	A
2 - A48 (E)	1443	361	87	2119	0.681	1443	958	2.1	2.1	5.405	A
3 - A48 (W)	652	163	647	683	0.954	642	883	9.4	11.9	69.300	F

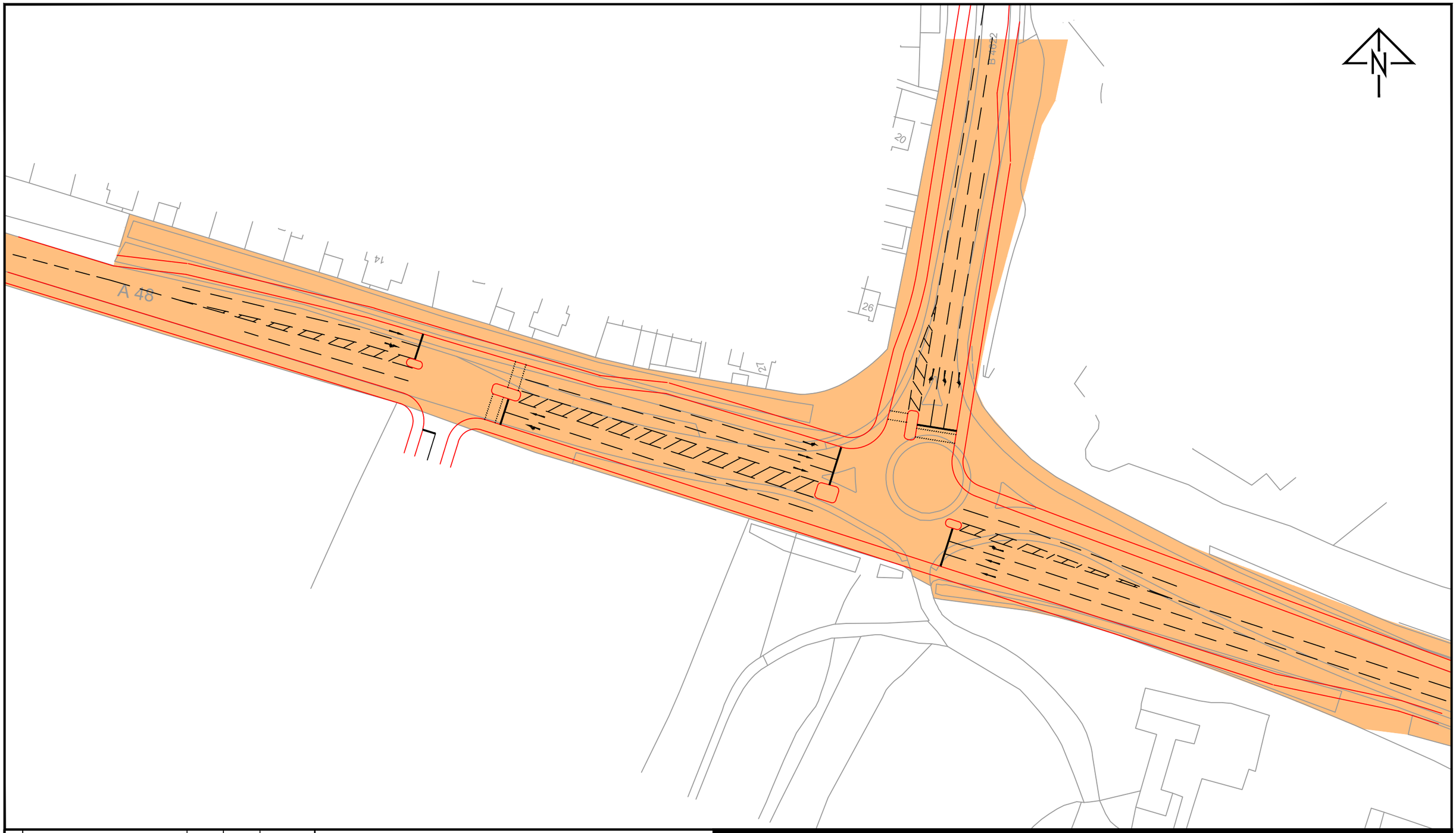
17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	414	104	476	1374	0.302	415	622	0.6	0.4	3.793	A
2 - A48 (E)	1179	295	71	2131	0.553	1182	820	2.1	1.3	3.866	A
3 - A48 (W)	532	133	530	744	0.715	569	723	11.9	2.8	24.789	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4622	347	87	378	1439	0.241	348	517	0.4	0.3	3.332	A
2 - A48 (E)	987	247	60	2139	0.461	989	666	1.3	0.9	3.178	A
3 - A48 (W)	446	111	443	790	0.564	451	605	2.8	1.4	11.162	B

Appendix B



REV.	DETAILS	DRAWN	CHECKED	DATE
A	Staggered Pedestrian Crossings Added	LT	CE	17.05.22
B	Staggered crossing arrangement	CE	KR	23.06.22

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

Legend

Adopted Highway

Land West of Bridgend - STA Review

Proposed Site Access Signalised Junction

Llanmoor Homes

vectos. | PART OF SLR

Ground Floor, Helmont House, Churchill Way, Cardiff CF10 2HE
t: 02920 720 860 e: vectos@vectos.co.uk

DRAWN:	CHECKED:	DATE:	SCALES:	DRAWING NUMBER:	REVISION:
LT	MR	14.04.2022	1:1000 at A3	226542_A01	B

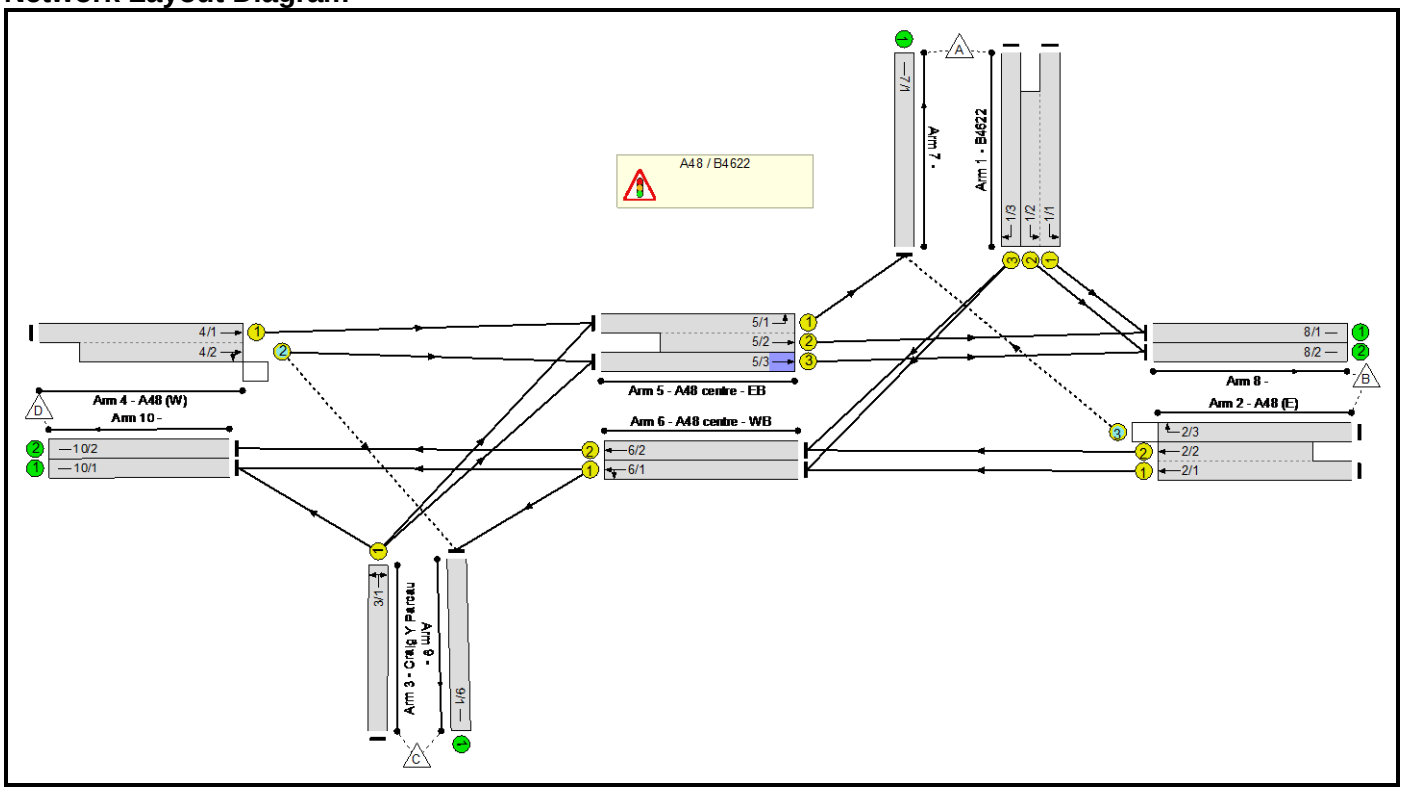
Appendix C

Full Input Data And Results

User and Project Details

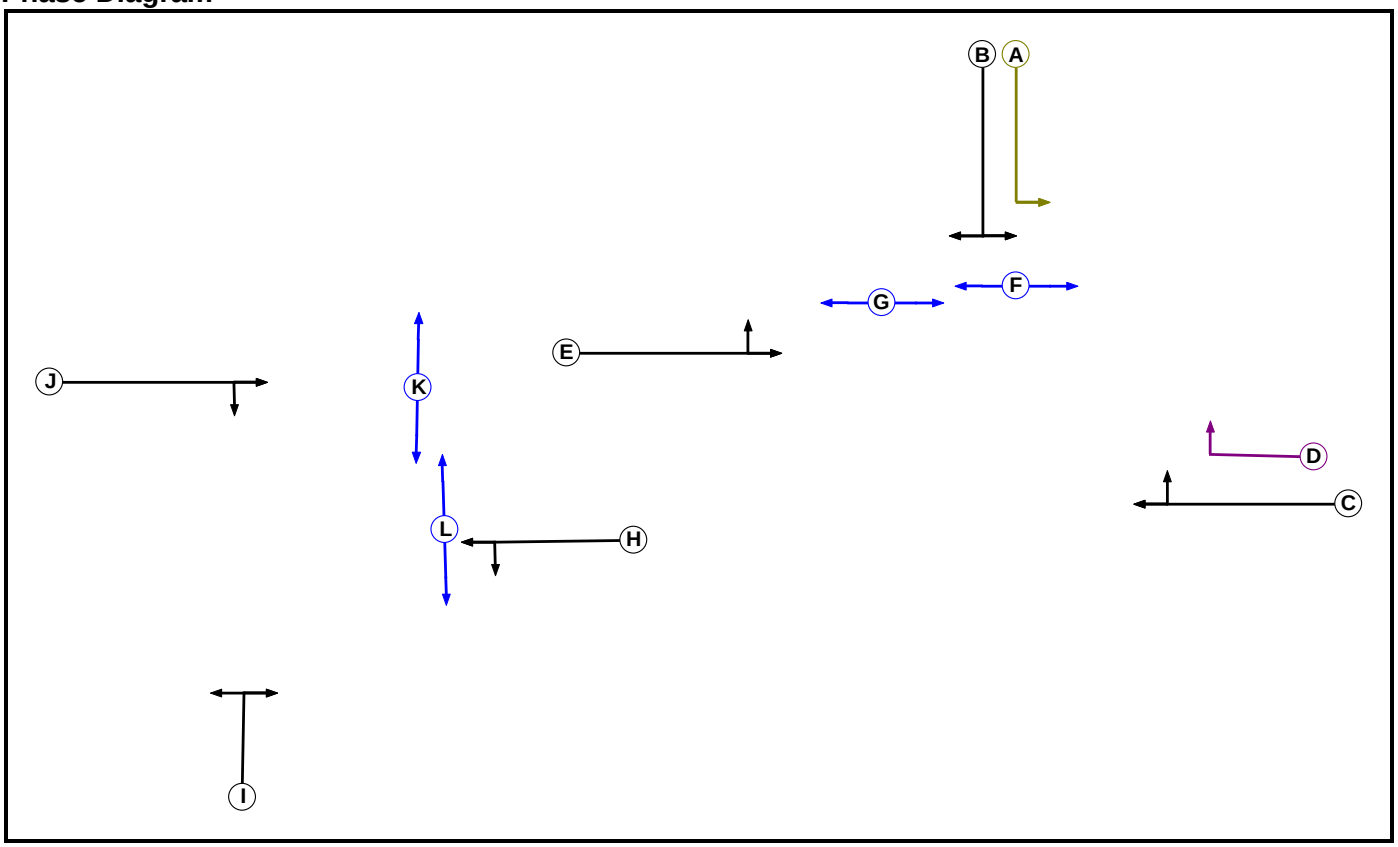
Project:	
Title:	
Location:	
Additional detail:	
File name:	226542 - A48_B4622 (A01 Rev B) - V8.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Filter	1	B	4	0
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Ind. Arrow	1	C	4	4
E	Traffic	1		7	7
F	Pedestrian	1		5	5
G	Pedestrian	1		5	5
H	Traffic	2		7	7
I	Traffic	2		7	7
J	Traffic	2		7	7
K	Pedestrian	2		5	5
L	Pedestrian	2		5	5

Phase Intergreens Matrix

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

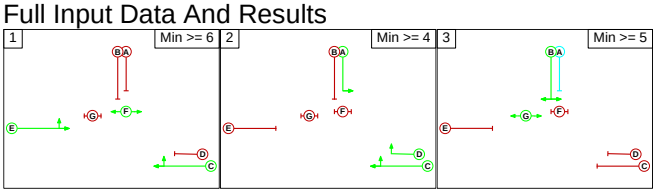
Phases in Stage

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

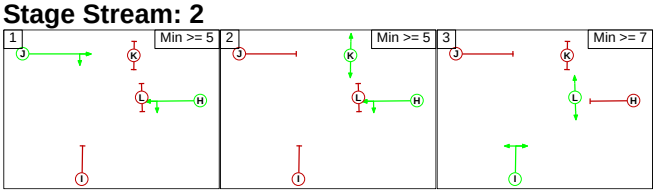
Stage Diagram

Stage Stream: 1

Full Input Data And Results



Stage Stream: 2



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	H	Losing	2	2

Prohibited Stage Change

Stage Stream: 1

		To Stage		
		1	2	3
From Stage	1		8	9
	2	X		9
	3	7	7	

Stage Stream: 2

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: A48 / B4622

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)
2/3 (A48 (E))	7/1 (Right)	1439	0	5/2	1.09	All	2.00	-	0.50	2	2.00
				5/3	1.09	All					
4/2 (A48 (W))	9/1 (Right)	1439	0	6/1	1.09	All	2.00	2.00	0.50	2	2.00
				6/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: A48 / B4622												
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 (B4622)	U	B A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 8 Left	12.00
1/2 (B4622)	U	B A	2	3	13.9	Geom	-	3.65	0.00	N	Arm 8 Left	16.00
1/3 (B4622)	U	B	2	3	60.0	Geom	-	3.65	0.00	N	Arm 6 Right	20.00
2/1 (A48 (E))	U	C	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Ahead	Inf
2/2 (A48 (E))	U	C	2	3	18.3	Geom	-	3.65	0.00	N	Arm 6 Ahead	Inf
2/3 (A48 (E))	O	C D	2	3	60.0	Geom	-	3.65	0.00	N	Arm 7 Right	20.00
3/1 (Craig Y Parcau)	U	I	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Right	20.00
											Arm 10 Left	12.00
4/1 (A48 (W))	U	J	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Ahead	Inf
4/2 (A48 (W))	O	J	2	3	13.0	Geom	-	3.65	0.00	N	Arm 5 Ahead	Inf
											Arm 9 Right	20.00
5/1 (A48 centre - EB)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 7 Left	12.00
5/2 (A48 centre - EB)	U	E	2	3	10.4	Geom	-	3.65	0.00	N	Arm 8 Ahead	Inf
5/3 (A48 centre - EB)	U	E	2	3	15.7	Geom	-	3.65	0.00	N	Arm 8 Ahead	Inf
6/1 (A48 centre - WB)	U	H	2	3	15.7	Geom	-	3.65	0.00	Y	Arm 9 Left	12.00
											Arm 10 Ahead	Inf
6/2 (A48 centre - WB)	U	H	2	3	15.7	Geom	-	3.65	0.00	N	Arm 10 Ahead	Inf
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Full Input Data And Results

Flow Group	Start Time	End Time	Duration	Formula
1: 'April 2022 + Com + Dev (BDBC) AM'	08:00	09:00	01:00	
2: 'April 2022 + Com + Dev (BDBC) PM'	17:00	18:00	01:00	
3: 'April 2022 + Com + Dev (TA) AM'	08:00	09:00	01:00	
4: 'April 2022 + Com + Dev (TA) PM'	17:00	18:00	01:00	

Scenario 1: 'April 2022 + Com + Dev (BDBC) AM' (FG1: 'April 2022 + Com + Dev (BDBC) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	904	0	148	1052
	B	288	0	6	1001	1295
	C	2	32	0	13	47
	D	110	1837	2	0	1949
	Tot.	400	2773	8	1162	4343

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: April 2022 + Com + Dev (BDBC) AM
Junction: A48 / B4622	
1/1 (with short)	904(In) 430(Out)
1/2 (short)	474
1/3	148
2/1 (with short)	1007(In) 486(Out)
2/2 (short)	521
2/3	288
3/1	47
4/1 (with short)	1949(In) 992(Out)
4/2 (short)	957
5/1 (with short)	1024(In) 112(Out)
5/2 (short)	912
5/3	957
6/1	557
6/2	598
7/1	400
8/1	1342
8/2	1431
9/1	8
10/1	564
10/2	598

Lane Saturation Flows

Junction: A48 / B4622								
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 (B4622)	3.65	0.00	Y	Arm 8 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 8 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 6 Right	20.00	100.0 %	1972	1972
2/1 (A48 (E))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
2/2 (A48 (E))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972

Full Input Data And Results

3/1 (Craig Y Parcau)	3.65	0.00	Y	Arm 5 Right	20.00	72.3 %	1818	1818
				Arm 10 Left	12.00	27.7 %		
4/1 (A48 (W))	3.65	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1980	1980
4/2 (A48 (W))	3.65	0.00	N	Arm 5 Ahead	Inf	99.8 %	2120	2120
				Arm 9 Right	20.00	0.2 %		
5/1 (A48 centre - EB)	3.65	0.00	Y	Arm 7 Left	12.00	100.0 %	1760	1760
5/2 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
5/3 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
6/1 (A48 centre - WB)	3.65	0.00	Y	Arm 9 Left	12.00	1.1 %	1977	1977
				Arm 10 Ahead	Inf	98.9 %		
6/2 (A48 centre - WB)	3.65	0.00	N	Arm 10 Ahead	Inf	100.0 %	2120	2120
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'April 2022 + Com + Dev (BDBC) PM' (FG2: 'April 2022 + Com + Dev (BDBC) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	479	2	119	600
	B	837	0	24	1654	2515
	C	1	13	0	5	19
	D	128	1053	10	0	1191
	Tot.	966	1545	36	1778	4325

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: April 2022 + Com + Dev (BDBC) PM
Junction: A48 / B4622	
1/1 (with short)	479(In) 228(Out)
1/2 (short)	251
1/3	121
2/1 (with short)	1678(In) 808(Out)
2/2 (short)	870
2/3	837
3/1	19
4/1 (with short)	1191(In) 607(Out)
4/2 (short)	584
5/1 (with short)	616(In) 129(Out)
5/2 (short)	487
5/3	579
6/1	868
6/2	931
7/1	966
8/1	715
8/2	830
9/1	36
10/1	847
10/2	931

Lane Saturation Flows

Junction: A48 / B4622								
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 (B4622)	3.65	0.00	Y	Arm 8 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 8 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 6 Right	20.00	100.0 %	1972	1972
2/1 (A48 (E))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
2/2 (A48 (E))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972

Full Input Data And Results

3/1 (Craig Y Parcau)	3.65	0.00	Y	Arm 5 Right	20.00	73.7 %	1820	1820
				Arm 10 Left	12.00	26.3 %		
4/1 (A48 (W))	3.65	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1980	1980
4/2 (A48 (W))	3.65	0.00	N	Arm 5 Ahead	Inf	98.3 %	2117	2117
				Arm 9 Right	20.00	1.7 %		
5/1 (A48 centre - EB)	3.65	0.00	Y	Arm 7 Left	12.00	100.0 %	1760	1760
5/2 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
5/3 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
6/1 (A48 centre - WB)	3.65	0.00	Y	Arm 9 Left	12.00	3.0 %	1973	1973
				Arm 10 Ahead	Inf	97.0 %		
6/2 (A48 centre - WB)	3.65	0.00	N	Arm 10 Ahead	Inf	100.0 %	2120	2120
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'April 2022 + Com + Dev (TA) AM' (FG3: 'April 2022 + Com + Dev (TA) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	843	0	148	991
	B	261	0	6	999	1266
	C	2	32	0	13	47
	D	110	1831	2	0	1943
	Tot.	373	2706	8	1160	4247

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: April 2022 + Com + Dev (TA) AM
Junction: A48 / B4622	
1/1 (with short)	843(In) 401(Out)
1/2 (short)	442
1/3	148
2/1 (with short)	1005(In) 485(Out)
2/2 (short)	520
2/3	261
3/1	47
4/1 (with short)	1943(In) 988(Out)
4/2 (short)	955
5/1 (with short)	1020(In) 112(Out)
5/2 (short)	908
5/3	955
6/1	556
6/2	597
7/1	373
8/1	1309
8/2	1397
9/1	8
10/1	563
10/2	597

Lane Saturation Flows

Junction: A48 / B4622								
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 (B4622)	3.65	0.00	Y	Arm 8 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 8 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 6 Right	20.00	100.0 %	1972	1972
2/1 (A48 (E))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
2/2 (A48 (E))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972

3/1 (Craig Y Parcau)	3.65	0.00	Y	Arm 5 Right	20.00	72.3 %	1818	1818
				Arm 10 Left	12.00	27.7 %		
4/1 (A48 (W))	3.65	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1980	1980
4/2 (A48 (W))	3.65	0.00	N	Arm 5 Ahead	Inf	99.8 %	2120	2120
				Arm 9 Right	20.00	0.2 %		
5/1 (A48 centre - EB)	3.65	0.00	Y	Arm 7 Left	12.00	100.0 %	1760	1760
5/2 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
5/3 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
6/1 (A48 centre - WB)	3.65	0.00	Y	Arm 9 Left	12.00	1.1 %	1977	1977
				Arm 10 Ahead	Inf	98.9 %		
6/2 (A48 centre - WB)	3.65	0.00	N	Arm 10 Ahead	Inf	100.0 %	2120	2120
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'April 2022 + Com + Dev (TA) PM' (FG4: 'April 2022 + Com + Dev (TA) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	445	2	119	566
	B	766	0	24	1648	2438
	C	1	13	0	5	19
	D	128	1050	10	0	1188
	Tot.	895	1508	36	1772	4211

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: April 2022 + Com + Dev (TA) PM
Junction: A48 / B4622	
1/1 (with short)	445(In) 212(Out)
1/2 (short)	233
1/3	121
2/1 (with short)	1672(In) 807(Out)
2/2 (short)	865
2/3	766
3/1	19
4/1 (with short)	1188(In) 643(Out)
4/2 (short)	545
5/1 (with short)	649(In) 129(Out)
5/2 (short)	520
5/3	543
6/1	863
6/2	930
7/1	895
8/1	732
8/2	776
9/1	36
10/1	842
10/2	930

Lane Saturation Flows

Junction: A48 / B4622								
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 (B4622)	3.65	0.00	Y	Arm 8 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 8 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 6 Right	20.00	100.0 %	1972	1972
2/1 (A48 (E))	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
2/2 (A48 (E))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972

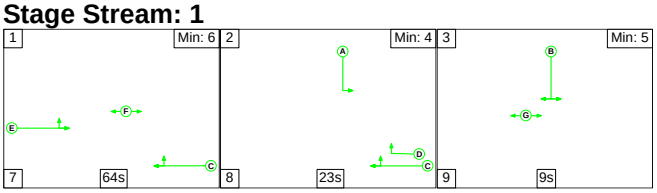
Full Input Data And Results

3/1 (Craig Y Parcau)	3.65	0.00	Y	Arm 5 Right	20.00	73.7 %	1820	1820
				Arm 10 Left	12.00	26.3 %		
4/1 (A48 (W))	3.65	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1980	1980
4/2 (A48 (W))	3.65	0.00	N	Arm 5 Ahead	Inf	98.2 %	2117	2117
				Arm 9 Right	20.00	1.8 %		
5/1 (A48 centre - EB)	3.65	0.00	Y	Arm 7 Left	12.00	100.0 %	1760	1760
5/2 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
5/3 (A48 centre - EB)	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
6/1 (A48 centre - WB)	3.65	0.00	Y	Arm 9 Left	12.00	3.0 %	1973	1973
				Arm 10 Ahead	Inf	97.0 %		
6/2 (A48 centre - WB)	3.65	0.00	N	Arm 10 Ahead	Inf	100.0 %	2120	2120
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf

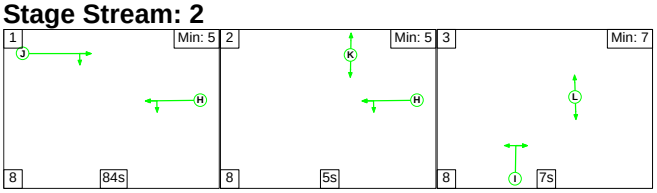
Scenario 1: 'April 2022 + Com + Dev (BDBC) AM' (FG1: 'April 2022 + Com + Dev (BDBC) AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

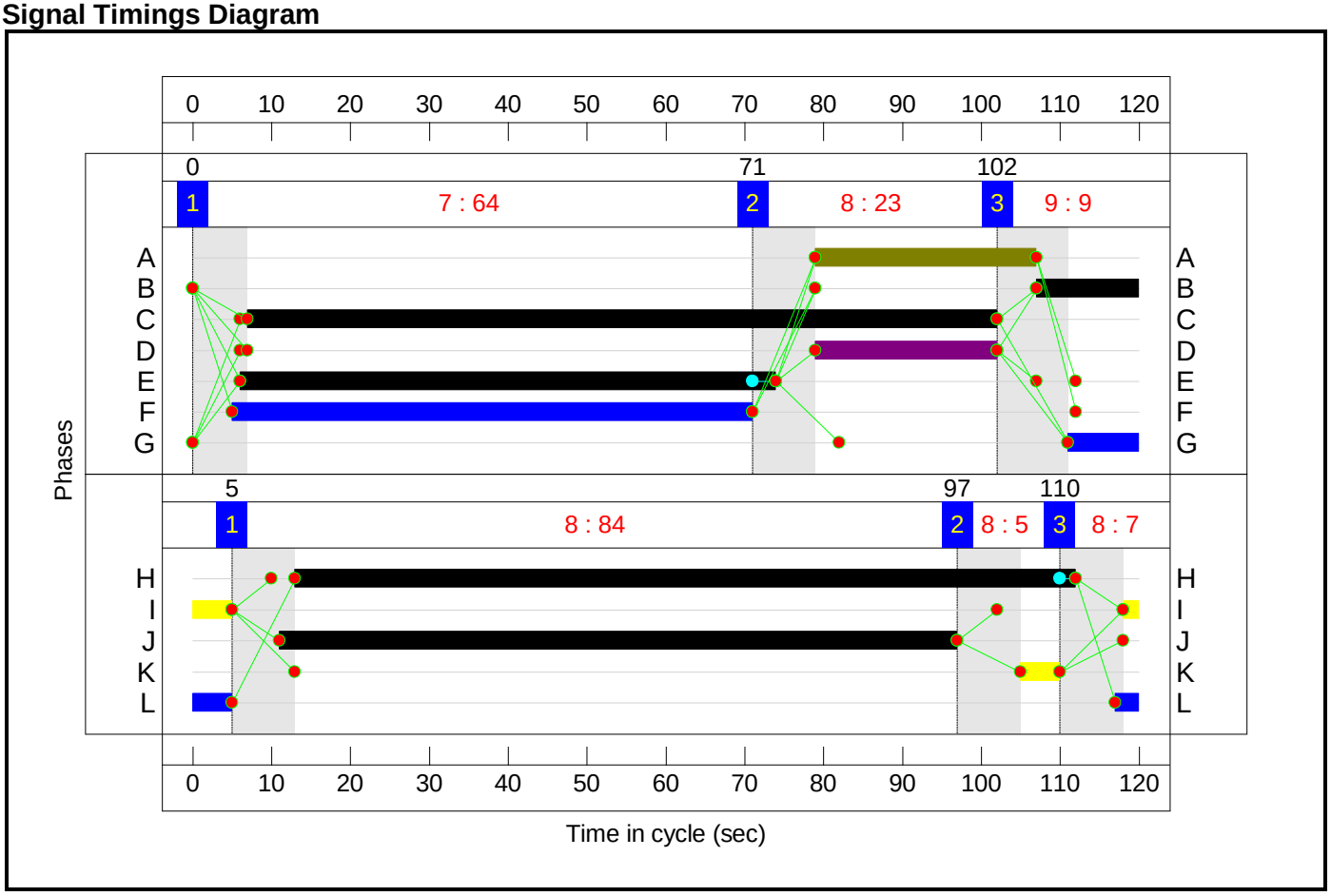
Stage	1	2	3
Duration	64	23	9
Change Point	0	71	102

Full Input Data And Results

Stage Stream: 2

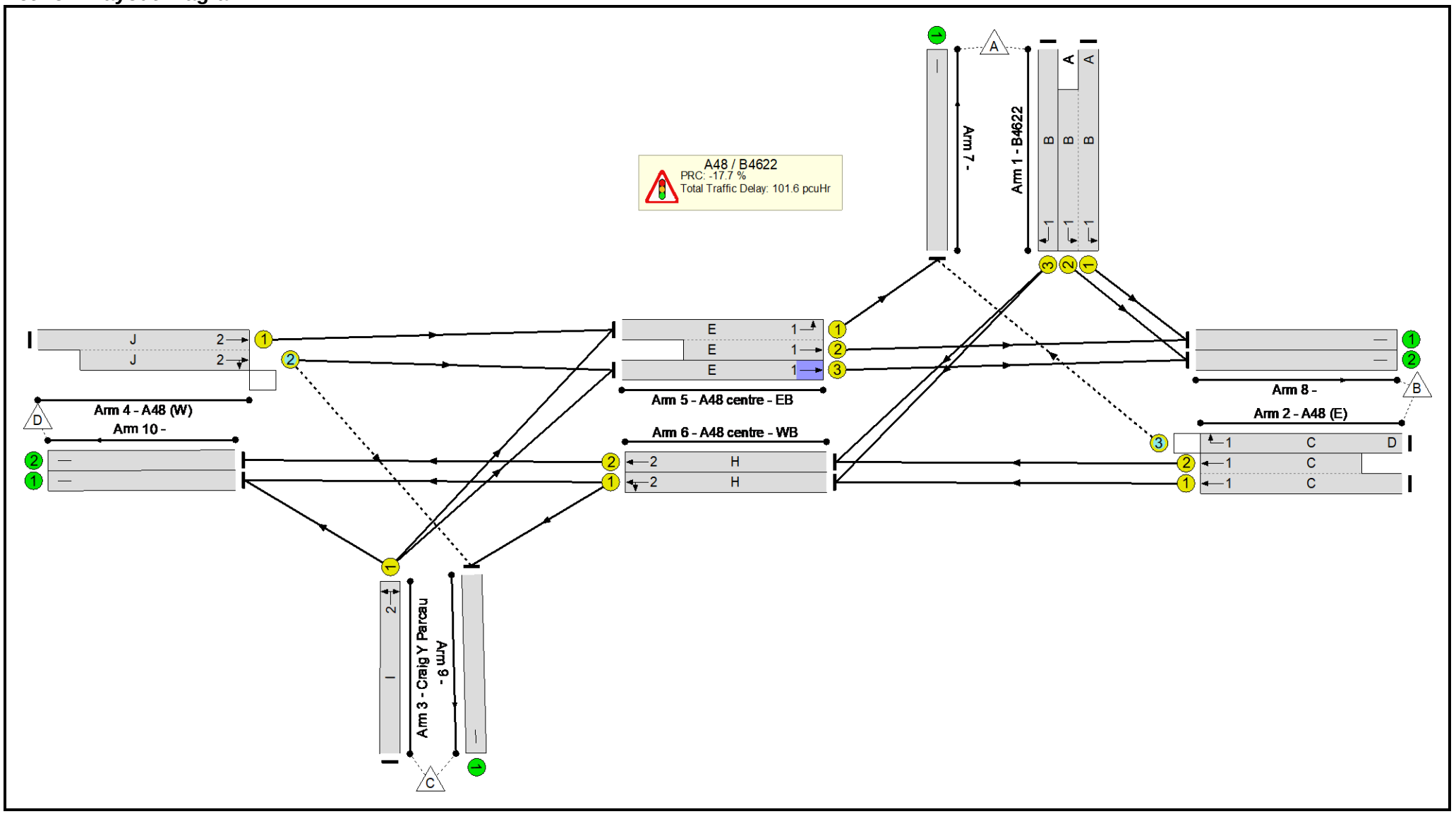
Stage	1	2	3
Duration	84	5	7
Change Point	5	97	110

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**105.9%**
A48 / B4622	-	-	**N/A**	-	-		-	-	-	-	-	-	**105.9%**
1/1+1/2	B4622 Left	U	1	N/A	B	A	1	41	28:28	904	1760:1938	504+556	85.3 : 85.3%
1/3	B4622 Right	U	1	N/A	B		1	13	-	148	1972	230	64.3%
2/1+2/2	A48 (E) Ahead	U	1	N/A	C		1	95	-	1007	1980:2120	989+1061	49.1 : 49.1%
2/3	A48 (E) Right	O	1	N/A	C	D	1	95	23	288	1972	454	63.4%
3/1	Craig Y Parcau Right Left	U	2	N/A	I		1	7	-	47	1818	121	38.8%
4/1+4/2	A48 (W) Ahead Right	U+O	2	N/A	J		1	86	-	1949	1980:2120	937+904	105.9 : 105.9%
5/1+5/2	A48 centre - EB Left Ahead	U	1	N/A	E		1	68	-	1024	1760:2120	136+1107	77.9 : 78.0%
5/3	A48 centre - EB Ahead	U	1	N/A	E		1	68	-	957	2120	1219	74.1%
6/1	A48 centre - WB Left Ahead	U	2	N/A	H		1	99	-	557	1977	1648	33.8%
6/2	A48 centre - WB Ahead	U	2	N/A	H		1	99	-	598	2120	1767	33.8%
7/1		U	N/A	N/A	-		-	-	-	400	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	1342	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	1431	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	564	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	598	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**2**	**283**	**5**	**33.0**	**67.4**	**1.1**	**101.6**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**2**	**283**	**5**	**33.0**	**67.4**	**1.1**	**101.6**	**-**	**-**	**-**	**-**
1/1+1/2	904	904	-	-	-	8.4	2.8	-	11.2	44.7	13.6	2.8	16.4
1/3	148	148	-	-	-	2.1	0.9	-	3.0	72.1	4.7	0.9	5.6
2/1+2/2	1007	1007	-	-	-	0.9	0.5	-	1.4	4.9	4.5	0.5	5.0
2/3	288	288	0	283	5	2.2	0.9	1.1	4.2	52.3	8.6	0.9	9.5
3/1	47	47	-	-	-	0.7	0.3	-	1.0	77.7	1.5	0.3	1.8
4/1+4/2	1949	1841	2	0	0	11.1	62.1	0.0	73.2	135.2	62.5	62.1	124.5
5/1+5/2	969	969	-	-	-	3.5	0.0	-	3.5	13.1	10.6	0.0	10.6
5/3	904	904	-	-	-	3.5	0.0	-	3.5	13.9	10.2	0.0	10.2
6/1	557	557	-	-	-	0.3	0.0	-	0.3	1.8	2.9	0.0	2.9
6/2	598	598	-	-	-	0.3	0.0	-	0.3	1.8	3.2	0.0	3.2
7/1	394	394	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1293	1293	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1378	1378	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	8	8	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	564	564	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	598	598	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

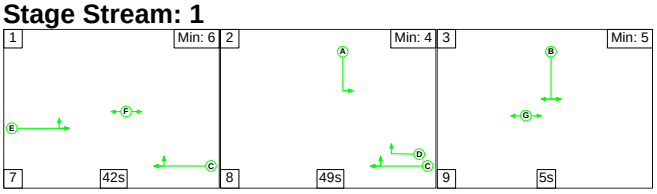
C1	Stream: 1 PRC for Signalled Lanes (%):	5.5	Total Delay for Signalled Lanes (pcuHr):	26.76	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	-17.7	Total Delay for Signalled Lanes (pcuHr):	74.80	Cycle Time (s): 120
	PRC Over All Lanes (%):	-17.7	Total Delay Over All Lanes(pcuHr):	101.56	

Full Input Data And Results

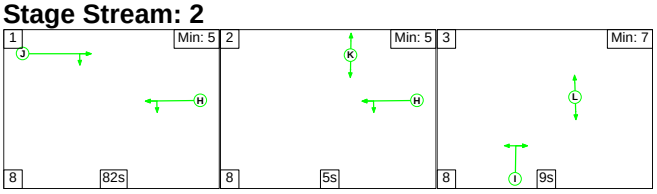
Scenario 2: 'April 2022 + Com + Dev (BDBC) PM' (FG2: 'April 2022 + Com + Dev (BDBC) PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

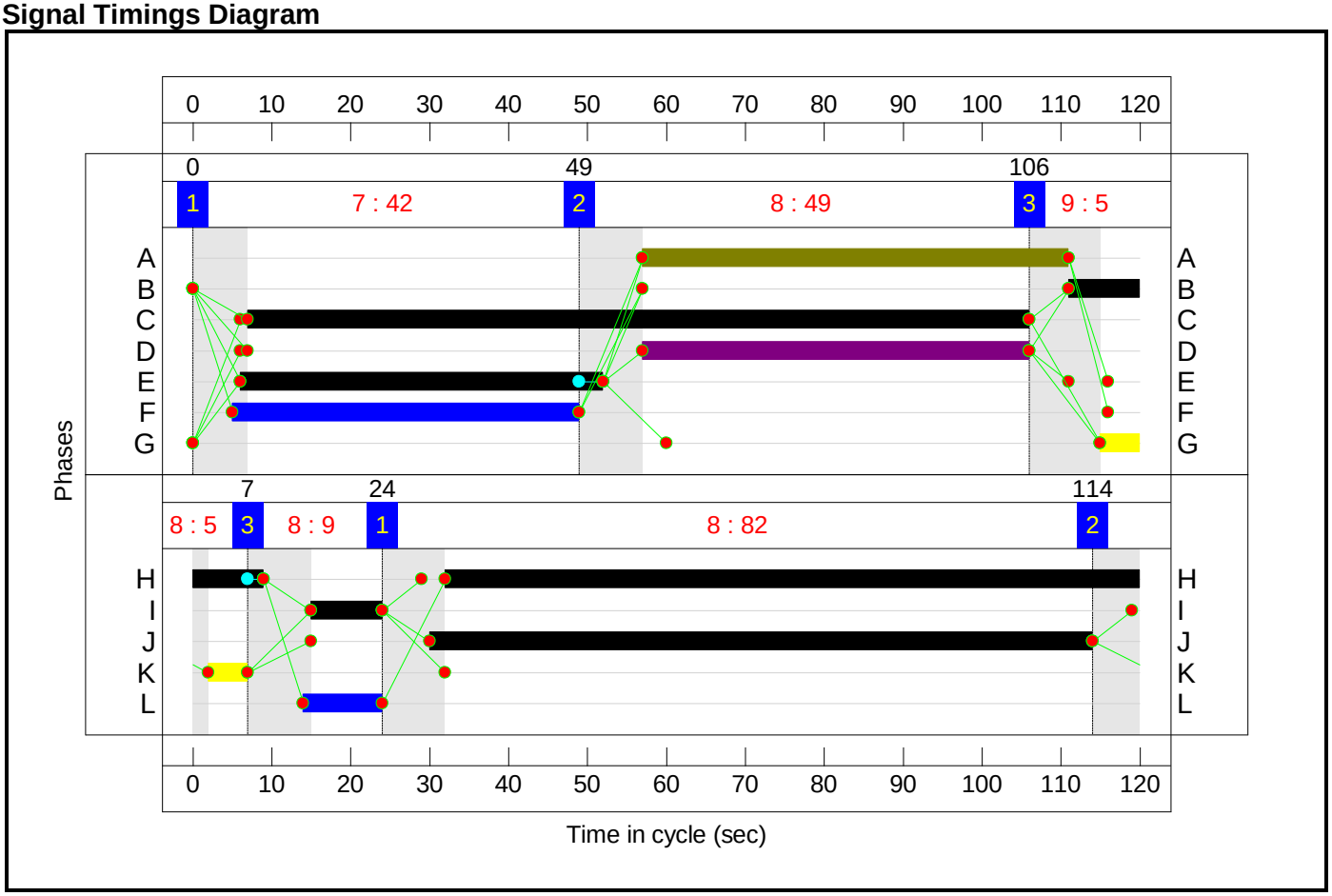
Stage Stream: 1

Stage	1	2	3
Duration	42	49	5
Change Point	0	49	106

Stage Stream: 2

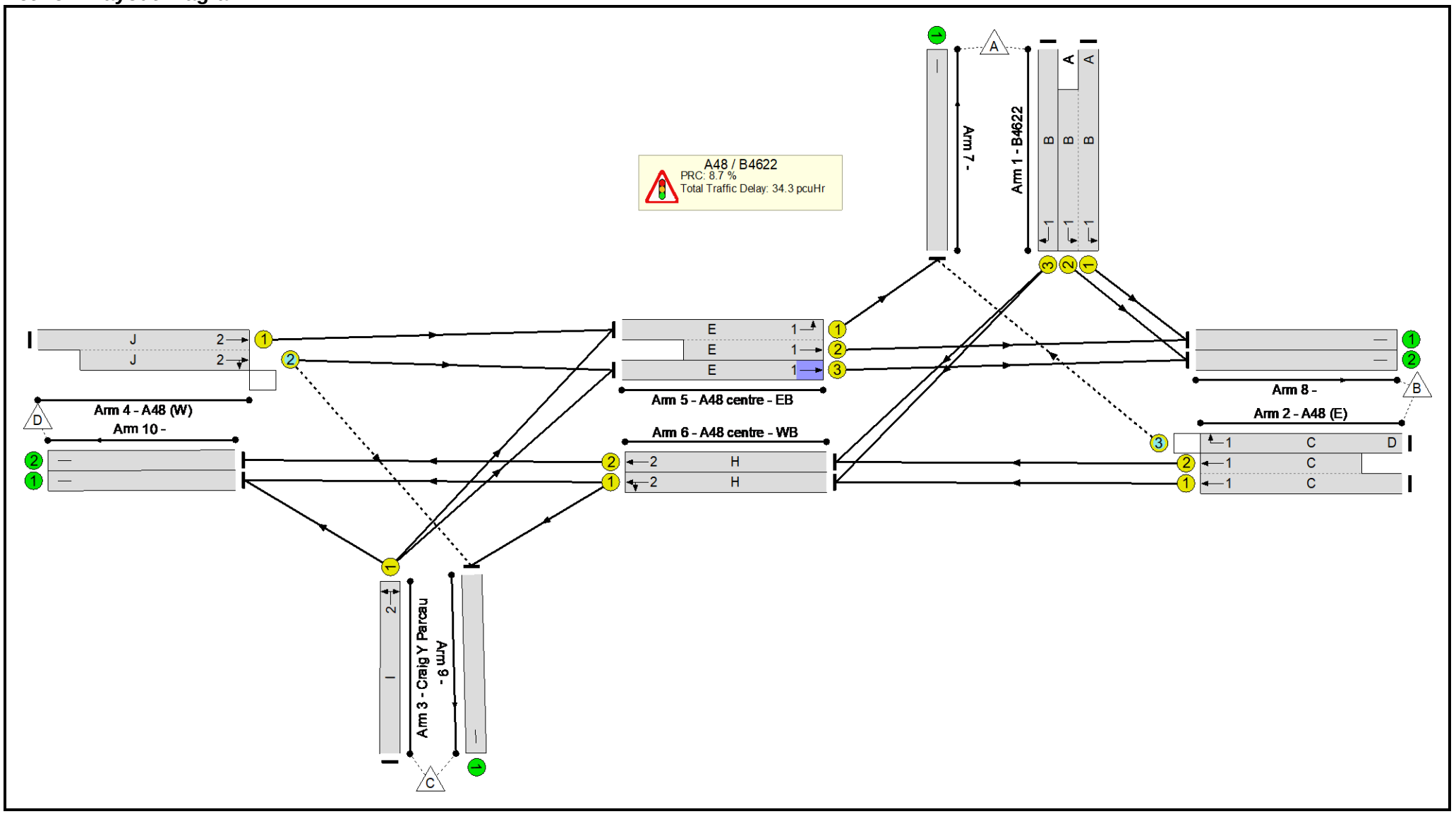
Stage	1	2	3
Duration	82	5	9
Change Point	24	114	7

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.8%**
A48 / B4622	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.8%**
1/1+1/2	B4622 Left	U	1	N/A	B	A	1	63	54:54	479	1760:1938	666+733	34.2 : 34.2%
1/3	B4622 Right	U	1	N/A	B		1	9	-	121	1972	164	73.6%
2/1+2/2	A48 (E) Ahead	U	1	N/A	C		1	99	-	1678	1980:2120	987+1063	81.8 : 81.8%
2/3	A48 (E) Right	O	1	N/A	C	D	1	99	49	837	1972	1011	82.8%
3/1	Craig Y Parcau Right Left	U	2	N/A	I		1	9	-	19	1820	152	12.5%
4/1+4/2	A48 (W) Ahead Right	U+O	2	N/A	J		1	84	-	1191	1980:2117	920+885	66.0 : 66.0%
5/1+5/2	A48 centre - EB Left Ahead	U	1	N/A	E		1	46	-	616	1760:2120	188+709	68.7 : 68.7%
5/3	A48 centre - EB Ahead	U	1	N/A	E		1	46	-	579	2120	830	69.7%
6/1	A48 centre - WB Left Ahead	U	2	N/A	H		1	97	-	868	1973	1611	53.9%
6/2	A48 centre - WB Ahead	U	2	N/A	H		1	97	-	931	2120	1731	53.8%
7/1		U	N/A	N/A	-		-	-	-	966	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	715	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	830	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	36	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	847	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	931	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**140**	**693**	**14**	**26.3**	**7.2**	**0.8**	**34.3**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**140**	**693**	**14**	**26.3**	**7.2**	**0.8**	**34.3**	**-**	**-**	**-**	**-**
1/1+1/2	479	479	-	-	-	2.0	0.3	-	2.3	17.0	4.5	0.3	4.7
1/3	121	121	-	-	-	1.8	1.3	-	3.1	92.9	3.9	1.3	5.2
2/1+2/2	1678	1678	-	-	-	1.3	2.2	-	3.5	7.6	8.0	2.2	10.2
2/3	837	837	130	693	14	4.6	2.3	0.7	7.6	32.6	23.5	2.3	25.8
3/1	19	19	-	-	-	0.3	0.1	-	0.3	64.6	0.6	0.1	0.7
4/1+4/2	1191	1191	10	0	0	2.4	1.0	0.2	3.5	10.6	8.4	1.0	9.4
5/1+5/2	616	616	-	-	-	5.9	0.0	-	5.9	34.2	11.5	0.0	11.5
5/3	579	579	-	-	-	5.7	0.0	-	5.7	35.5	13.5	0.0	13.5
6/1	868	868	-	-	-	1.1	0.0	-	1.1	4.8	12.8	0.0	12.8
6/2	931	931	-	-	-	1.2	0.0	-	1.2	4.7	13.8	0.0	13.8
7/1	966	966	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	715	715	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	36	36	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	847	847	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	931	931	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

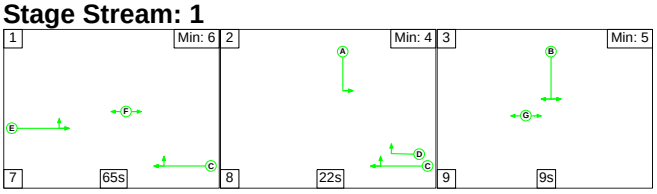
C1	Stream: 1 PRC for Signalled Lanes (%):	8.7	Total Delay for Signalled Lanes (pcuHr):	28.06	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	36.4	Total Delay for Signalled Lanes (pcuHr):	6.23	Cycle Time (s): 120
	PRC Over All Lanes (%):	8.7	Total Delay Over All Lanes(pcuHr):	34.29	

Full Input Data And Results

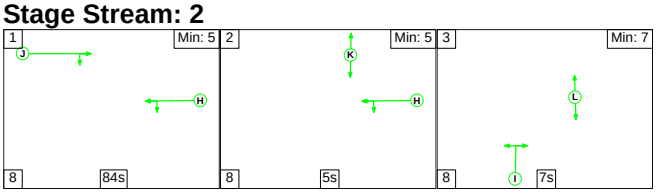
Scenario 3: 'April 2022 + Com + Dev (TA) AM' (FG3: 'April 2022 + Com + Dev (TA) AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

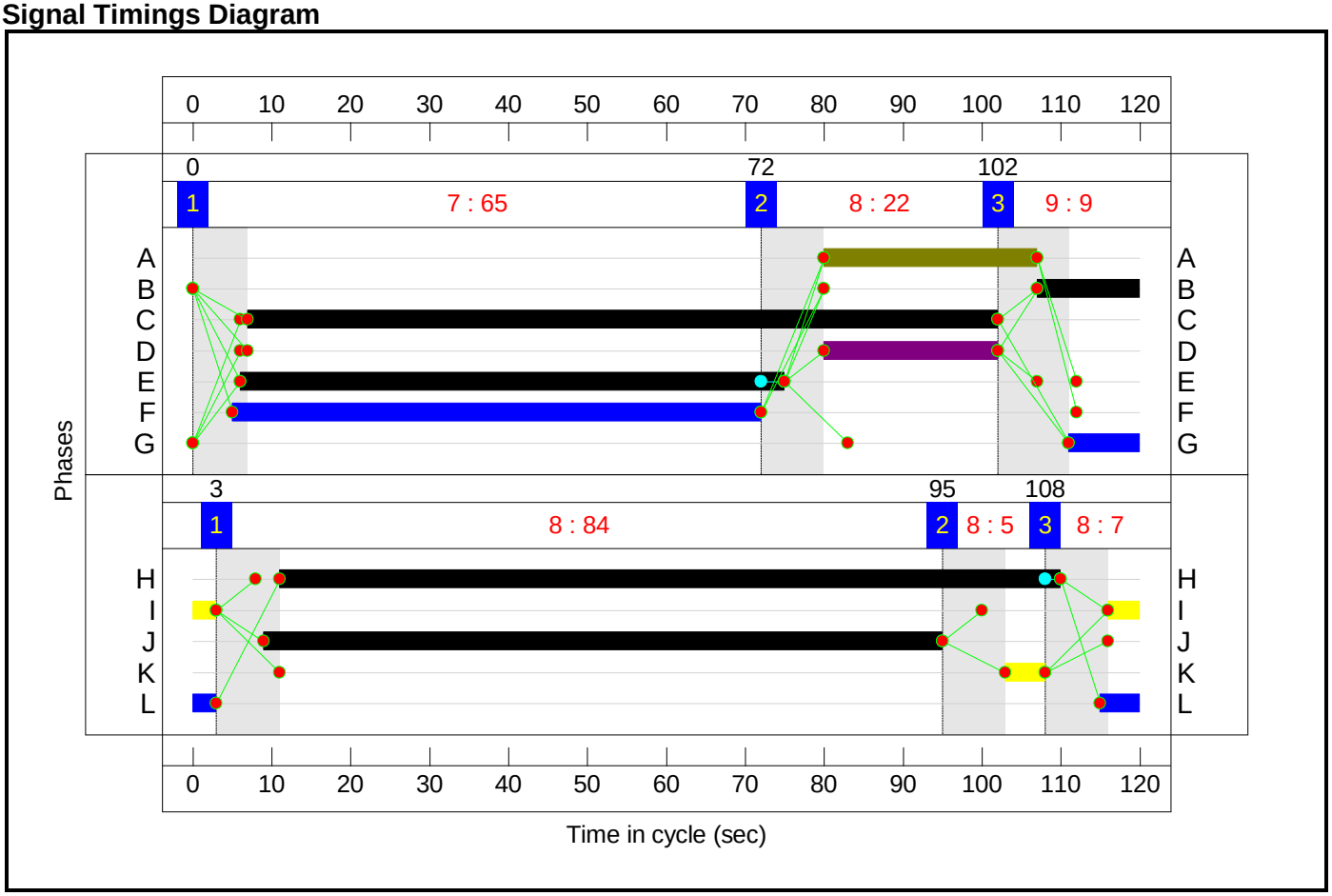
Stage Stream: 1

Stage	1	2	3
Duration	65	22	9
Change Point	0	72	102

Stage Stream: 2

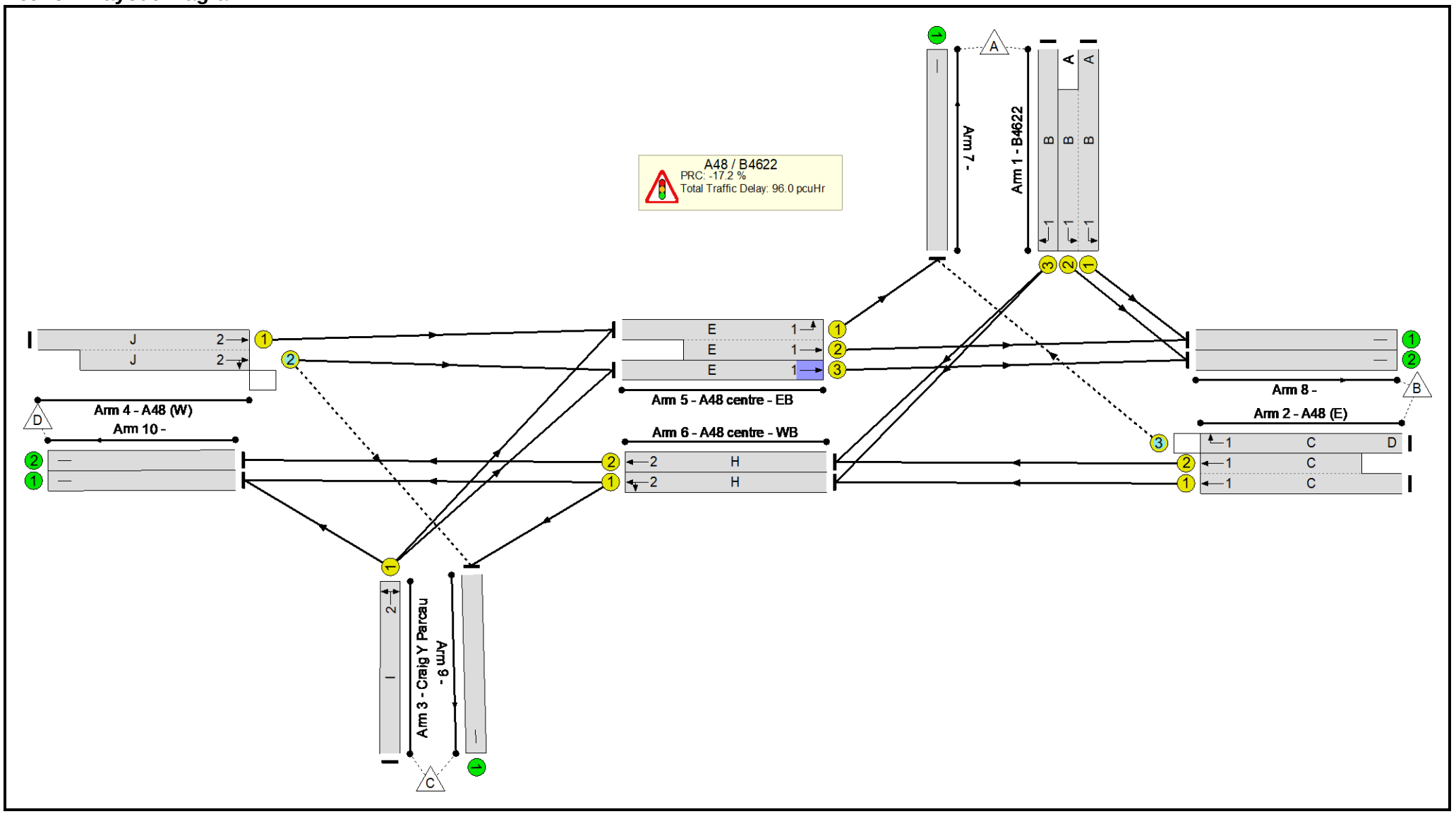
Stage	1	2	3
Duration	84	5	7
Change Point	3	95	108

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**105.5%**
A48 / B4622	-	-	**N/A**	-	-		-	-	-	-	-	-	**105.5%**
1/1+1/2	B4622 Left	U	1	N/A	B	A	1	40	27:27	843	1760:1938	497+548	80.7 : 80.7%
1/3	B4622 Right	U	1	N/A	B		1	13	-	148	1972	230	64.3%
2/1+2/2	A48 (E) Ahead	U	1	N/A	C		1	95	-	1005	1980:2120	989+1061	49.0 : 49.0%
2/3	A48 (E) Right	O	1	N/A	C	D	1	95	22	261	1972	438	59.6%
3/1	Craig Y Parcau Right Left	U	2	N/A	I		1	7	-	47	1818	121	38.8%
4/1+4/2	A48 (W) Ahead Right	U+O	2	N/A	J		1	86	-	1943	1980:2120	936+905	105.5 : 105.5%
5/1+5/2	A48 centre - EB Left Ahead	U	1	N/A	E		1	69	-	1020	1760:2120	138+1122	76.8 : 76.9%
5/3	A48 centre - EB Ahead	U	1	N/A	E		1	69	-	955	2120	1237	73.2%
6/1	A48 centre - WB Left Ahead	U	2	N/A	H		1	99	-	556	1977	1648	33.7%
6/2	A48 centre - WB Ahead	U	2	N/A	H		1	99	-	597	2120	1767	33.8%
7/1		U	N/A	N/A	-		-	-	-	373	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	1309	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	1397	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	563	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	597	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**2**	**257**	**4**	**31.3**	**63.5**	**1.2**	**96.0**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**2**	**257**	**4**	**31.3**	**63.5**	**1.2**	**96.0**	**-**	**-**	**-**	**-**
1/1+1/2	843	843	-	-	-	7.9	2.0	-	9.9	42.4	12.5	2.0	14.6
1/3	148	148	-	-	-	2.1	0.9	-	3.0	72.1	4.7	0.9	5.6
2/1+2/2	1005	1005	-	-	-	0.9	0.5	-	1.4	4.9	4.5	0.5	5.0
2/3	261	261	0	257	4	1.9	0.7	1.2	3.8	51.9	7.8	0.7	8.5
3/1	47	47	-	-	-	0.7	0.3	-	1.0	77.7	1.5	0.3	1.8
4/1+4/2	1943	1843	2	0	0	10.8	59.1	0.0	69.9	129.5	62.1	59.1	121.1
5/1+5/2	969	969	-	-	-	3.2	0.0	-	3.2	12.0	10.7	0.0	10.7
5/3	906	906	-	-	-	3.2	0.0	-	3.2	12.8	9.3	0.0	9.3
6/1	556	556	-	-	-	0.3	0.0	-	0.3	1.9	3.0	0.0	3.0
6/2	597	597	-	-	-	0.3	0.0	-	0.3	1.9	3.3	0.0	3.3
7/1	367	367	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1264	1264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1348	1348	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	8	8	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	563	563	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	597	597	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

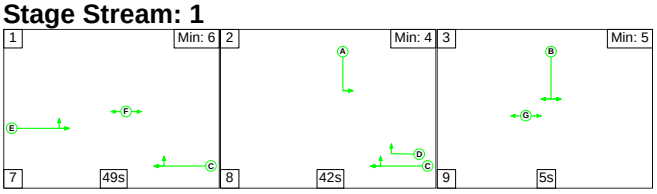
C1	Stream: 1 PRC for Signalled Lanes (%):	11.5	Total Delay for Signalled Lanes (pcuHr):	24.46	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	-17.2	Total Delay for Signalled Lanes (pcuHr):	71.49	Cycle Time (s): 120
	PRC Over All Lanes (%):	-17.2	Total Delay Over All Lanes(pcuHr):	95.95	

Full Input Data And Results

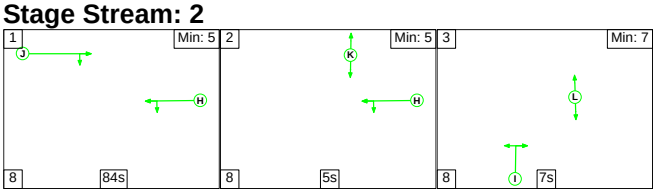
Scenario 4: 'April 2022 + Com + Dev (TA) PM' (FG4: 'April 2022 + Com + Dev (TA) PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

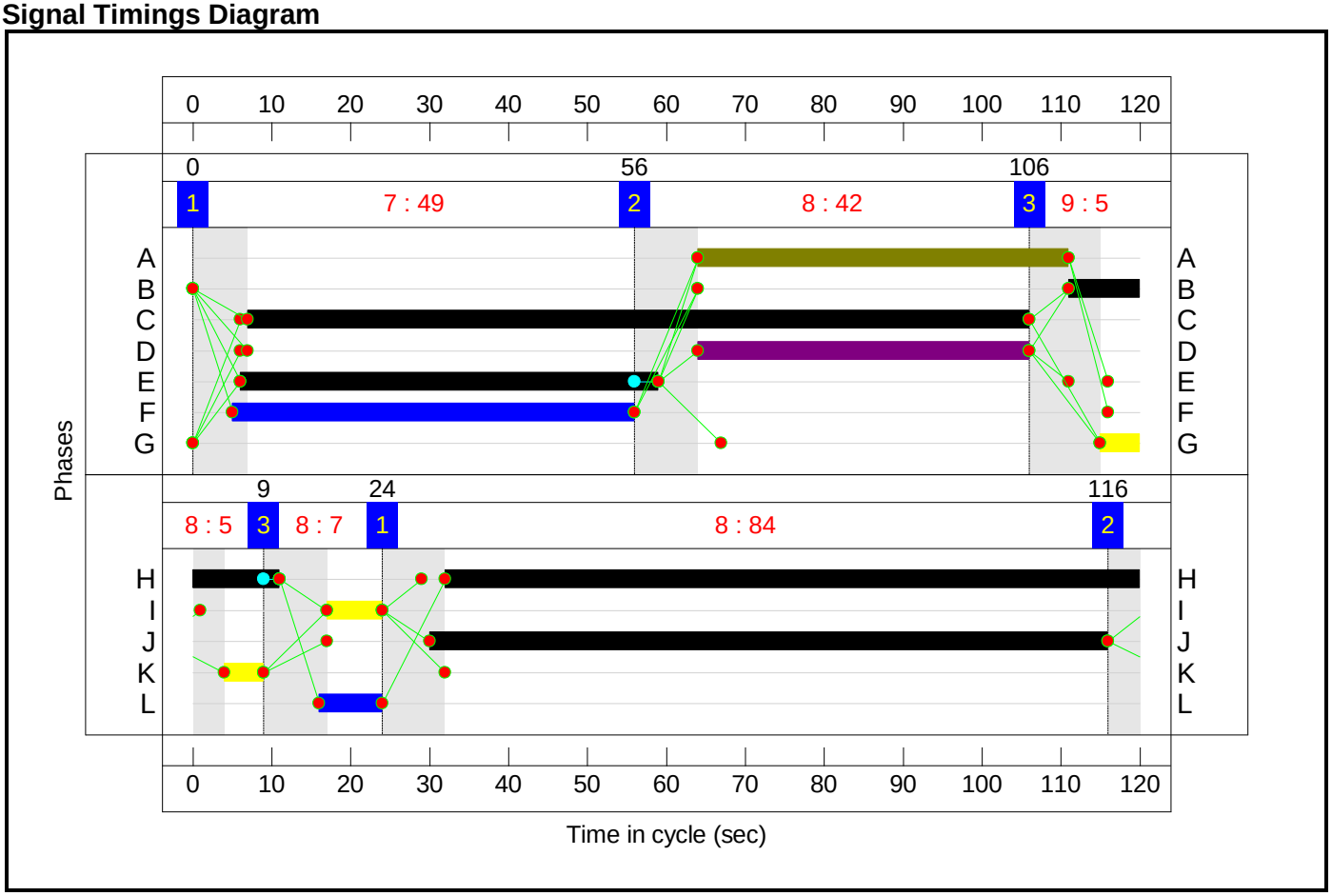
Stage Stream: 1

Stage	1	2	3
Duration	49	42	5
Change Point	0	56	106

Stage Stream: 2

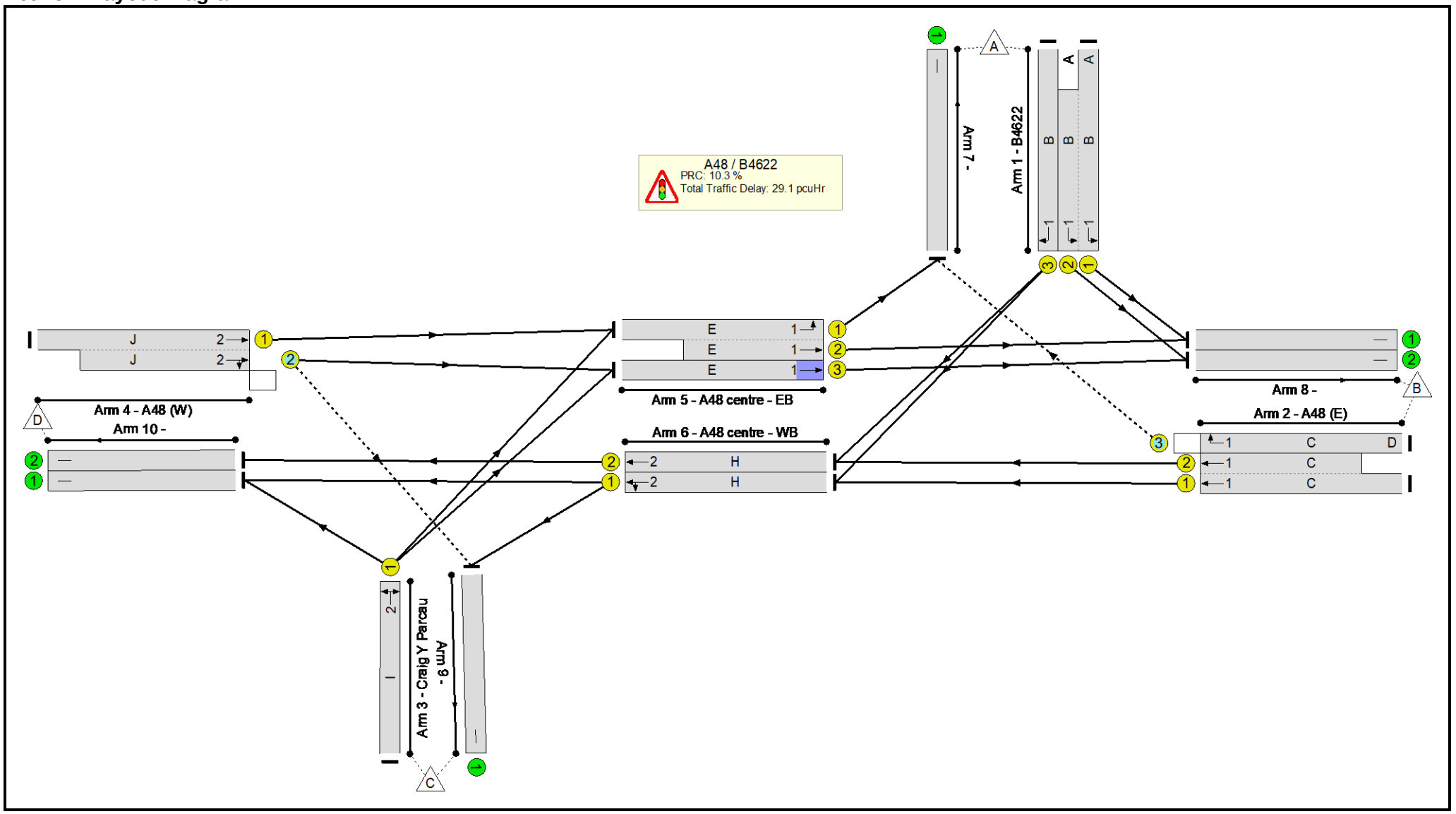
Stage	1	2	3
Duration	84	5	7
Change Point	24	116	9

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
A48 / B4622	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
1/1+1/2	B4622 Left	U	1	N/A	B	A	1	56	47:47	445	1760:1938	616+677	34.4 : 34.4%
1/3	B4622 Right	U	1	N/A	B		1	9	-	121	1972	164	73.6%
2/1+2/2	A48 (E) Ahead	U	1	N/A	C		1	99	-	1672	1980:2120	989+1061	81.6 : 81.6%
2/3	A48 (E) Right	O	1	N/A	C	D	1	99	42	766	1972	951	80.5%
3/1	Craig Y Parcau Right Left	U	2	N/A	I		1	7	-	19	1820	121	15.7%
4/1+4/2	A48 (W) Ahead Right	U+O	2	N/A	J		1	86	-	1188	1980:2117	970+822	66.3 : 66.3%
5/1+5/2	A48 centre - EB Left Ahead	U	1	N/A	E		1	53	-	649	1760:2120	201+811	64.1 : 64.1%
5/3	A48 centre - EB Ahead	U	1	N/A	E		1	53	-	543	2120	954	56.9%
6/1	A48 centre - WB Left Ahead	U	2	N/A	H		1	99	-	863	1973	1644	52.5%
6/2	A48 centre - WB Ahead	U	2	N/A	H		1	99	-	930	2120	1767	52.6%
7/1		U	N/A	N/A	-		-	-	-	895	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	732	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	776	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	36	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	842	Inf	Inf	0.0%
10/2		U	N/A	N/A	-		-	-	-	930	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**195**	**569**	**13**	**21.3**	**6.9**	**0.9**	**29.1**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**195**	**569**	**13**	**21.3**	**6.9**	**0.9**	**29.1**	**-**	**-**	**-**	**-**
1/1+1/2	445	445	-	-	-	2.3	0.3	-	2.6	20.9	4.6	0.3	4.9
1/3	121	121	-	-	-	1.8	1.3	-	3.1	92.9	3.9	1.3	5.2
2/1+2/2	1672	1672	-	-	-	1.3	2.2	-	3.5	7.5	7.9	2.2	10.1
2/3	766	766	185	569	13	3.7	2.0	0.8	6.5	30.4	21.5	2.0	23.5
3/1	19	19	-	-	-	0.3	0.1	-	0.4	70.4	0.6	0.1	0.7
4/1+4/2	1188	1188	10	0	0	2.1	1.0	0.2	3.3	9.9	8.6	1.0	9.6
5/1+5/2	649	649	-	-	-	4.0	0.0	-	4.0	22.4	10.0	0.0	10.0
5/3	543	543	-	-	-	3.6	0.0	-	3.6	23.6	10.0	0.0	10.0
6/1	863	863	-	-	-	1.1	0.0	-	1.1	4.4	12.3	0.0	12.3
6/2	930	930	-	-	-	1.1	0.0	-	1.1	4.4	13.2	0.0	13.2
7/1	895	895	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	732	732	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	776	776	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	36	36	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	842	842	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	930	930	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 Stream: 1 PRC for Signalled Lanes (%): 10.3 Total Delay for Signalled Lanes (pcuHr): 23.27 Cycle Time (s): 120
C1 Stream: 2 PRC for Signalled Lanes (%): 35.7 Total Delay for Signalled Lanes (pcuHr): 5.83 Cycle Time (s): 120
PRC Over All Lanes (%): 10.3 Total Delay Over All Lanes(pcuHr): 29.10

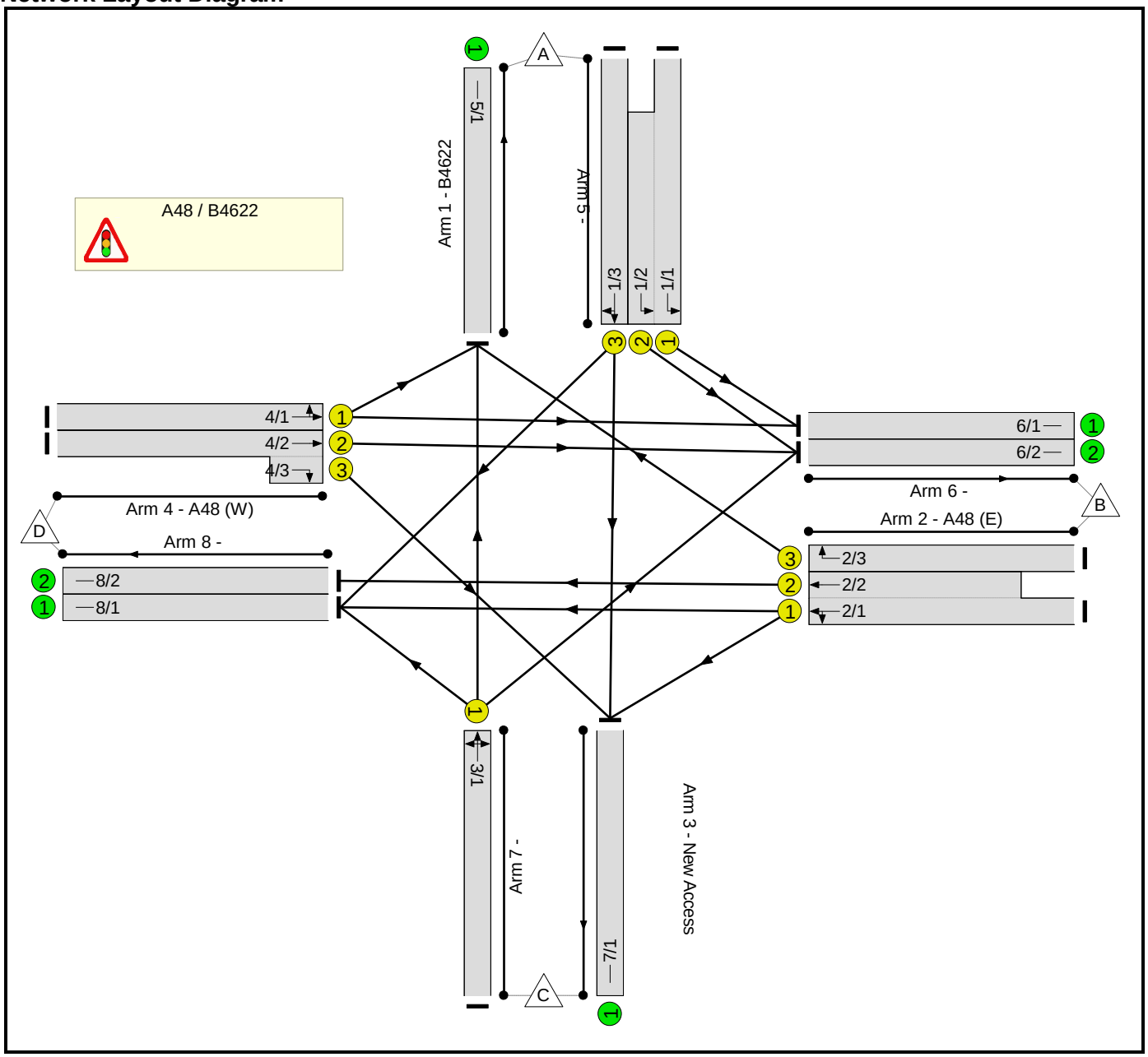
Appendix D

Full Input Data And Results

User and Project Details

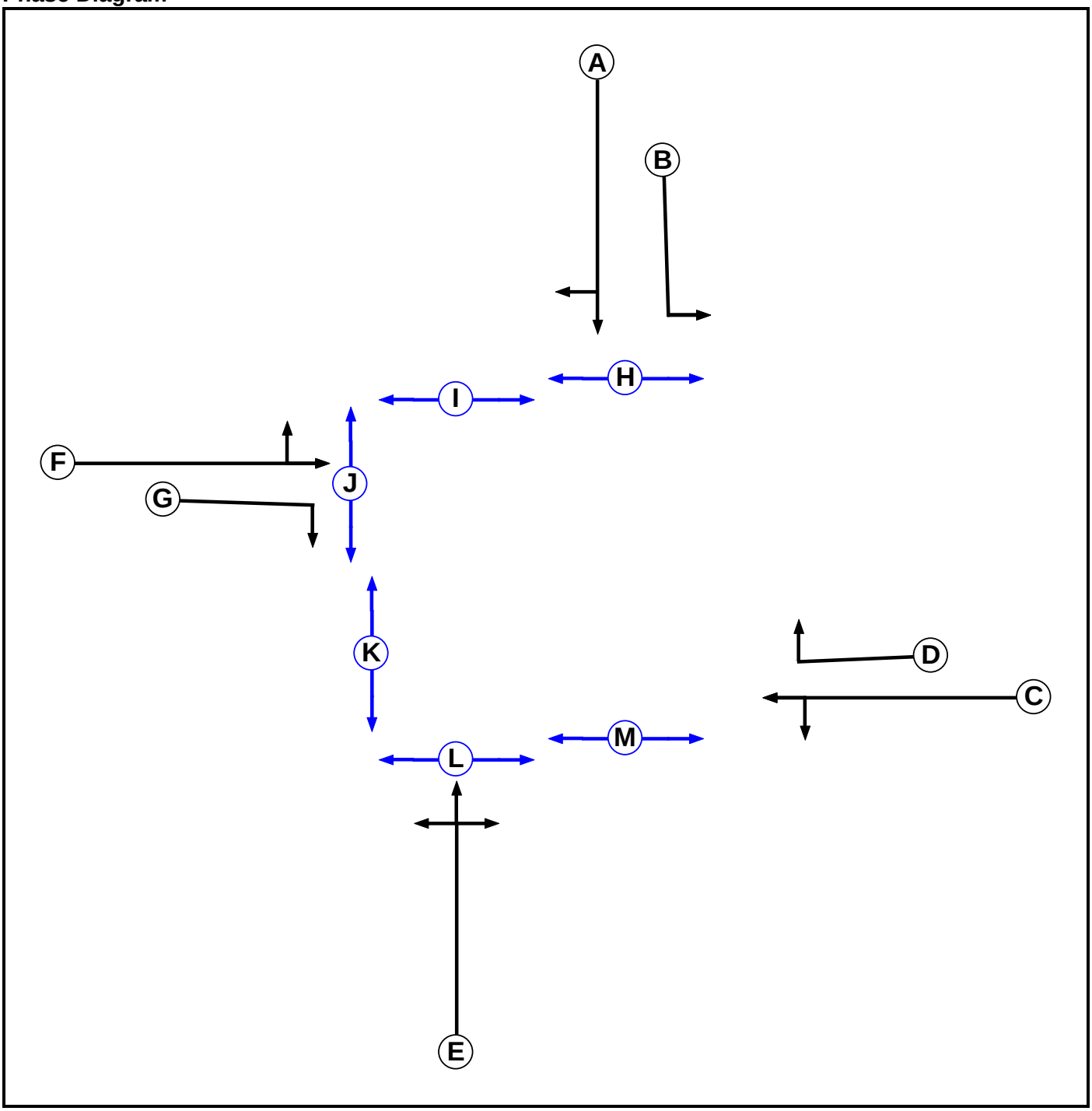
Project:	
Title:	
Location:	
Additional detail:	
File name:	226542 - A48_B4622 (A01 Rev A) - V8.lsg3x
Author:	
Company:	
Address:	

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	Traffic		7	7
G	Traffic		7	7
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5

Phase Intergreens Matrix

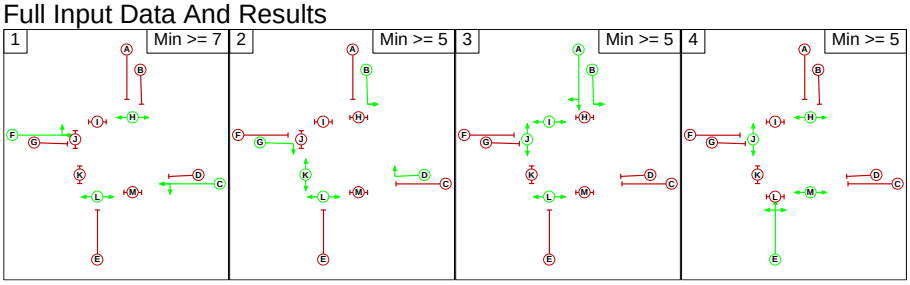
		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	6	5	5	5	6	5	-	-	10	-	11
	B	-		-	-	5	-	-	5	-	-	-	-	-
	C	5	-		-	6	-	5	-	-	-	10	-	9
	D	5	-	-		5	6	-	-	11	-	-	-	-
	E	5	5	5	5		6	-	-	11	-	9	5	-
	F	6	-	-	5	5		-	-	9	5	-	-	-
	G	5	-	6	-	-	-		-	-	5	-	-	11
	H	8	8	-	-	-	-	-		-	-	-	-	-
	I	-	-	-	6	6	6	-	-		-	-	-	-
	J	-	-	-	-	-	8	8	-	-		-	-	-
	K	6	-	6	-	6	-	-	-	-	-		-	-
	L	-	-	-	-	8	-	-	-	-	-	-		-
	M	5	-	5	-	-	-	5	-	-	-	-	-	

Phases in Stage

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

Stage Diagram

Full Input Data And Results



Phase Delays

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

Prohibited Stage Change

	To Stage				
		1	2	3	4
From Stage	1		10	9	9
	2	6		11	11
	3	8	10		11
	4	8	9	11	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A48 / B4622
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A48 / B4622												
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 (B4622)	U	B	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	12.00
1/2 (B4622)	U	B	2	3	13.9	Geom	-	3.65	0.00	N	Arm 6 Left	16.00
1/3 (B4622)	U	A	2	3	60.0	Geom	-	3.65	0.00	N	Arm 7 Ahead	Inf
											Arm 8 Right	20.00
2/1 (A48 (E))	U	C	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
2/2 (A48 (E))	U	C	2	3	18.3	Geom	-	3.65	0.00	N	Arm 8 Ahead	Inf
2/3 (A48 (E))	U	D	2	3	60.0	Geom	-	3.65	0.00	N	Arm 5 Right	20.00
3/1 (New Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	20.00
											Arm 8 Left	12.00
4/1 (A48 (W))	U	F	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
4/2 (A48 (W))	U	F	2	3	60.0	Geom	-	3.65	0.00	N	Arm 6 Ahead	Inf
4/3 (A48 (W))	U	G	2	3	3.0	Geom	-	3.65	0.00	N	Arm 7 Right	20.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'April 2022 + Com + Dev (BDBC) AM'	08:00	09:00	01:00	
2: 'April 2022 + Com + Dev (BDBC) PM'	17:00	18:00	01:00	
3: 'April 2022 + Com + Dev (TA) AM'	08:00	09:00	01:00	
4: 'April 2022 + Com + Dev (TA) PM'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: 'April 2022 + Com + Dev (BDBC) AM' (FG1: 'April 2022 + Com + Dev (BDBC) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	904	0	148	1052
	B	288	0	6	1001	1295
	C	2	32	0	13	47
	D	110	1837	2	0	1949
	Tot.	400	2773	8	1162	4343

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: April 2022 + Com + Dev (BDBC) AM
Junction: A48 / B4622	
1/1 (with short)	904(In) 428(Out)
1/2 (short)	476
1/3	148
2/1 (with short)	1007(In) 486(Out)
2/2 (short)	521
2/3	288
3/1	47
4/1	933
4/2 (with short)	1016(In) 1014(Out)
4/3 (short)	2
5/1	400
6/1	1251
6/2	1522
7/1	8
8/1	641
8/2	521

Lane Saturation Flows

Junction: A48 / B4622								
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 (B4622)	3.65	0.00	Y	Arm 6 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 6 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 7 Ahead	Inf	0.0 %	1972	1972
				Arm 8 Right	20.00	100.0 %		
2/1 (A48 (E))	3.65	0.00	Y	Arm 7 Left	12.00	1.2 %	1977	1977
				Arm 8 Ahead	Inf	98.8 %		
2/2 (A48 (E))	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 5 Right	20.00	100.0 %	1972	1972
3/1 (New Access)	3.65	0.00	Y	Arm 5 Ahead	Inf	4.3 %	1824	1824
				Arm 6 Right	20.00	68.1 %		
				Arm 8 Left	12.00	27.7 %		
4/1	3.65	0.00	Y	Arm 5 Left	12.00	11.8 %	1951	1951

(A48 (W))				Arm 6 Ahead	Inf	88.2 %		
4/2 (A48 (W))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
4/3 (A48 (W))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'April 2022 + Com + Dev (BDBC) PM' (FG2: 'April 2022 + Com + Dev (BDBC) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	479	2	119	600
	B	837	0	24	1654	2515
	C	1	13	0	5	19
	D	128	1053	10	0	1191
	Tot.	966	1545	36	1778	4325

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: April 2022 + Com + Dev (BDBC) PM
Junction: A48 / B4622	
1/1 (with short)	479(In) 228(Out)
1/2 (short)	251
1/3	121
2/1 (with short)	1678(In) 791(Out)
2/2 (short)	887
2/3	837
3/1	19
4/1	562
4/2 (with short)	629(In) 619(Out)
4/3 (short)	10
5/1	966
6/1	662
6/2	883
7/1	36
8/1	891
8/2	887

Lane Saturation Flows

Junction: A48 / B4622								
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 (B4622)	3.65	0.00	Y	Arm 6 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 6 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 7 Ahead	Inf	1.7 %	1974	1974
				Arm 8 Right	20.00	98.3 %		
2/1 (A48 (E))	3.65	0.00	Y	Arm 7 Left	12.00	3.0 %	1973	1973
				Arm 8 Ahead	Inf	97.0 %		
2/2 (A48 (E))	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 5 Right	20.00	100.0 %	1972	1972
3/1 (New Access)	3.65	0.00	Y	Arm 5 Ahead	Inf	5.3 %	1826	1826
				Arm 6 Right	20.00	68.4 %		
				Arm 8 Left	12.00	26.3 %		
4/1	3.65	0.00	Y	Arm 5 Left	12.00	22.8 %	1925	1925

Full Input Data And Results

(A48 (W))				Arm 6 Ahead	Inf	77.2 %		
4/2 (A48 (W))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
4/3 (A48 (W))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'April 2022 + Com + Dev (TA) AM' (FG3: 'April 2022 + Com + Dev (TA) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	843	0	148	991
	B	261	0	6	999	1266
	C	2	32	0	13	47
	D	110	1831	2	0	1943
	Tot.	373	2706	8	1160	4247

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: April 2022 + Com + Dev (TA) AM
Junction: A48 / B4622	
1/1 (with short)	843(In) 401(Out)
1/2 (short)	442
1/3	148
2/1 (with short)	1005(In) 485(Out)
2/2 (short)	520
2/3	261
3/1	47
4/1	930
4/2 (with short)	1013(In) 1011(Out)
4/3 (short)	2
5/1	373
6/1	1221
6/2	1485
7/1	8
8/1	640
8/2	520

Lane Saturation Flows

Junction: A48 / B4622								
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 (B4622)	3.65	0.00	Y	Arm 6 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 6 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 7 Ahead	Inf	0.0 %	1972	1972
				Arm 8 Right	20.00	100.0 %		
2/1 (A48 (E))	3.65	0.00	Y	Arm 7 Left	12.00	1.2 %	1977	1977
				Arm 8 Ahead	Inf	98.8 %		
2/2 (A48 (E))	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 5 Right	20.00	100.0 %	1972	1972
3/1 (New Access)	3.65	0.00	Y	Arm 5 Ahead	Inf	4.3 %	1824	1824
				Arm 6 Right	20.00	68.1 %		
				Arm 8 Left	12.00	27.7 %		
4/1	3.65	0.00	Y	Arm 5 Left	12.00	11.8 %	1951	1951

(A48 (W))				Arm 6 Ahead	Inf	88.2 %		
4/2 (A48 (W))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
4/3 (A48 (W))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'April 2022 + Com + Dev (TA) PM' (FG4: 'April 2022 + Com + Dev (TA) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	445	2	119	566
	B	766	0	24	1648	2438
	C	1	13	0	5	19
	D	128	1050	10	0	1188
	Tot.	895	1508	36	1772	4211

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: April 2022 + Com + Dev (TA) PM
Junction: A48 / B4622	
1/1 (with short)	445(In) 212(Out)
1/2 (short)	233
1/3	121
2/1 (with short)	1672(In) 788(Out)
2/2 (short)	884
2/3	766
3/1	19
4/1	559
4/2 (with short)	629(In) 619(Out)
4/3 (short)	10
5/1	895
6/1	643
6/2	865
7/1	36
8/1	888
8/2	884

Lane Saturation Flows

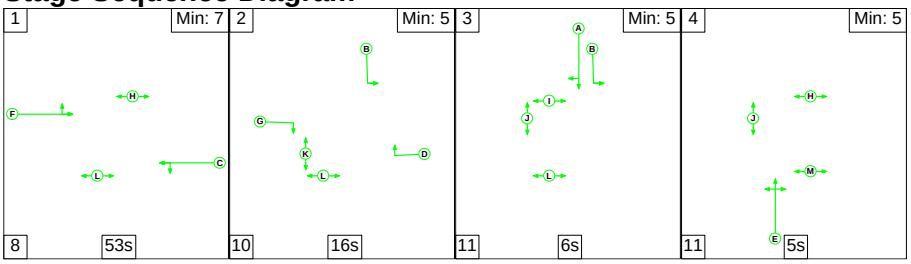
Junction: A48 / B4622								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B4622)	3.65	0.00	Y	Arm 6 Left	12.00	100.0 %	1760	1760
1/2 (B4622)	3.65	0.00	N	Arm 6 Left	16.00	100.0 %	1938	1938
1/3 (B4622)	3.65	0.00	N	Arm 7 Ahead	Inf	1.7 %	1974	1974
				Arm 8 Right	20.00	98.3 %		
2/1 (A48 (E))	3.65	0.00	Y	Arm 7 Left	12.00	3.0 %	1972	1972
				Arm 8 Ahead	Inf	97.0 %		
2/2 (A48 (E))	3.65	0.00	N	Arm 8 Ahead	Inf	100.0 %	2120	2120
2/3 (A48 (E))	3.65	0.00	N	Arm 5 Right	20.00	100.0 %	1972	1972
3/1 (New Access)	3.65	0.00	Y	Arm 5 Ahead	Inf	5.3 %	1826	1826
				Arm 6 Right	20.00	68.4 %		
				Arm 8 Left	12.00	26.3 %		
4/1	3.65	0.00	Y	Arm 5 Left	12.00	22.9 %	1925	1925

Full Input Data And Results

(A48 (W))				Arm 6 Ahead	Inf	77.1 %		
4/2 (A48 (W))	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
4/3 (A48 (W))	3.65	0.00	N	Arm 7 Right	20.00	100.0 %	1972	1972
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'April 2022 + Com + Dev (BDBC) AM' (FG1: 'April 2022 + Com + Dev (BDBC) AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

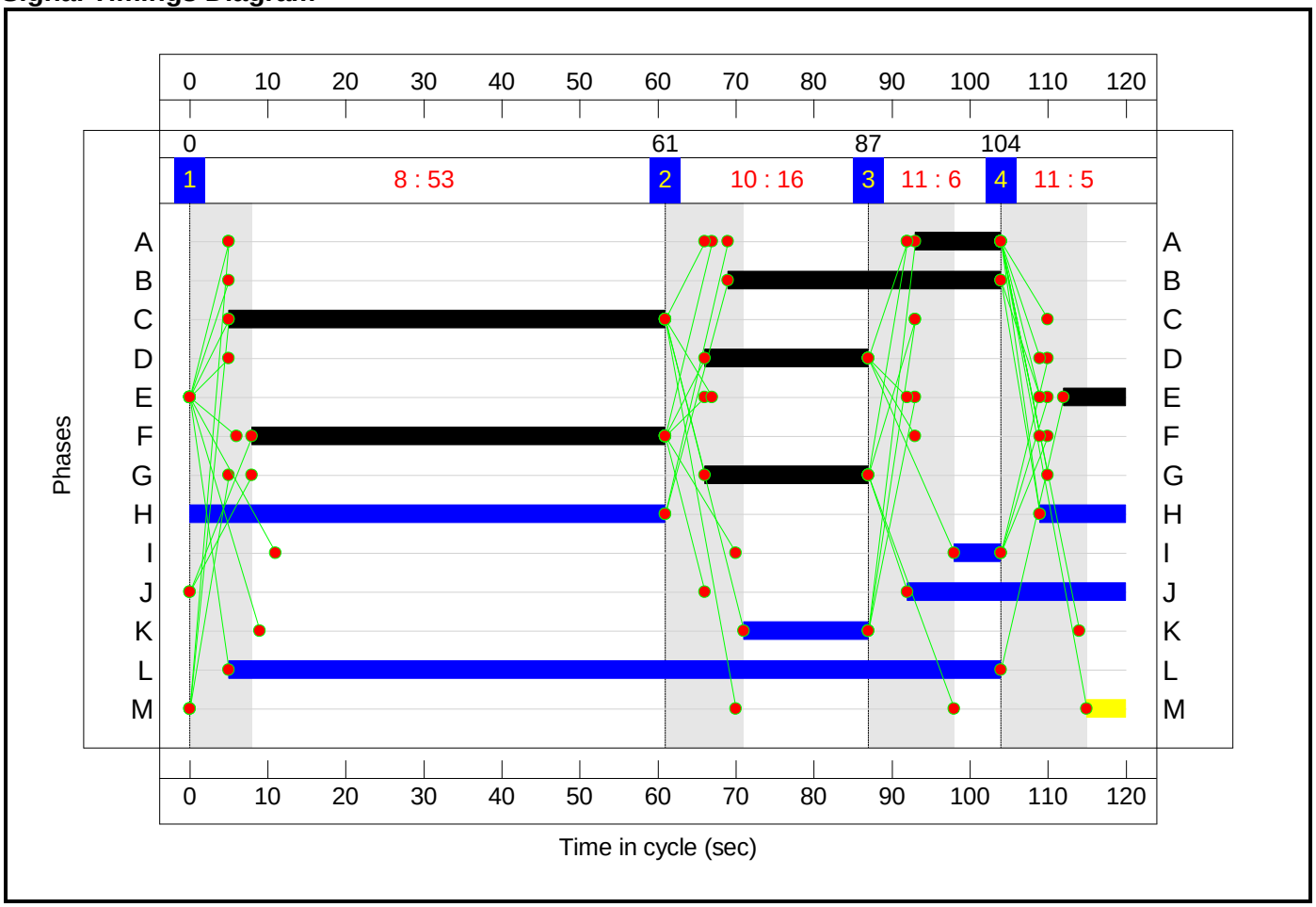


Full Input Data And Results

Stage Timings

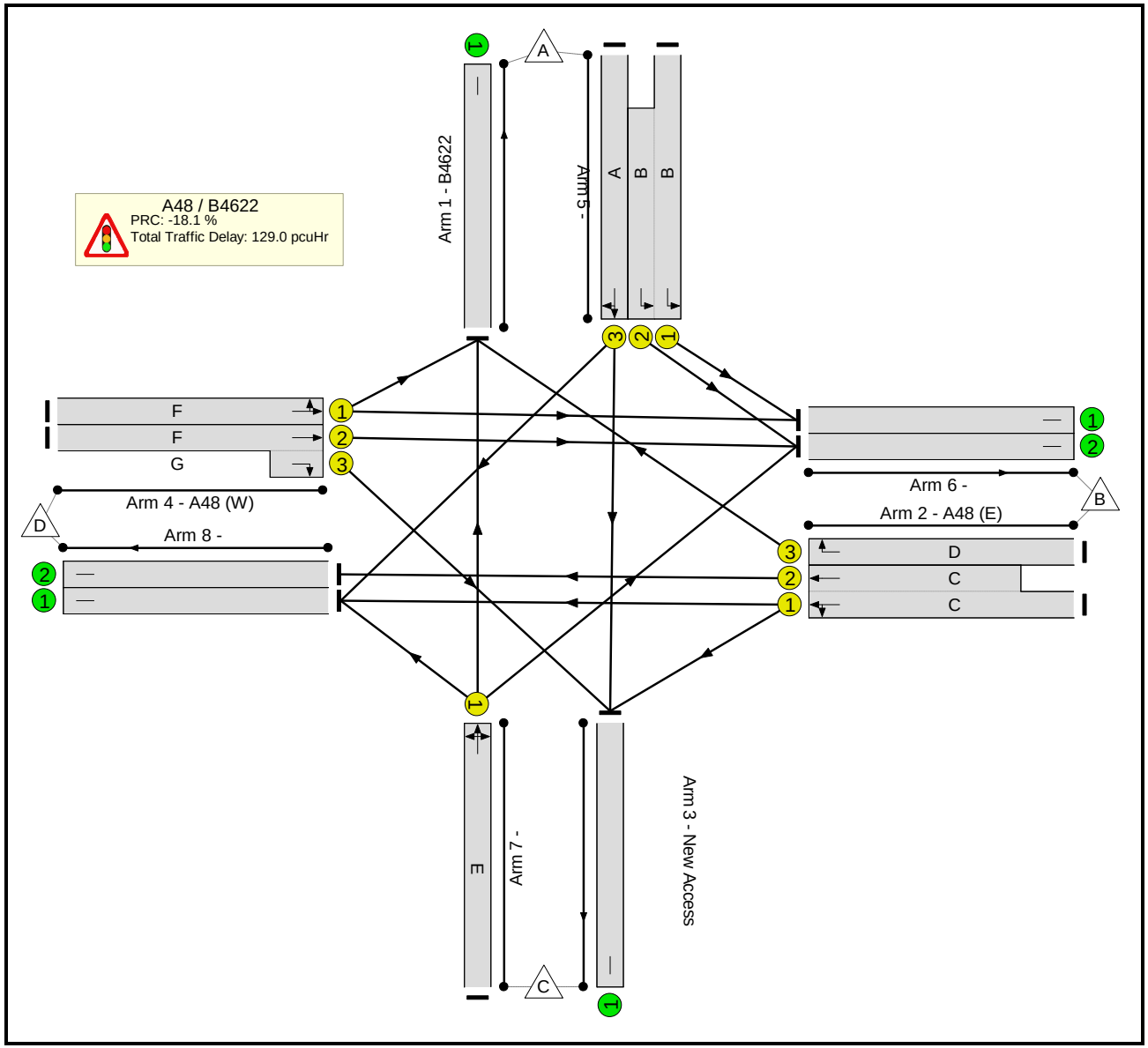
Stage	1	2	3	4
Duration	53	16	6	5
Change Point	0	61	87	104

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.3%**
A48 / B4622	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**106.3%**
1/1+1/2	B4622 Left	U	N/A	N/A	B		1	35	-	904	1760:1938	457+508	93.7 : 93.7%
1/3	B4622 Ahead Right	U	N/A	N/A	A		1	11	-	148	1972	197	75.1%
2/1+2/2	A48 (E) Left Ahead	U	N/A	N/A	C		1	56	-	1007	1977:2120	725+777	67.0 : 67.0%
2/3	A48 (E) Right	U	N/A	N/A	D		1	21	-	288	1972	362	79.7%
3/1	New Access Ahead Right Left	U	N/A	N/A	E		1	8	-	47	1824	137	34.4%
4/1	A48 (W) Left Ahead	U	N/A	N/A	F		1	53	-	933	1951	878	106.3%
4/2+4/3	A48 (W) Ahead Right	U	N/A	N/A	F G		1	53:21	-	1016	2120:1972	954+2	106.3 : 106.3%
5/1		U	N/A	N/A	-		-	-	-	400	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1251	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	1522	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	641	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	521	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**46.9**	**82.1**	**0.0**	**129.0**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**0**	**0**	**0**	**46.9**	**82.1**	**0.0**	**129.0**	**-**	**-**	**-**	**-**
1/1+1/2	904	904	-	-	-	9.8	6.2	-	16.0	63.7	15.9	6.2	22.1
1/3	148	148	-	-	-	2.2	1.4	-	3.6	87.1	4.8	1.4	6.2
2/1+2/2	1007	1007	-	-	-	6.1	1.0	-	7.1	25.6	12.0	1.0	13.0
2/3	288	288	-	-	-	3.7	1.9	-	5.6	70.2	9.1	1.9	11.0
3/1	47	47	-	-	-	0.7	0.3	-	0.9	72.6	1.5	0.3	1.7
4/1	933	878	-	-	-	11.7	34.3	-	46.0	177.4	32.9	34.3	67.3
4/2+4/3	1016	956	-	-	-	12.7	37.0	-	49.7	176.2	36.4	37.0	73.4
5/1	394	394	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1202	1202	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1462	1462	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	8	8	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	641	641	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

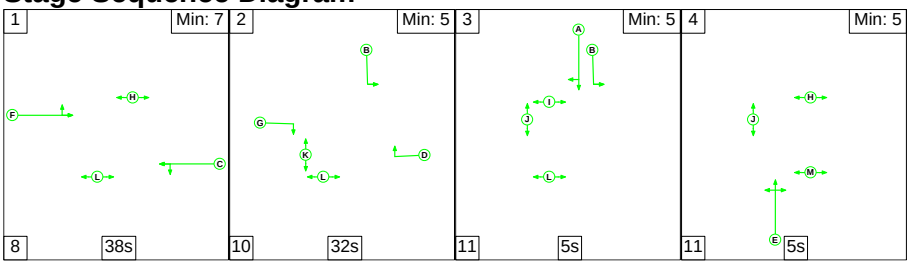
C1 PRC for Signalled Lanes (%): -18.1 Total Delay for Signalled Lanes (pcuHr): 129.01 Cycle Time (s): 120

PRC Over All Lanes (%): -18.1 Total Delay Over All Lanes(pcuHr): 129.01

Full Input Data And Results

Scenario 2: 'April 2022 + Com + Dev (BDBC) PM' (FG2: 'April 2022 + Com + Dev (BDBC) PM', Plan 1: 'Network Control Plan 1')

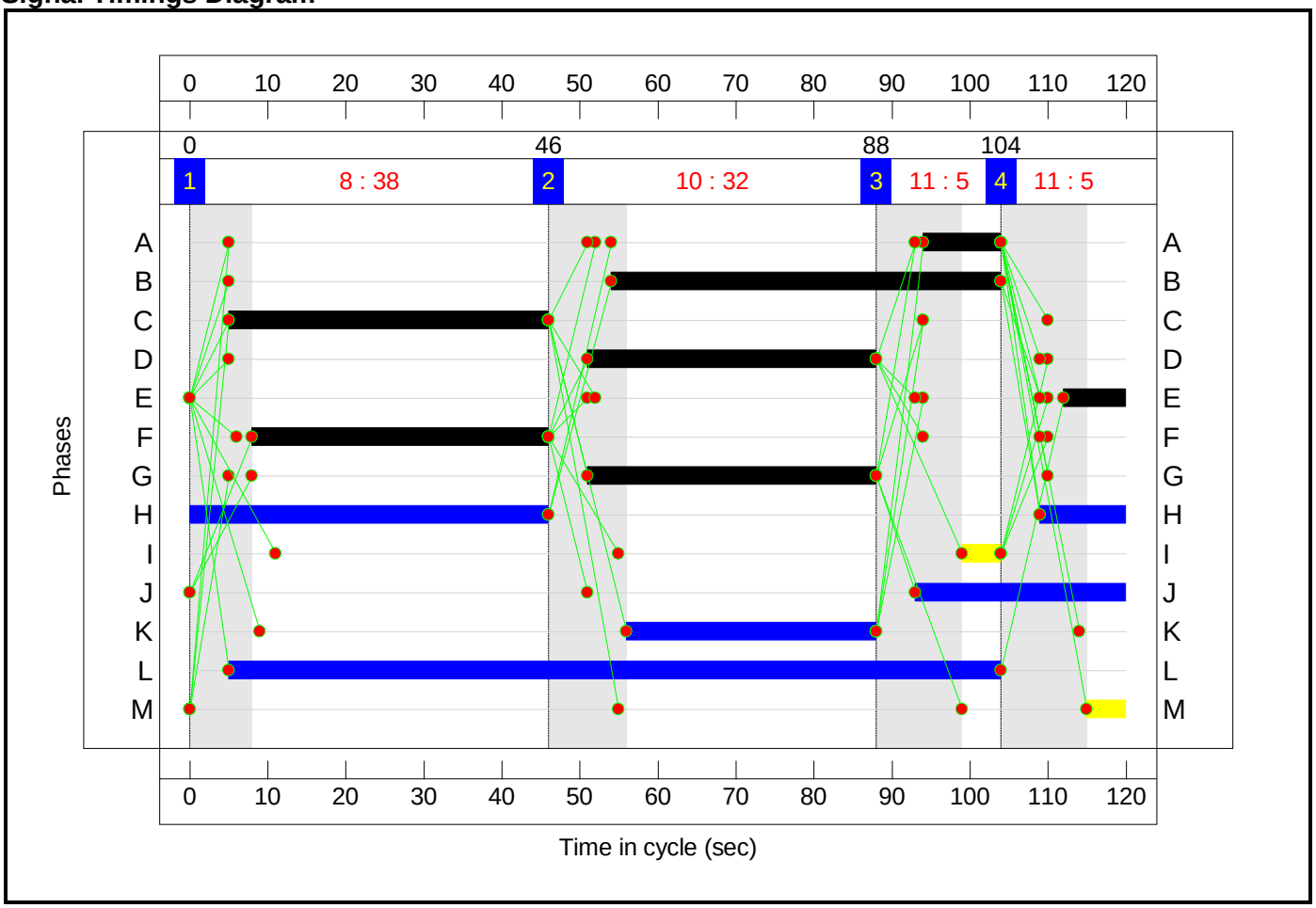
Stage Sequence Diagram



Stage Timings

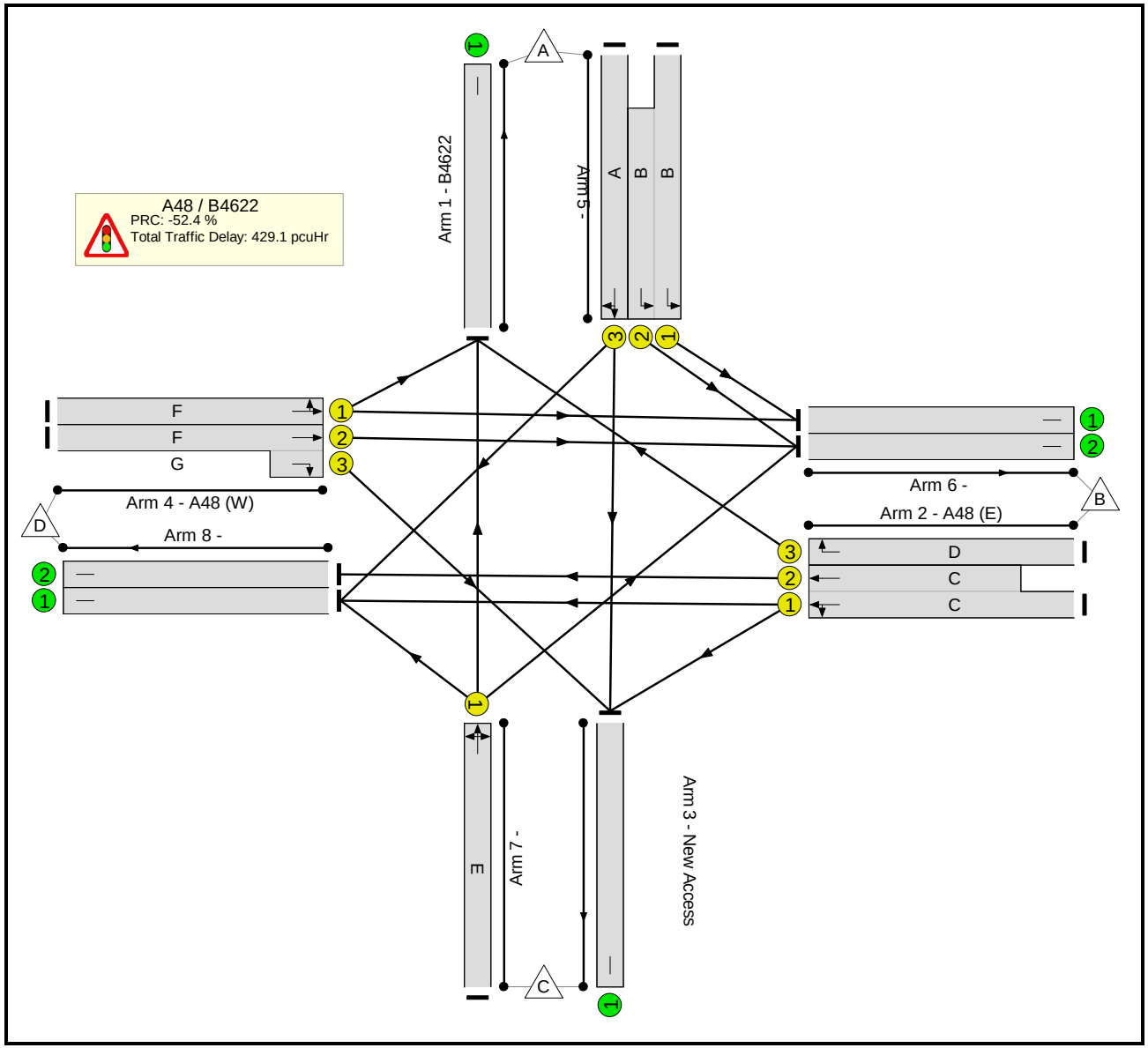
Stage	1	2	3	4
Duration	38	32	5	5
Change Point	0	46	88	104

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.2%**
A48 / B4622	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.2%**
1/1+1/2	B4622 Left	U	N/A	N/A	B		1	50	-	479	1760:1938	571+628	39.9 : 39.9%
1/3	B4622 Ahead Right	U	N/A	N/A	A		1	10	-	121	1974	181	66.9%
2/1+2/2	A48 (E) Left Ahead	U	N/A	N/A	C		1	41	-	1678	1973:2120	577+647	137.2 : 137.2%
2/3	A48 (E) Right	U	N/A	N/A	D		1	37	-	837	1972	624	134.0%
3/1	New Access Ahead Right Left	U	N/A	N/A	E		1	8	-	19	1826	137	13.9%
4/1	A48 (W) Left Ahead	U	N/A	N/A	F		1	38	-	562	1925	626	89.8%
4/2+4/3	A48 (W) Ahead Right	U	N/A	N/A	F G		1	38:37	-	629	2120:1972	680+11	91.0 : 91.0%
5/1		U	N/A	N/A	-		-	-	-	966	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	662	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	883	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	36	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	891	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	887	Inf	Inf	0.0%

Full Input Data And Results

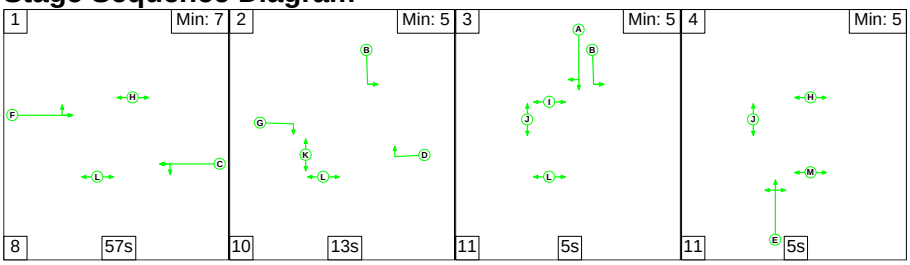
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**82.0**	**347.1**	**0.0**	**429.1**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**0**	**0**	**0**	**82.0**	**347.1**	**0.0**	**429.1**	**-**	**-**	**-**	**-**
1/1+1/2	479	479	-	-	-	3.0	0.3	-	3.4	25.3	5.5	0.3	5.8
1/3	121	121	-	-	-	1.8	1.0	-	2.8	81.8	3.9	1.0	4.9
2/1+2/2	1678	1223	-	-	-	44.2	229.2	-	273.4	586.7	60.8	229.2	290.0
2/3	837	624	-	-	-	19.8	108.2	-	128.0	550.6	35.3	108.2	143.5
3/1	19	19	-	-	-	0.3	0.1	-	0.4	67.2	0.6	0.1	0.7
4/1	562	562	-	-	-	6.0	3.9	-	10.0	63.8	17.8	3.9	21.7
4/2+4/3	629	629	-	-	-	6.8	4.4	-	11.2	64.2	19.9	4.4	24.3
5/1	753	753	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	883	883	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	29	29	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	683	683	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	647	647	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -52.4 Total Delay for Signalled Lanes (pcuHr): 429.11 Cycle Time (s): 120
PRC Over All Lanes (%): -52.4 Total Delay Over All Lanes(pcuHr): 429.11

Full Input Data And Results

Scenario 3: 'April 2022 + Com + Dev (TA) AM' (FG3: 'April 2022 + Com + Dev (TA) AM', Plan 1: 'Network Control Plan 1')

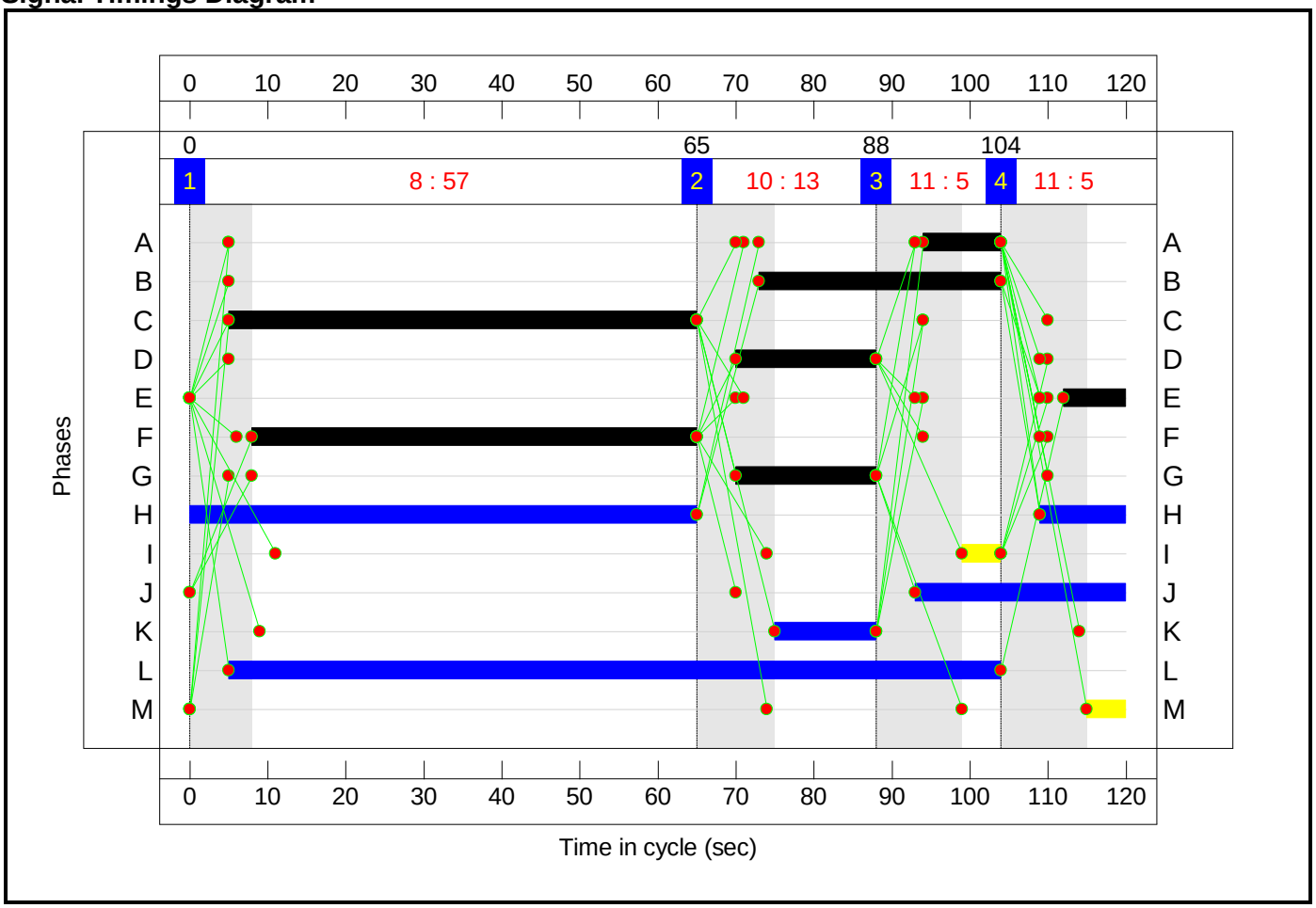
Stage Sequence Diagram



Stage Timings

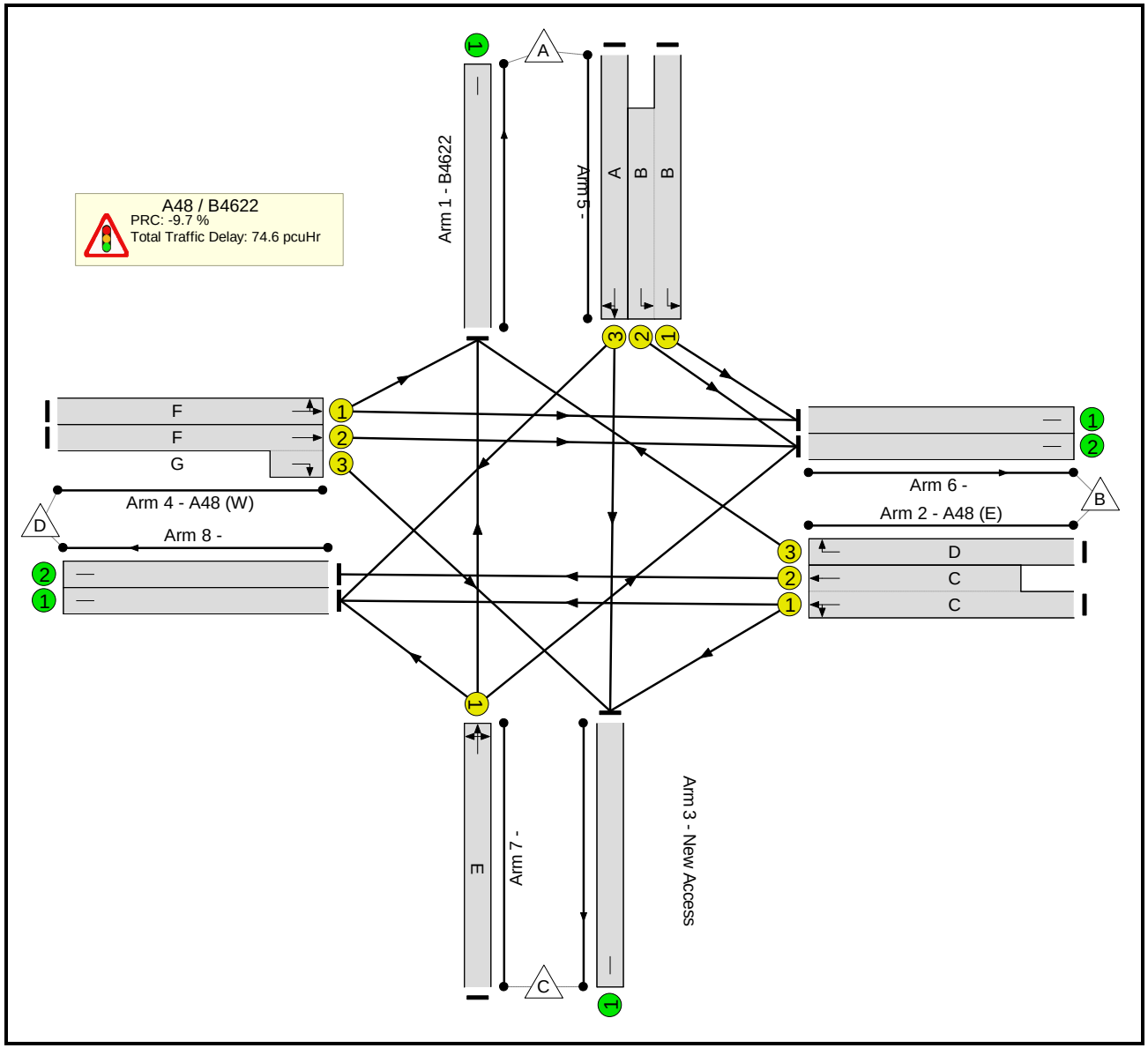
Stage	1	2	3	4
Duration	57	13	5	5
Change Point	0	65	88	104

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.7%**
A48 / B4622	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**98.7%**
1/1+1/2	B4622 Left	U	N/A	N/A	B		1	31	-	843	1760:1938	431+475	93.0 : 93.0%
1/3	B4622 Ahead Right	U	N/A	N/A	A		1	10	-	148	1972	181	81.9%
2/1+2/2	A48 (E) Left Ahead	U	N/A	N/A	C		1	60	-	1005	1977:2120	758+812	64.0 : 64.0%
2/3	A48 (E) Right	U	N/A	N/A	D		1	18	-	261	1972	312	83.6%
3/1	New Access Ahead Right Left	U	N/A	N/A	E		1	8	-	47	1824	137	34.4%
4/1	A48 (W) Left Ahead	U	N/A	N/A	F		1	57	-	930	1951	943	98.6%
4/2+4/3	A48 (W) Ahead Right	U	N/A	N/A	F G		1	57:18	-	1013	2120:1972	1024+2	98.7 : 98.7%
5/1		U	N/A	N/A	-		-	-	-	373	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1221	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	1485	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	640	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%

Full Input Data And Results

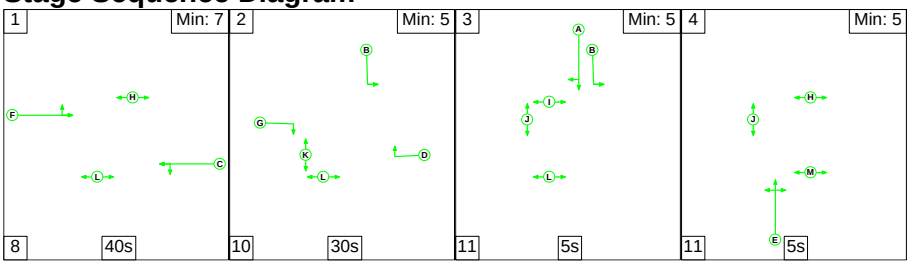
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**38.1**	**36.4**	**0.0**	**74.6**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**0**	**0**	**0**	**38.1**	**36.4**	**0.0**	**74.6**	**-**	**-**	**-**	**-**
1/1+1/2	843	843	-	-	-	9.8	5.7	-	15.5	66.0	14.0	5.7	19.7
1/3	148	148	-	-	-	2.2	2.0	-	4.2	102.5	4.8	2.0	6.8
2/1+2/2	1005	1005	-	-	-	5.4	0.9	-	6.3	22.4	11.3	0.9	12.2
2/3	261	261	-	-	-	3.6	2.3	-	5.9	81.2	8.4	2.3	10.7
3/1	47	47	-	-	-	0.7	0.3	-	0.9	72.6	1.5	0.3	1.7
4/1	930	930	-	-	-	7.9	12.3	-	20.3	78.4	30.5	12.3	42.8
4/2+4/3	1013	1013	-	-	-	8.6	12.9	-	21.5	76.6	33.2	12.9	46.1
5/1	373	373	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1221	1221	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1485	1485	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	8	8	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	640	640	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -9.7 Total Delay for Signalled Lanes (pcuHr): 74.55 Cycle Time (s): 120
PRC Over All Lanes (%): -9.7 Total Delay Over All Lanes(pcuHr): 74.55

Full Input Data And Results

Scenario 4: 'April 2022 + Com + Dev (TA) PM' (FG4: 'April 2022 + Com + Dev (TA) PM', Plan 1: 'Network Control Plan 1')

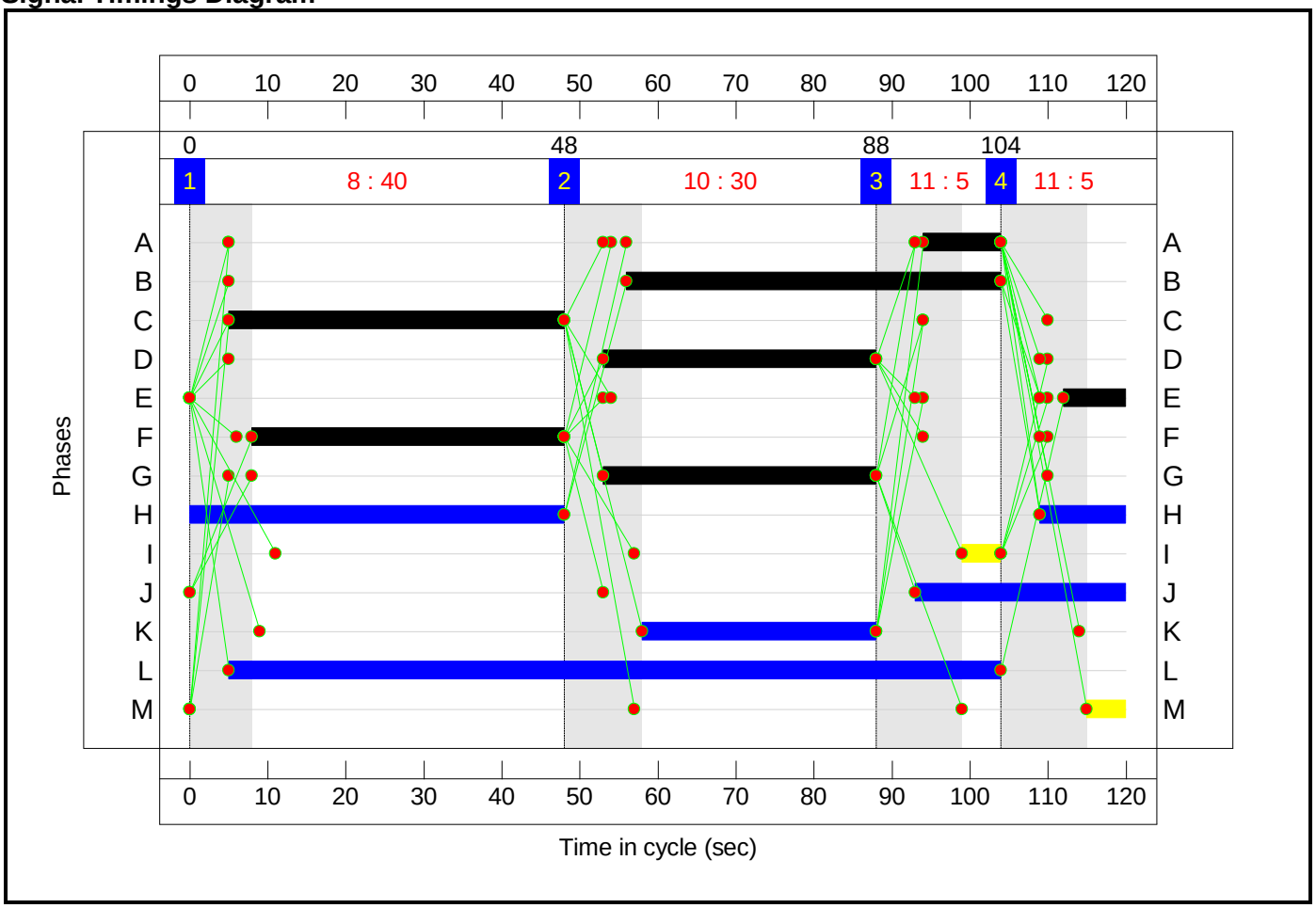
Stage Sequence Diagram



Stage Timings

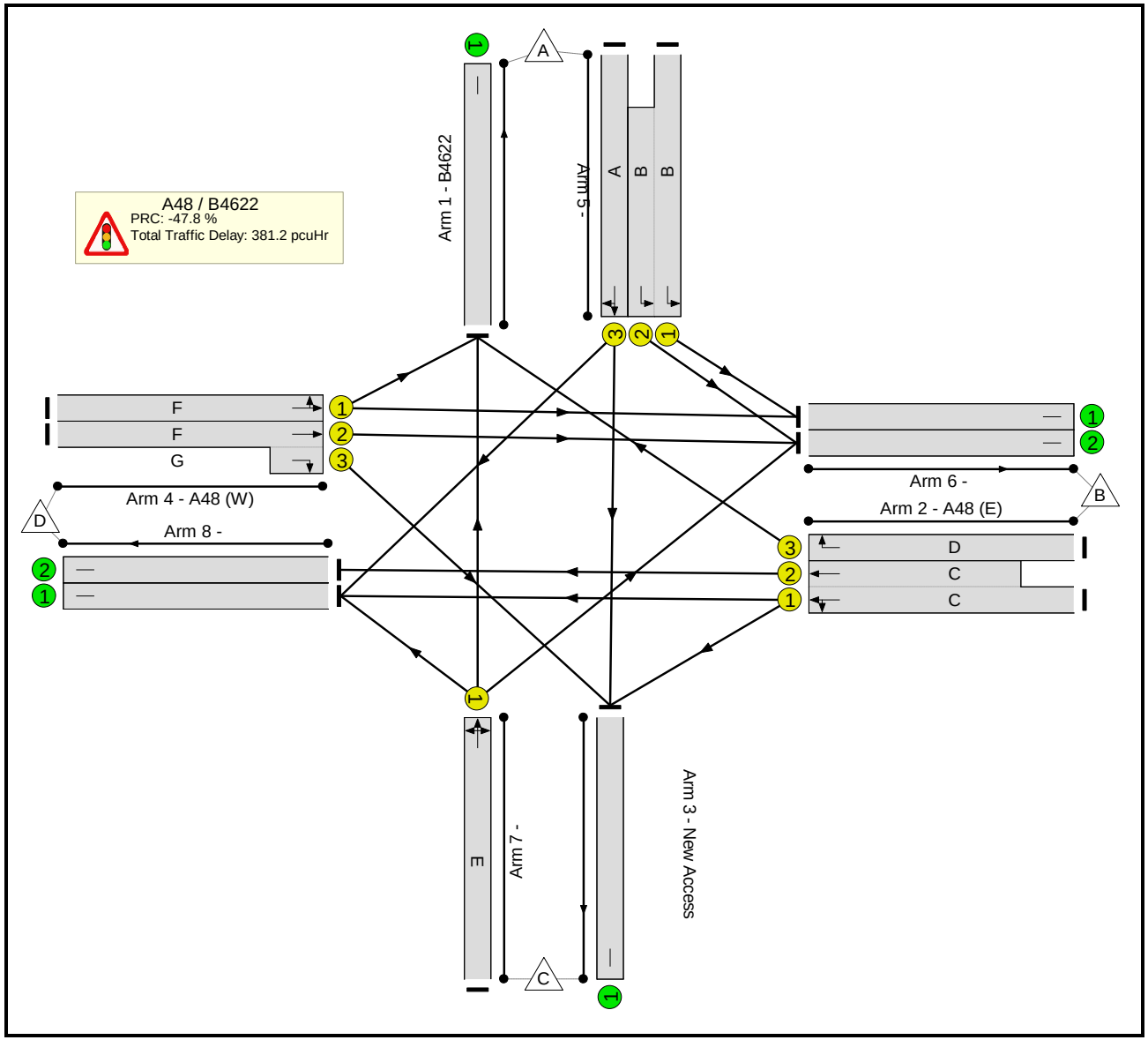
Stage	1	2	3	4
Duration	40	30	5	5
Change Point	0	48	88	104

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**133.0%**
A48 / B4622	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**133.0%**
1/1+1/2	B4622 Left	U	N/A	N/A	B		1	48	-	445	1760:1938	557+612	38.1 : 38.1%
1/3	B4622 Ahead Right	U	N/A	N/A	A		1	10	-	121	1974	181	66.9%
2/1+2/2	A48 (E) Left Ahead	U	N/A	N/A	C		1	43	-	1672	1972:2120	592+665	133.0 : 133.0%
2/3	A48 (E) Right	U	N/A	N/A	D		1	35	-	766	1972	592	129.5%
3/1	New Access Ahead Right Left	U	N/A	N/A	E		1	8	-	19	1826	137	13.9%
4/1	A48 (W) Left Ahead	U	N/A	N/A	F		1	40	-	559	1925	658	85.0%
4/2+4/3	A48 (W) Ahead Right	U	N/A	N/A	F G		1	40:35	-	629	2120:1972	715+12	86.6 : 86.6%
5/1		U	N/A	N/A	-		-	-	-	895	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	643	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	865	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	36	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	888	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	884	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**75.3**	**305.9**	**0.0**	**381.2**	**-**	**-**	**-**	**-**
A48 / B4622	**-**	**-**	**0**	**0**	**0**	**75.3**	**305.9**	**0.0**	**381.2**	**-**	**-**	**-**	**-**
1/1+1/2	445	445	-	-	-	3.0	0.3	-	3.3	26.4	5.2	0.3	5.5
1/3	121	121	-	-	-	1.8	1.0	-	2.8	81.8	3.9	1.0	4.9
2/1+2/2	1672	1257	-	-	-	41.1	209.4	-	250.5	539.4	59.3	209.4	268.7
2/3	766	592	-	-	-	17.1	89.3	-	106.4	500.0	31.3	89.3	120.7
3/1	19	19	-	-	-	0.3	0.1	-	0.4	67.2	0.6	0.1	0.7
4/1	559	559	-	-	-	5.7	2.7	-	8.4	53.9	17.2	2.7	19.9
4/2+4/3	629	629	-	-	-	6.5	3.0	-	9.5	54.4	19.5	3.0	22.6
5/1	721	721	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	643	643	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	865	865	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	30	30	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	698	698	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	665	665	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -47.8 Total Delay for Signalled Lanes (pcuHr): 381.17 Cycle Time (s): 120
PRC Over All Lanes (%): -47.8 Total Delay Over All Lanes(pcuHr): 381.17

Appendix B

Ewenny Roundabout Junction Review (Corun Associates, May 2022)

A2
ORIGINAL
PLOT SIZE

NOTES:

1) All dimensions in millimetres unless otherwise stated.

2) Traffic signal equipment not illustrated. Signal junction will run MOVA.

3) Tactile paving and drop kerb arrangements to be provided at all pedestrian/cycle crossing points.

4) Public Lighting not shown, to be provided.

- Existing carriageway to the planed off and re-surfaced - 40mm deep
- Proposed Carriageway Construction
- Proposed Shared-use Footway/Cycleway Construction (3.0m - 4.5m wide)
- Existing carriageway to the planed off and re-surfaced - 40mm deep
- Existing Highway Verge

This drawing is based on [Company's Name] Drawing No:

Rev	Date	Details	Drawn by	Checked by

CORUN
Transport and Highway Engineering
Corun Associates Ltd
Swansea
E swansea@corun.uk.com
W www.corun.uk.com

CLIENT:
HD LTD

PROJECT:
ISLAND FARM
BRIDGEND

TITLE:
EWENNY ROAD ROUNDABOUT
PROPOSED SIGNAL JUNCTION
AND ACTIVE TRAVEL
IMPROVEMENTS

STATUS:
PRELIMINARY

SCALE:	DATE:	DRAWN:	CHECKED:
1:500@A2	APR'22	MA	MA

JOB NO:	DRAWING NO:	REVISION:
19-00637	01	

N
INDICATIVE

HD Ltd

ISLAND FARM, BRIDGEND

EWENNY ROUNDABOUT
PROPOSED NEW SIGNAL LAYOUT
CAPACITY ANALYSIS REPORT

19-00637/TN/04

May 2022

CORUN
Transport and Highway Engineering

TRANSPORT NOTE

CORUN
Transport and Highway Engineering

Introduction

This Transport Note ('TN') has been produced by Corun Associates Ltd (Corun) as part of the Island Farm development site proposals in Bridgend.

The Island Farm site benefits from outline consent (planning ref. P/08/1114/OUT) for a proposal including a number of sports facilities, major stadium, tennis centre and office space. Since being consented, further revised proposals have also been developed and assessed for the site.

As part of the wider Island Farm proposals, improvements to the existing Ewenny Roundabout junction have been developed, with the aim of easing current and future anticipated congestion issues at the junction.

Ewenny Roundabout currently operates as a 4-arm signalised roundabout junction between the A48 (east and west arms) and the B4625 (north and south arms). The Transport Assessment for the consented application showed that without mitigation, the junction was modelled to operate significantly above capacity during the forecast years (for both with and without Island Farm development scenarios), during both the weekday AM and PM highway peak hours.

As part of the wider Island Farm highway improvement proposals, a new signalised layout option has been developed for the Ewenny Roundabout junction, which is anticipated to improve operation of the junction from the existing arrangement. The purpose of this TN is therefore to provide an assessment of this new signalised layout option, in comparison to the existing signalised roundabout arrangement.

Island Farm Background

Original Island Farm Consented Scheme (Ref: P/08/1114/OUT)

The original consented Island Farm proposal comprised a number of sports facilities including a major stadium, tennis centre and office space. As part of application reference P/14/354/RES, outline planning approval was granted for the tennis centre to include 7 indoor courts, 12 outdoor courts and ancillary uses.

Revised Island Farm Development Proposal

A revised proposal has been discussed with the Local Highway Authority to change the proposals on Island Farm to accommodate circa 733 dwellings (40dph), 2 schools, a commercial/community area to serve the site.

The revised Island Farm site (along with the neighbouring residential Craig Y Parcau development) is now being promoted in the emerging Bridgend County Borough Council (BCBC) replacement Local Development Plan (LDP) for residential-led development.

Island Farm Tennis Centre Proposal

A tennis centre application has been developed to include 9 indoor tennis courts, 6 outdoor tennis courts, a fitness suite, outdoor pool area, and ancillary uses. This is a separate application, however, the flows associated with the proposed tennis centre have been included in this report, to ensure that a robust assessment of the proposed 4-arm signal junction is undertaken.

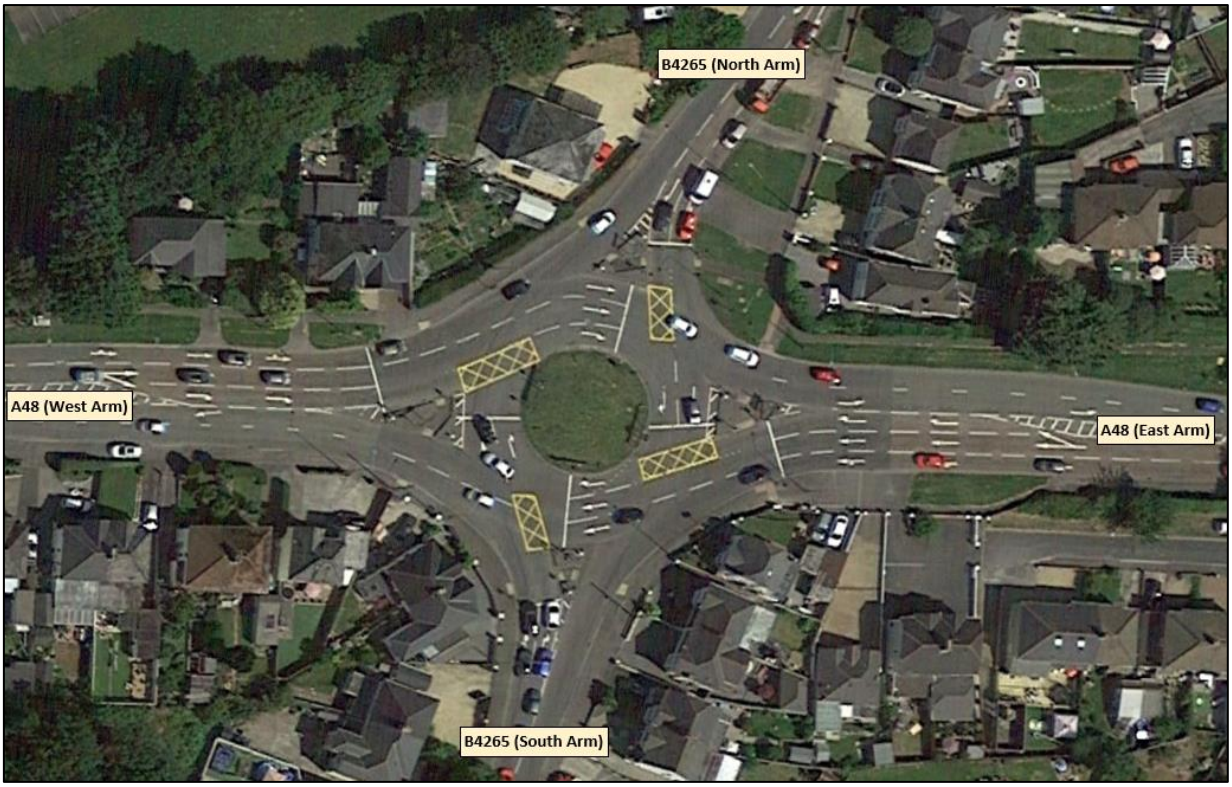
Ewenny Roundabout Existing and Proposed Layouts

Ewenny Roundabout – Existing Layout

Ewenny Roundabout currently operates as a 4-arm signalised roundabout between the A48 (east and west arms), and the B4625 (north and south arms), as shown on **Figure 1**. The existing layout includes signalled stop lines on all approach arms of the junction, with further signalled stop lines provided on the roundabout circulatory area.

Although dropped kerbs, and central pedestrian islands are provided across all entry and exit arms at the current roundabout arrangement, only the A48 (East Arm) approach and exit lanes offer a dedicated signalised crossing phase at the junction.

Figure 1: Existing Ewenny Roundabout Signalised Junction Layout

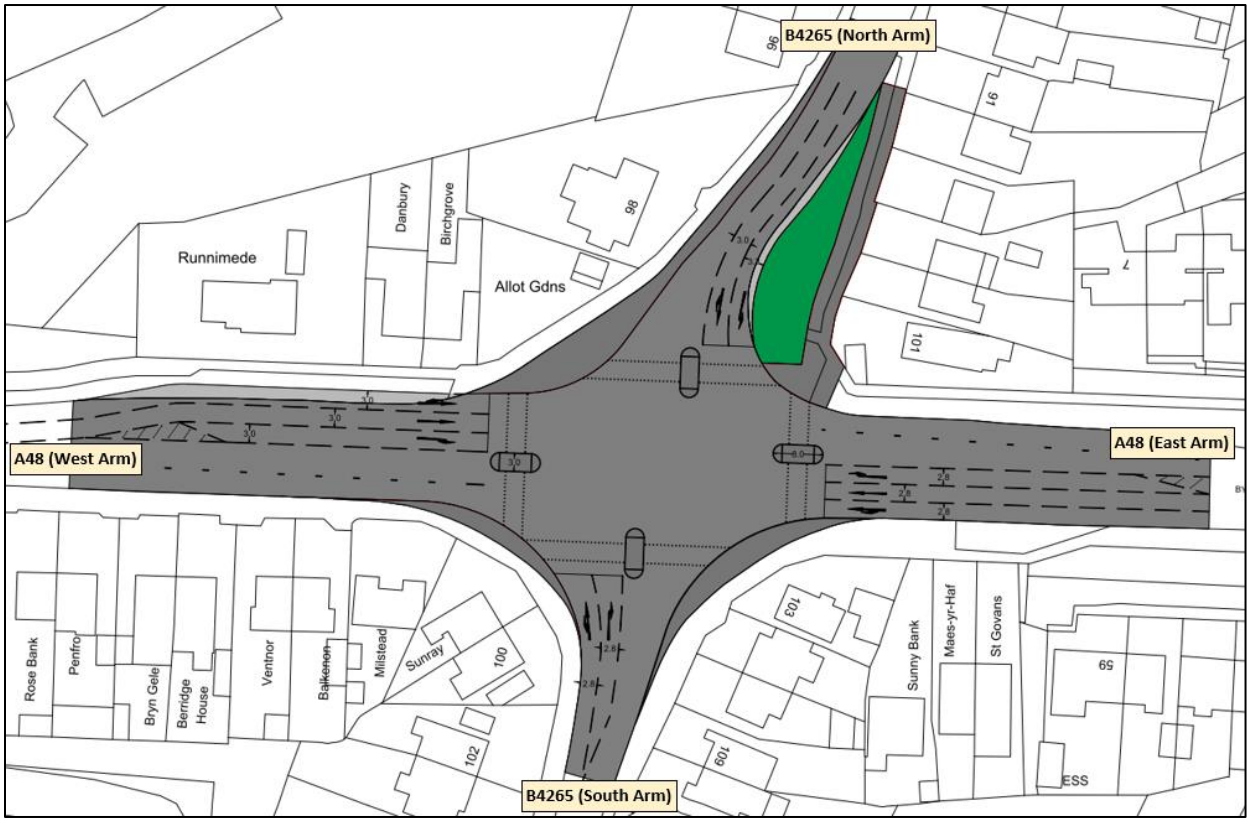


© Google Earth Pro

Ewenny Roundabout – Proposed Layout

A proposed new signalised arrangement has been developed for the Ewenny Roundabout junction, as identified in **Figure 2**. This proposed layout would see the junction operate with a 4-arm signalised crossroads arrangement.

Figure 2: Proposed New Ewenny Signalised Junction Layout



Note – Drawing not to scale

The proposed layout would also provide dedicated signalised crossing points across all approach and exit arms of the junction, to encourage Active Travel, which offers a significant improvement on the existing arrangement. The crossing points will include central refuge islands (3.0m x 8.0m), which are suitable for simultaneous pedestrian and cycle use.

Capacity Assessment

Introduction

The following section provides a summary of a capacity assessment undertaken for both the existing and proposed signalised arrangements at the Ewenny Roundabout junction.

Assessment Traffic Flows

Traffic flows for each assessment have been based on those developed in previous Island Farm assessment work. The development of these traffic flows has previously been described in a previous TN developed by Corun in April 2021 (19-00637/TN/03), on behalf of BCBC.

For each assessment, both a 'Without Development' and 'With Development' scenario have been assessed. Traffic flows for the Without Development scenario have been based on those identified within the traffic assessment undertaken for the consented scheme, outlined within the supporting Environmental Statement for the application (Appendix 6.1, Movement Assessment), prepared by Opus. Traffic flows for the With Development scenario include for anticipated development trips (developed using the TRICS methodology for the latest design proposals) on top of the Without Development flows. As per the previous assessment work, and upon request from BCBC, all traffic flows have been prepared for a 2033 assessment year, to align with the Bridgend LDP.

Assessment Methodology

Operational analysis of the Ewenny Road signalised junction has been undertaken using the LinSig computer-modelling tool.

The output from LinSig provides a number of measurements to provide information of a junction's operation. These relate to the 'Practical Reserve Capacity' (PRC), average queue length (in PCUs), mean maximum average queue length, and delay. The 'PRC' gives the main indicator of the junction's performance, which is calculated from the maximum degree of saturation on a link and is a measure of how much additional traffic could pass through the junction while maintaining a maximum degree of saturation of 90% on all links. A value above '0' is therefore normally accepted as being within capacity as this reduces the risk of delays due to traffic count inaccuracies and analytical and modelling assumptions.

A separate LinSig model has been developed for both the Without Development and With Development scenarios.

The Without Development scenario model has been developed based on the existing Ewenny Roundabout junction layout. All measurements, stage sequences and intergreen times for this model have been obtained from OS mapping, satellite imagery and on-site observations, and a 120 second cycle time has been utilised.

The With Development model has been based on measurements identified within the proposed new junction layout, shown at **Figure 2**. A staging sequence has been developed where no give-way movements are required, and all pedestrian stages are run at least once within each signal cycle. For consistency, intergreen times have been set as per the existing Without Development model (5 seconds for traffic stages, and 7 seconds for pedestrian stages), with a cycle time of 120 seconds again applied.

LinSig models work with a fixed cycle time, with model green times optimised for best operation. It is anticipated however that the proposed new signal layout will be operated via MOVA, which allows a dynamic allocation of green time within each cycle, based on observed demand. As such, the results from the LinSig modelling identify a worst-case scenario, with MOVA operation anticipated to provide an improvement on capacity figures identified in this TN.

For all LinSig modelling, traffic flows have been converted to PCUs, with light vehicles = 1 PCU, and heavy vehicles = 2 PCUs.

Models have been developed to represent both the weekday AM and PM highway peak hours in traffic flows (0800 to 0900, and 1700 to 1800 respectively), which are the periods of highest demand through the junction (and therefore when capacity is at its most restricted).

A copy of all LinSig model reports are contained at **Appendix A** of this TN.

Existing Junction Layout Assessment Results

Table 1 and **Table 2** identify the LinSig model results for the existing Ewenny Roundabout layout over both the AM and PM peak periods respectively.

These identify that under the existing signalised roundabout layout, the Ewenny junction is anticipated to experience significant capacity issues in both the Weekday AM and PM peak hours, during both the 2033 Without Development and With Development scenarios, with PRC values of -166.3% and -210.0% in the AM model (Without Development and With Development scenario respectively), and PRC values of -63.1% and -88.4% in the PM model (Without Development and With Development scenario respectively). Within

these models the capacity issues are mainly seen along the B4265 arms, with extended queuing back on the circulatory area also experienced.

Table 1: Existing Signalled Roundabout Layout Model Results - Weekday AM Peak Hour (0800 to 0900)

Approach Arm	Without Development		With Development	
	Degree of Sat (%)	Mean Max Queue (PCU)	Degree of Sat (%)	Mean Max Queue (PCU)
A48 (East Arm)	30.0%	4.4	32.9%	5.2
B4265 (South Arm)	197.2%	176.2	234.8%	244.4
A48 (West Arm)	57.3%	13.9	67.8%	18.3
B4265 (North Arm)	239.7%	161.0	279.0%	204.6
Cycle Time: 120	**PRC: -166.3%** **Delay (pcuHr): 337.7**		**PRC: -210.0%** **Delay (pcuHr): 451.5**	

Note – Values represent maximum observed on any approach arm lane

Table 2: Existing Signalled Roundabout Layout Model Results - Weekday PM Peak Hour (1700 to 1800)

Approach Arm	Without Development		With Development	
	Degree of Sat (%)	Mean Max Queue (PCU)	Degree of Sat (%)	Mean Max Queue (PCU)
A48 (East Arm)	68.8%	18.2	80.3%	23.0
B4265 (South Arm)	146.8%	96.4	169.9%	138.6
A48 (West Arm)	39.5%	7.6	48.6%	9.8
B4265 (North Arm)	93.7%	17.8	109.7%	59.7
Cycle Time: 120	**PRC: -63.1%** **Delay (pcuHr): 125.0**		**PRC: -88.4%** **Delay (pcuHr): 209.7**	

Note – Values represent maximum observed on any approach arm lane

Proposed Junction Layout Assessment Results

Table 3 and **Table 4** identify the LinSig model results for the proposed new signalled junction layout over both the AM and PM peak periods respectively. These identify that with the proposed new signalised layout, the Ewenny junction is still anticipated to experience capacity issues in both the Weekday AM and PM peak

hours, during both the 2033 Without Development and With Development scenarios, with PRC values of -20.3% and -49.9% in the AM model (Without Development and With Development scenario respectively), and PRC values of -24.0% and -43.6% in the PM model (Without Development and With Development scenario respectively). Within these models the capacity issues are more spread out across the junction, than with the existing layout where capacity issues are focussed on the B2465 approach arms, and internally within the roundabout circulatory area.

Table 3: Proposed signalised Junction Layout Model Results - Weekday AM Peak Hour (0800 to 0900)

Approach Arm	Without Development		With Development	
	Degree of Sat (%)	Mean Max Queue (PCU)	Degree of Sat (%)	Mean Max Queue (PCU)
A48 (East Arm)	71.4%	9.5	71.4%	12.1
B4265 (South Arm)	108.2%	43.6	134.9%	120.2
A48 (West Arm)	107.9%	64.2	134.0%	164.1
B4265 (North Arm)	108.2%	28.0	127.9%	64.4
Cycle Time: 120	**PRC: -20.3%** **Delay (pcuHr): 124.6**		**PRC: -49.9%** **Delay (pcuHr): 343.0**	

Note – Values represent maximum observed on any approach arm lane

Table 4: Proposed signalised Junction Layout Model Results – Weekday PM Peak Hour (1700 to 1800)

Approach Arm	Without Development		With Development	
	Degree of Sat (%)	Mean Max Queue (PCU)	Degree of Sat (%)	Mean Max Queue (PCU)
A48 (East Arm)	111.6%	66.9	128.8%	120.2
B4265 (South Arm)	110.1%	39.2	129.2%	83.1
A48 (West Arm)	65.2%	12.7	79.2%	16.4
B4265 (North Arm)	109.9%	49.2	127.9%	104.6
Cycle Time: 120	**PRC: -24.0%** **Delay (pcuHr): 145.7**		**PRC: -43.6%** **Delay (pcuHr): 308.2**	

Note – Values represent maximum observed on any approach arm lane

Although the proposed layout Models still identify capacity issues at the junction, **Table 5** shows these are significantly lower than would be anticipated with the existing layout in both the Without Development and With Development scenarios, with PRC increases of +146.0% and +160.1% in the AM model (Without Development and With Development scenario respectively), and PRC increases of +39.1% and +44.8% in the PM model (Without Development and With Development scenario respectively).

Table 5: Existing and Proposed Ewenny Junction Layout Model PRC values Comparison

Model Scenario	Existing Junction Layout Model PRC	Proposed Junction Layout Model PRC	PRC Difference with Proposed Layout
2033 Without Development – Weekday AM Peak Period	-166.3%	-20.3%	**+146.0%**
2033 Without Development – Weekday PM Peak Period	-63.1%	-24.0%	**+39.1%**
2033 With Development – Weekday AM Peak Period	-210.0%	-49.9%	**+160.1%**
2033 With Development – Weekday PM Peak Period	-88.4%	-43.6%	**+44.8%**

As mentioned previously, the proposed signalised layout is also anticipated to be operated under MOVA, which is likely to bring further capacity improvements from those identified within the LinSig models.

The proposed layout is also anticipated to bring road safety improvements at the junction, as the staging sequence would ensure that no conflicting movements are in operation at any time, with no internal queuing expected beyond the give-way lines. This is not the case within the existing design which currently operates with some give way and weaving movements on the roundabout circulatory section, from which queuing can also currently extend back through the downstream give-way lines during busy periods.

Conclusion

This TN has been prepared to assess the capacity benefits of a proposed new signalised layout at the A48 / B4265 signalised roundabout junction (currently referred to as the Ewenny Roundabout junction), as part of wider highway improvements in relation to the proposed Island Farm development within Bridgend.

Ewenny Roundabout currently operates as a 4-arm signalised roundabout between the A48 (east and west arms), and the B4625 (north and south arms). Although dropped kerbs, and central pedestrian islands are provided across all entry and exit arms at the current roundabout arrangement, only the A48 (East Arm) approach and exit lanes offer a dedicated signalised crossing phase at the junction.

A proposed new signalised arrangement has been developed for the Ewenny Roundabout junction, which would see the junction operate with a 4-arm signalised crossroads arrangement. The proposed layout would also provide dedicated signalised crossing points across all approach and exit arms of the junction, which will be an improvement on the existing design, and improve Active Travel movements across the junction. The proposed design is also anticipated to bring safety improvements at the junction, by reducing potential conflicting vehicle movements, and queuing back through downstream approaches.

Capacity assessment models have identified that under the existing layout, the junction would be expected to operate significantly above capacity in a 2033 forecast year. This would be the case under both scenarios i.e., with and without the Island Farm development in place.

The proposed layout however, would be anticipated to bring significant capacity improvements at the junction, under both scenarios, with and without the Island Farm development in place. Although these improvements would not completely solve the anticipated future capacity issues at the junction, the proposed layout would bring significant improvements to queuing and congestion. The Island Farm development is not anticipated to be the cause of congestion through the junction. However, the proposed new signal layout would mitigate any increases in traffic through the junction as a result of the Island Farm development proposals.

It is therefore concluded that the proposed new signalised layout would provide significant beneficial improvement to that of the existing Ewenny Roundabout signalised layout.

Appendix A

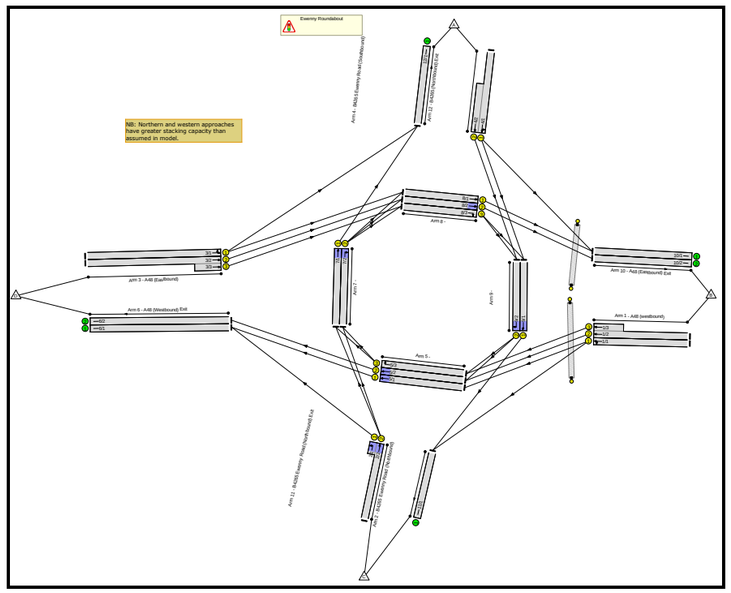
LinSig Model Outputs

Full Input Data And Results

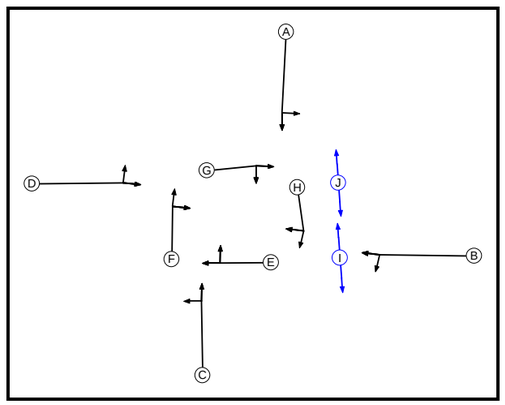
User and Project Details

Project:	**Ewenny Roundabout Existing Layout**
Title:	**Full Island Farm 2033 Scenario**
Location:	
Additional detail:	
File name:	Existing Layout_Wider Scheme Flows.lsg3x
Author:	MM
Company:	Corun Associates
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7
E	Traffic	1		7	7
F	Traffic	1		7	7
G	Traffic	1		7	7
H	Traffic	1		7	7
I	Pedestrian	1		7	7
J	Pedestrian	1		7	7

Phase Intergreens Matrix

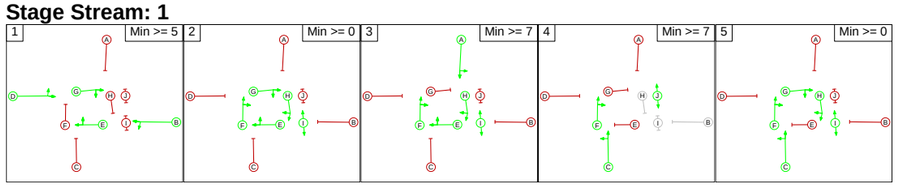
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	-	-	5	-	-	5
B	-		-	-	-	-	-	5	5	-
C	-	-		-	5	-	-	-	-	-
D	-	-	-		-	5	-	-	-	-
E	-	-	5	-		-	-	-	-	-
F	-	-	-	5	-		-	-	-	-
G	5	-	-	-	-	-		-	-	5
H	-	5	-	-	-	-	-		-	-
I	-	7	-	-	-	-	-	-		-
J	7	-	-	-	-	-	7	-	-	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	B D E G
1	2	E F G H I
1	3	A E F H I
1	4	C F J
1	5	C F G H I

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	1	H	Losing	2	2
3	1	H	Losing	2	2
5	1	H	Losing	2	2

Prohibited Stage Change

Stage Stream: 1

		To Stage				
		1	2	3	4	5
From Stage	1		5	5	5	5
	2	7		5	5	5
	3	7	5		5	5
	4	7	7	7		7
	5	7	5	5	5	

Give-Way Lane Input Data

Junction: Ewenny Roundabout
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: Ewenny Roundabout

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 (A48 (westbound))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 11 Left	43.00
1/2 (A48 (westbound))	U	B	2	3	13.9	Geom	-	3.00	0.00	N	Arm 5 Ahead	Inf
1/3 (A48 (westbound))	U	B	2	3	6.3	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
2/1 (B4265 Ewenny Road (Northbound))	U	C	2	3	2.6	Geom	-	3.00	0.00	Y	Arm 6 Left	27.00
2/2 (B4265 Ewenny Road (Northbound))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Ahead	Inf
3/1 (A48 (Eastbound))	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf
											Arm 12 Left	54.00
3/2 (A48 (Eastbound))	U	D	2	3	14.8	Geom	-	3.00	0.00	N	Arm 8 Ahead	Inf
3/3 (A48 (Eastbound))	U	D	2	3	5.6	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf
4/1 (B4265 Ewenny Road (Southbound))	U	A	2	3	29.6	Geom	-	3.00	0.00	Y	Arm 9 Ahead	Inf
											Arm 10 Left	20.00
4/2 (B4265 Ewenny Road (Southbound))	U	A	2	3	10.4	Geom	-	3.00	0.00	Y	Arm 9 Ahead	Inf
5/1	U	E	2	3	4.2	Geom	-	3.00	0.00	Y	Arm 6 Ahead	17.00
5/2	U	E	2	3	4.2	Geom	-	3.00	0.00	Y	Arm 6 Ahead	15.00
5/3	U	E	2	3	4.2	Geom	-	3.00	0.00	Y	Arm 7 Right	13.00
6/1 (A48 (Westbound) Exit)	U		2	3	7.3	Geom	-	3.50	0.00	Y		
6/2 (A48 (Westbound) Exit)	U		2	3	3.5	Geom	-	3.50	0.00	Y		
7/1	U	F	2	3	3.4	Geom	-	3.00	0.00	Y	Arm 12 Ahead	17.00
7/2	U	F	2	3	3.4	Geom	-	3.00	0.00	Y	Arm 8 Right	13.00
8/1	U	G	2	3	5.3	Geom	-	3.00	0.00	Y	Arm 10 Ahead	17.00
8/2	U	G	2	3	5.3	Geom	-	3.00	0.00	Y	Arm 10 Ahead	15.00
8/3	U	G	2	3	5.3	Geom	-	3.00	0.00	Y	Arm 9 Right	13.00
9/1	U	H	2	3	3.1	Geom	-	3.00	0.00	Y	Arm 11 Ahead	17.00
9/2	U	H	2	3	3.1	Geom	-	3.00	0.00	Y	Arm 5 Right	13.00
10/1 (A48 (Eastbound) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (A48 (Eastbound) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (B4265 Ewenny Road (Northbound) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (B4265 (Northbound) Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2033 No Island Farm AM'	08:00	09:00	01:00	
2: '2033 No Island Farm PM'	17:00	18:00	01:00	
3: '2033 WITH Island Farm AM'	08:00	09:00	01:00	
4: '2033 WITH Island Farm PM'	17:00	18:00	01:00	

Scenario 1: '2033 Without Dev AM' (FG1: '2033 No Island Farm AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	148	147	168	463
	B	121	0	147	429	697
	C	250	247	0	66	563
	D	258	1102	96	0	1456
	Tot.	629	1497	390	663	3179

Traffic Lane Flows

Lane	Scenario 1: 2033 Without Dev AM
Junction: Ewenny Roundabout	
1/1	291
1/2 (with short)	406(In) 285(Out)
1/3 (short)	121
2/1 (short)	66
2/2 (with short)	563(In) 497(Out)
3/1	681
3/2 (with short)	775(In) 679(Out)
3/3 (short)	96
4/1 (with short)	463(In) 295(Out)
4/2 (short)	168
5/1	144
5/2	453
5/3	121
6/1	210
6/2	453
7/1	371
7/2	247
8/1	615
8/2	734
8/3	96
9/1	243
9/2	168
10/1	763
10/2	734
11/1	390
12/1	629

Lane Saturation Flows

Junction: Ewenny Roundabout

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 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	49.5 %	1882	1882
				Arm 11 Left	43.00	50.5 %		
1/2 (A48 (westbound))	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
1/3 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
2/1 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 6 Left	27.00	100.0 %	1814	1814
2/2 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
3/1 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	62.1 %	1895	1895
				Arm 12 Left	54.00	37.9 %		
3/2 (A48 (Eastbound))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
3/3 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
4/1 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	49.8 %	1846	1846
				Arm 10 Left	20.00	50.2 %		
4/2 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
5/1	3.00	0.00	Y	Arm 6 Ahead	17.00	100.0 %	1760	1760
5/2	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
5/3	3.00	0.00	Y	Arm 7 Right	13.00	100.0 %	1717	1717
6/1 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
6/2 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
7/1	3.00	0.00	Y	Arm 12 Ahead	17.00	100.0 %	1760	1760
7/2	3.00	0.00	Y	Arm 8 Right	13.00	100.0 %	1717	1717
8/1	3.00	0.00	Y	Arm 10 Ahead	17.00	100.0 %	1760	1760
8/2	3.00	0.00	Y	Arm 10 Ahead	15.00	100.0 %	1741	1741
8/3	3.00	0.00	Y	Arm 9 Right	13.00	100.0 %	1717	1717
9/1	3.00	0.00	Y	Arm 11 Ahead	17.00	100.0 %	1760	1760
9/2	3.00	0.00	Y	Arm 5 Right	13.00	100.0 %	1717	1717
10/1 (A48 (Eastbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (A48 (Eastbound) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 Ewenny Road (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
12/1 (B4265 (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2033 Without Dev PM' (FG2: '2033 No Island Farm PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	58	196	350	604
	B	36	0	130	1151	1317
	C	150	168	0	132	450
	D	125	582	66	0	773
	Tot.	311	808	392	1633	3144

Traffic Lane Flows

Lane	Scenario 2: 2033 Without Dev PM
Junction: Ewenny Roundabout	
1/1	632
1/2 (with short)	685(In) 649(Out)
1/3 (short)	36
2/1 (short)	132
2/2 (with short)	450(In) 318(Out)
3/1	357
3/2 (with short)	416(In) 350(Out)
3/3 (short)	66
4/1 (with short)	604(In) 254(Out)
4/2 (short)	350
5/1	502
5/2	999
5/3	36
6/1	634
6/2	999
7/1	186
7/2	168
8/1	343
8/2	407
8/3	66
9/1	262
9/2	350
10/1	401
10/2	407
11/1	392
12/1	311

Lane Saturation Flows

Junction: Ewenny Roundabout

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 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	79.4 %	1901	1901
				Arm 11 Left	43.00	20.6 %		
1/2 (A48 (westbound))	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
1/3 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
2/1 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 6 Left	27.00	100.0 %	1814	1814
2/2 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
3/1 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	65.0 %	1897	1897
				Arm 12 Left	54.00	35.0 %		
3/2 (A48 (Eastbound))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
3/3 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
4/1 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	77.2 %	1883	1883
				Arm 10 Left	20.00	22.8 %		
4/2 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
5/1	3.00	0.00	Y	Arm 6 Ahead	17.00	100.0 %	1760	1760
5/2	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
5/3	3.00	0.00	Y	Arm 7 Right	13.00	100.0 %	1717	1717
6/1 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
6/2 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
7/1	3.00	0.00	Y	Arm 12 Ahead	17.00	100.0 %	1760	1760
7/2	3.00	0.00	Y	Arm 8 Right	13.00	100.0 %	1717	1717
8/1	3.00	0.00	Y	Arm 10 Ahead	17.00	100.0 %	1760	1760
8/2	3.00	0.00	Y	Arm 10 Ahead	15.00	100.0 %	1741	1741
8/3	3.00	0.00	Y	Arm 9 Right	13.00	100.0 %	1717	1717
9/1	3.00	0.00	Y	Arm 11 Ahead	17.00	100.0 %	1760	1760
9/2	3.00	0.00	Y	Arm 5 Right	13.00	100.0 %	1717	1717
10/1 (A48 (Eastbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (A48 (Eastbound) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 Ewenny Road (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
12/1 (B4265 (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2033 With Dev AM' (FG3: '2033 WITH Island Farm AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	148	197	219	564
	B	121	0	188	475	784
	C	289	279	0	114	682
	D	367	1190	156	0	1713
	Tot.	777	1617	541	808	3743

Traffic Lane Flows

Lane	Scenario 3: 2033 With Dev AM
Junction: Ewenny Roundabout	
1/1	341
1/2 (with short)	443(In) 322(Out)
1/3 (short)	121
2/1 (short)	114
2/2 (with short)	682(In) 568(Out)
3/1	791
3/2 (with short)	922(In) 766(Out)
3/3 (short)	156
4/1 (with short)	564(In) 345(Out)
4/2 (short)	219
5/1	153
5/2	541
5/3	121
6/1	267
6/2	541
7/1	410
7/2	279
8/1	634
8/2	835
8/3	156
9/1	353
9/2	219
10/1	782
10/2	835
11/1	541
12/1	777

Lane Saturation Flows

Junction: Ewenny Roundabout

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 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	44.9 %	1879	1879
				Arm 11 Left	43.00	55.1 %		
1/2 (A48 (westbound))	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
1/3 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
2/1 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 6 Left	27.00	100.0 %	1814	1814
2/2 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
3/1 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	53.6 %	1891	1891
				Arm 12 Left	54.00	46.4 %		
3/2 (A48 (Eastbound))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
3/3 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
4/1 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	57.1 %	1855	1855
				Arm 10 Left	20.00	42.9 %		
4/2 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
5/1	3.00	0.00	Y	Arm 6 Ahead	17.00	100.0 %	1760	1760
5/2	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
5/3	3.00	0.00	Y	Arm 7 Right	13.00	100.0 %	1717	1717
6/1 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
6/2 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
7/1	3.00	0.00	Y	Arm 12 Ahead	17.00	100.0 %	1760	1760
7/2	3.00	0.00	Y	Arm 8 Right	13.00	100.0 %	1717	1717
8/1	3.00	0.00	Y	Arm 10 Ahead	17.00	100.0 %	1760	1760
8/2	3.00	0.00	Y	Arm 10 Ahead	15.00	100.0 %	1741	1741
8/3	3.00	0.00	Y	Arm 9 Right	13.00	100.0 %	1717	1717
9/1	3.00	0.00	Y	Arm 11 Ahead	17.00	100.0 %	1760	1760
9/2	3.00	0.00	Y	Arm 5 Right	13.00	100.0 %	1717	1717
10/1 (A48 (Eastbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (A48 (Eastbound) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 Ewenny Road (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
12/1 (B4265 (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2033 With Dev PM' (FG4: '2033 WITH Island Farm PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	58	221	458	737
	B	36	0	152	1243	1431
	C	173	190	0	160	523
	D	171	618	97	0	886
	Tot.	380	866	470	1861	3577

Traffic Lane Flows

Lane	Scenario 4: 2033 With Dev PM
Junction: Ewenny Roundabout	
1/1	686
1/2 (with short)	745(In) 709(Out)
1/3 (short)	36
2/1 (short)	160
2/2 (with short)	523(In) 363(Out)
3/1	403
3/2 (with short)	483(In) 386(Out)
3/3 (short)	97
4/1 (with short)	737(In) 279(Out)
4/2 (short)	458
5/1	534
5/2	1167
5/3	36
6/1	694
6/2	1167
7/1	209
7/2	190
8/1	360
8/2	448
8/3	97
9/1	318
9/2	458
10/1	418
10/2	448
11/1	470
12/1	380

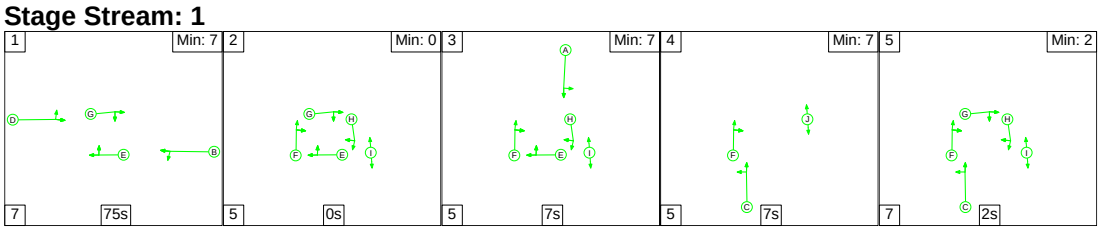
Lane Saturation Flows

Junction: Ewenny Roundabout								
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 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	77.8 %	1900	1900
				Arm 11 Left	43.00	22.2 %		
1/2 (A48 (westbound))	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
1/3 (A48 (westbound))	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
2/1 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 6 Left	27.00	100.0 %	1814	1814
2/2 (B4265 Ewenny Road (Northbound))	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
3/1 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	57.6 %	1893	1893
				Arm 12 Left	54.00	42.4 %		
3/2 (A48 (Eastbound))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
3/3 (A48 (Eastbound))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
4/1 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	79.2 %	1886	1886
				Arm 10 Left	20.00	20.8 %		
4/2 (B4265 Ewenny Road (Southbound))	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
5/1	3.00	0.00	Y	Arm 6 Ahead	17.00	100.0 %	1760	1760
5/2	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
5/3	3.00	0.00	Y	Arm 7 Right	13.00	100.0 %	1717	1717
6/1 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
6/2 (A48 (Westbound) Exit)	3.50	0.00	Y				1965	1965
7/1	3.00	0.00	Y	Arm 12 Ahead	17.00	100.0 %	1760	1760
7/2	3.00	0.00	Y	Arm 8 Right	13.00	100.0 %	1717	1717
8/1	3.00	0.00	Y	Arm 10 Ahead	17.00	100.0 %	1760	1760
8/2	3.00	0.00	Y	Arm 10 Ahead	15.00	100.0 %	1741	1741
8/3	3.00	0.00	Y	Arm 9 Right	13.00	100.0 %	1717	1717
9/1	3.00	0.00	Y	Arm 11 Ahead	17.00	100.0 %	1760	1760
9/2	3.00	0.00	Y	Arm 5 Right	13.00	100.0 %	1717	1717
10/1 (A48 (Eastbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (A48 (Eastbound) Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 Ewenny Road (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
12/1 (B4265 (Northbound) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2033 Without Dev AM' (FG1: '2033 No Island Farm AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1

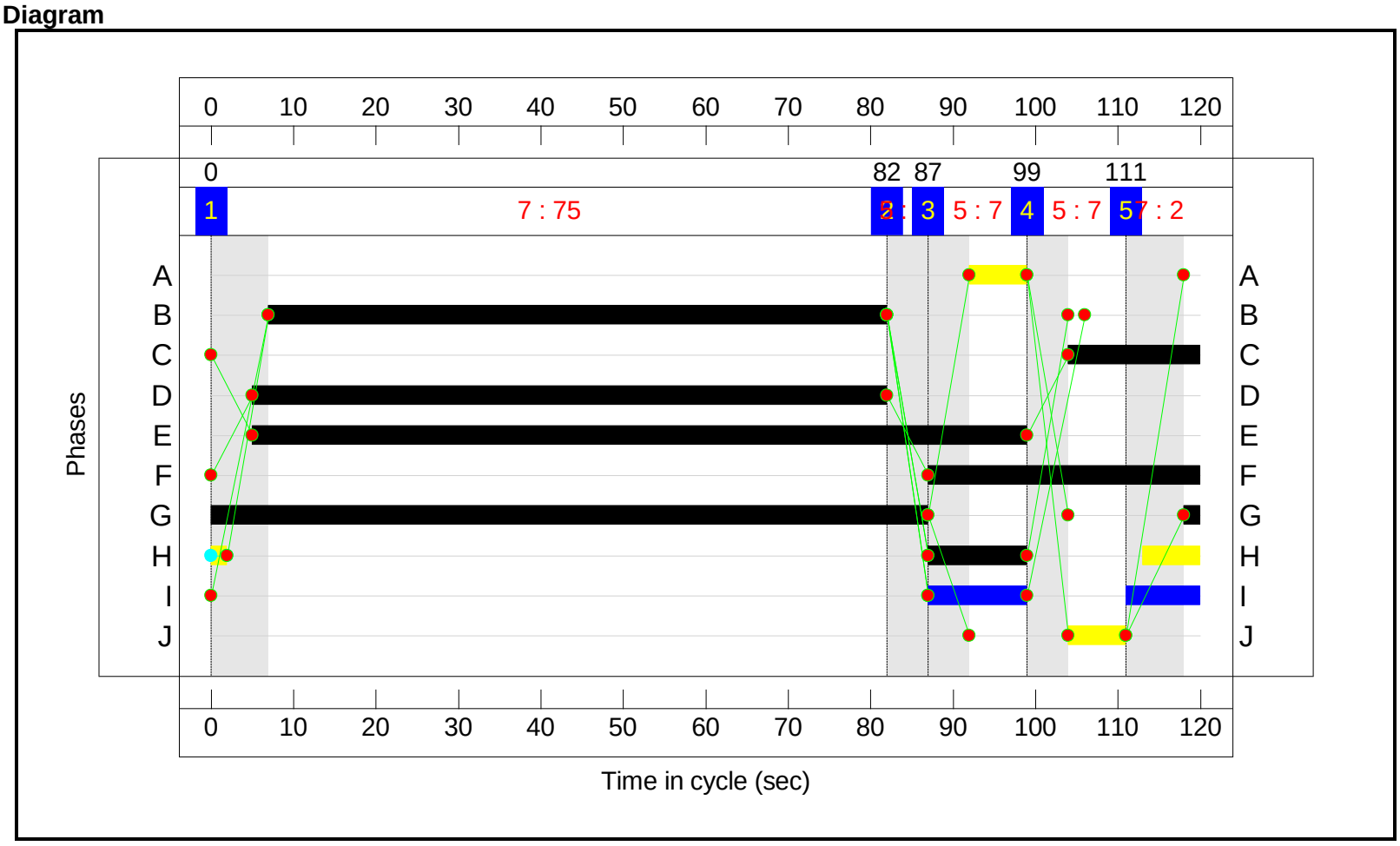


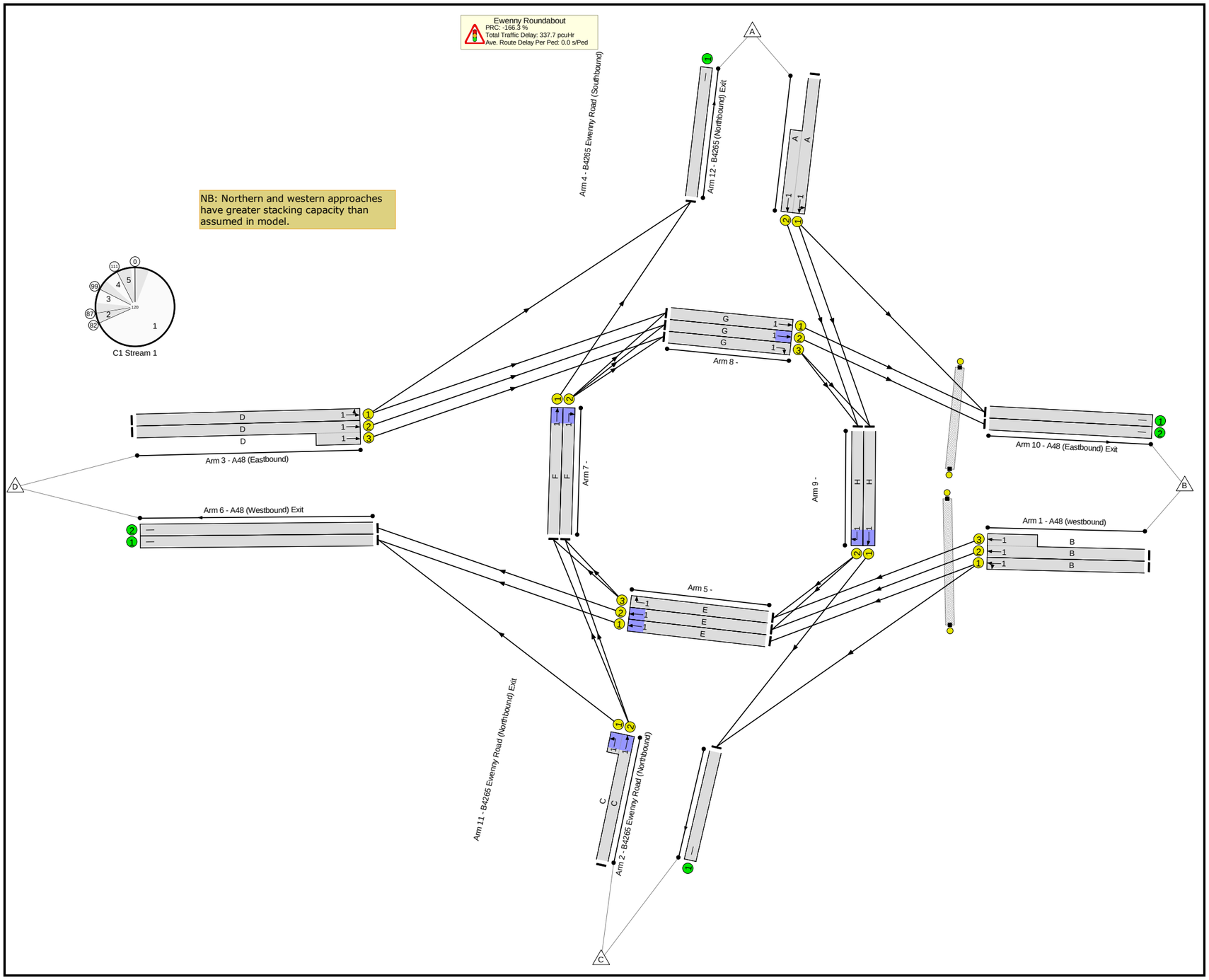
Stage Timings

Stage Stream: 1

Stage	1	2	3	4	5
Duration	75	0	7	7	2
Change Point	0	82	87	99	111

Signal Timings Diagram




Ewenny Roundabout
PRC: -166.3 %
Total Traffic Delay: 337.7 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
NB: Northern and western approaches have greater stacking capacity than assumed in model.
C1 Stream 1
Arm 4 - B4265 Ewenny Road (Southbound)
Arm 12 - B4265 (Northbound) Exit
Arm 3 - A48 (Eastbound)
Arm 8 -
Arm 7 -
Arm 9 -
Arm 10 - A48 (Eastbound) Exit
Arm 6 - A48 (Westbound) Exit
Arm 1 - A48 (westbound)
Arm 5 -
Arm 11 - B4265 Ewenny Road (Northbound) Exit
Arm 2 - B4265 Ewenny Road (Northbound)
A
B
C
D

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: Full Island Farm 2033 Scenario	-	-	**N/A**	-	-		-	-	-	-	-	-	**239.7%**
Ewenny Roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**239.7%**
1/1	A48 (westbound) Ahead Left	U	1	N/A	B		1	75	-	291	1882	1192	24.4%
1/2+1/3	A48 (westbound) Ahead	U	1	N/A	B		1	75	-	406	2055:1915	951+404	30.0 : 30.0%
2/2+2/1	B4265 Ewenny Road (Northbound) Left Ahead	U	1	N/A	C		1	16	-	563	1915:1814	252+33	197.2 : 197.2%
3/1	A48 (Eastbound) Ahead Left	U	1	N/A	D		1	77	-	681	1895	1232	55.3%
3/2+3/3	A48 (Eastbound) Ahead	U	1	N/A	D		1	77	-	775	2055:1915	1186+168	57.3 : 57.3%
4/1+4/2	B4265 Ewenny Road (Southbound) Ahead Left	U	1	N/A	A		1	7	-	463	1846:1915	123+70	239.7 : 239.7%
5/1	Ahead	U	1	N/A	E		1	94	-	144	1760	1393	10.3%
5/2	Ahead	U	1	N/A	E		1	94	-	453	1741	1378	25.8%
5/3	Right	U	1	N/A	E		1	94	-	121	1717	1359	8.9%
6/1	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	210	1965	1965	9.0%
6/2	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	453	1965	1965	18.1%
7/1	Ahead	U	1	N/A	F		1	33	-	371	1760	499	49.7%
7/2	Right	U	1	N/A	F		1	33	-	247	1717	486	25.7%
8/1	Ahead	U	1	N/A	G		1	89	-	615	1760	1320	39.4%
8/2	Ahead	U	1	N/A	G		1	89	-	734	1741	1306	54.1%
8/3	Right	U	1	N/A	G		1	89	-	96	1717	1288	7.5%
9/1	Ahead	U	1	N/A	H		2	21	-	243	1760	337	46.6%
9/2	Right	U	1	N/A	H		2	21	-	168	1717	329	21.3%
10/1	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	763	Inf	Inf	0.0%
10/2	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	734	Inf	Inf	0.0%
11/1	B4265 Ewenny Road (Northbound) Exit	U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%
12/1	B4265 (Northbound) Exit	U	N/A	N/A	-		-	-	-	629	Inf	Inf	0.0%
Ped Link: P1	A48 W/B Peds	-	1	-	I		2	21	-	0	-	0	0.0%
Ped Link: P2	A48 E/B Peds	-	1	-	J		1	7	-	0	-	0	0.0%

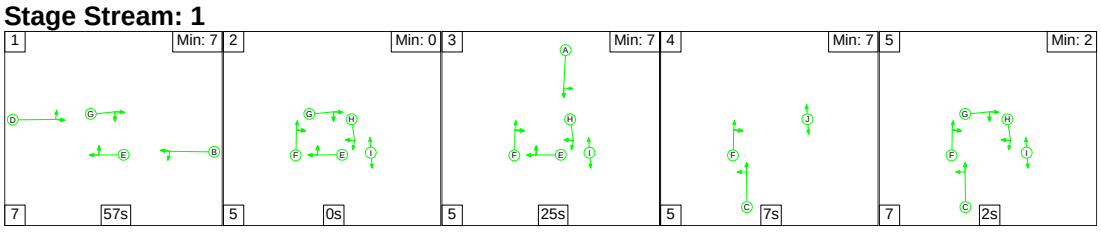
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Full Island Farm 2033 Scenario	**-**	**-**	**0**	**0**	**0**	**57.8**	**279.8**	**0.0**	**337.7**	**-**	**-**	**-**	**-**
Ewenny Roundabout	**-**	**-**	**0**	**0**	**0**	**57.8**	**279.8**	**0.0**	**337.7**	**-**	**-**	**-**	**-**
1/1	291	291	-	-	-	0.8	0.2	-	0.9	11.5	4.2	0.2	4.4
1/2+1/3	406	406	-	-	-	1.0	0.2	-	1.2	11.0	4.0	0.2	4.3
2/2+2/1	563	285	-	-	-	27.0	139.8	-	166.8	1066.4	36.5	139.8	176.2
3/1	681	681	-	-	-	2.2	0.6	-	2.8	14.7	12.3	0.6	12.9
3/2+3/3	775	775	-	-	-	2.4	0.7	-	3.0	14.1	13.2	0.7	13.9
4/1+4/2	463	193	-	-	-	19.7	135.8	-	155.5	1208.9	25.2	135.8	161.0
5/1	144	144	-	-	-	0.0	0.1	-	0.1	1.4	0.0	0.1	0.1
5/2	355	355	-	-	-	0.2	0.2	-	0.4	3.7	0.9	0.2	1.1
5/3	121	121	-	-	-	0.0	0.0	-	0.0	1.5	0.5	0.0	0.5
6/1	177	177	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
6/2	355	355	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
7/1	248	248	-	-	-	2.3	0.5	-	2.8	40.7	4.7	0.5	5.2
7/2	125	125	-	-	-	0.4	0.2	-	0.6	17.8	0.6	0.2	0.8
8/1	520	520	-	-	-	0.2	0.3	-	0.5	3.7	3.1	0.3	3.4
8/2	707	707	-	-	-	0.2	0.6	-	0.8	3.9	8.7	0.6	9.3
8/3	96	96	-	-	-	0.0	0.0	-	0.0	1.6	0.0	0.0	0.0
9/1	157	157	-	-	-	1.4	0.4	-	1.8	42.3	3.2	0.4	3.6
9/2	70	70	-	-	-	0.0	0.1	-	0.1	7.5	0.1	0.1	0.2
10/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	707	707	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	506	506	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -166.3 Total Delay for Signalled Lanes (pcuHr): 337.49 Cycle Time (s): 120
PRC Over All Lanes (%): -166.3 Total Delay Over All Lanes(pcuHr): 337.65

Scenario 2: '2033 Without Dev PM' (FG2: '2033 No Island Farm PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1

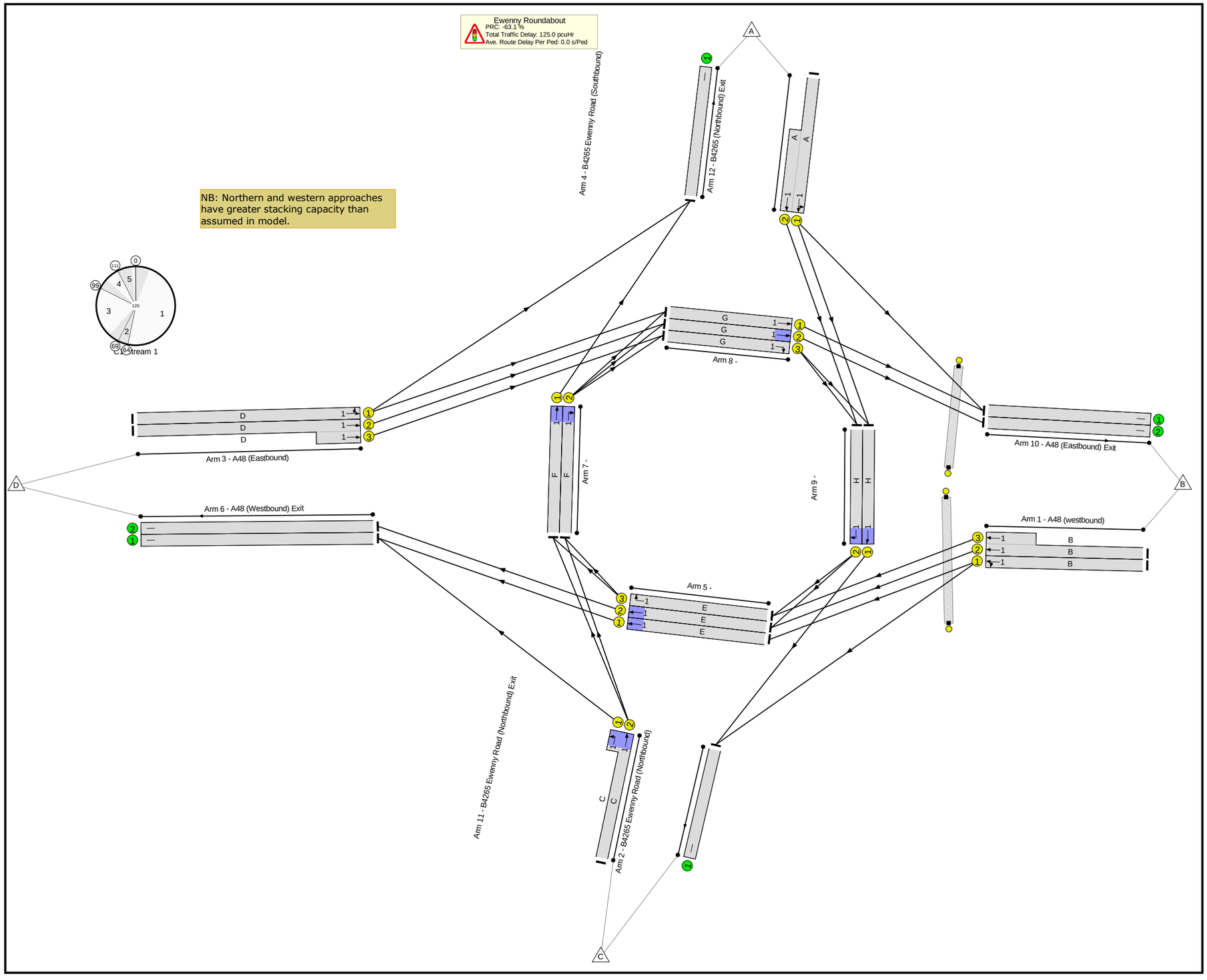


Stage Timings

Stage Stream: 1

Stage	1	2	3	4	5
Duration	57	0	25	7	2
Change Point	0	64	69	99	111

Signal Timings Diagram


Ewenny Roundabout
PRC: -63.1 %
Total Traffic Delay: 125.0 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
NB: Northern and western approaches have greater stacking capacity than assumed in model.
Stream 1
Arm 4 - B4265 Ewenny Road (Southbound)
Arm 12 - B4265 (Northbound) Exit
Arm 8 -
Arm 3 - A48 (Eastbound)
Arm 7 -
Arm 9 -
Arm 10 - A48 (Eastbound) Exit
Arm 6 - A48 (Westbound) Exit
Arm 1 - A48 (westbound)
Arm 5 -
Arm 11 - B4265 Ewenny Road (Northbound) Exit
Arm 2 - B4265 Ewenny Road (Northbound)
A
B
C
D

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: Full Island Farm 2033 Scenario	-	-	**N/A**	-	-		-	-	-	-	-	-	**146.8%**
Ewenny Roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**146.8%**
1/1	A48 (westbound) Ahead Left	U	1	N/A	B		1	57	-	632	1901	919	68.8%
1/2+1/3	A48 (westbound) Ahead	U	1	N/A	B		1	57	-	685	2055:1915	944+52	68.7 : 68.7%
2/2+2/1	B4265 Ewenny Road (Northbound) Left Ahead	U	1	N/A	C		1	16	-	450	1915:1814	217+90	146.8 : 146.8%
3/1	A48 (Eastbound) Ahead Left	U	1	N/A	D		1	59	-	357	1897	948	37.6%
3/2+3/3	A48 (Eastbound) Ahead	U	1	N/A	D		1	59	-	416	2055:1915	886+167	39.5 : 39.5%
4/1+4/2	B4265 Ewenny Road (Southbound) Ahead Left	U	1	N/A	A		1	25	-	604	1883:1915	271+374	93.7 : 93.7%
5/1	Ahead	U	1	N/A	E		1	94	-	502	1760	1393	36.0%
5/2	Ahead	U	1	N/A	E		1	94	-	999	1741	1378	72.5%
5/3	Right	U	1	N/A	E		1	94	-	36	1717	1359	2.6%
6/1	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	634	1965	1965	30.1%
6/2	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	999	1965	1965	50.8%
7/1	Ahead	U	1	N/A	F		1	51	-	186	1760	763	18.1%
7/2	Right	U	1	N/A	F		1	51	-	168	1717	744	15.4%
8/1	Ahead	U	1	N/A	G		1	71	-	343	1760	1056	29.1%
8/2	Ahead	U	1	N/A	G		1	71	-	407	1741	1045	37.2%
8/3	Right	U	1	N/A	G		1	71	-	66	1717	1030	6.4%
9/1	Ahead	U	1	N/A	H		2	39	-	262	1760	601	43.6%
9/2	Right	U	1	N/A	H		2	39	-	350	1717	587	59.7%
10/1	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	401	Inf	Inf	0.0%
10/2	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	407	Inf	Inf	0.0%
11/1	B4265 Ewenny Road (Northbound) Exit	U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
12/1	B4265 (Northbound) Exit	U	N/A	N/A	-		-	-	-	311	Inf	Inf	0.0%
Ped Link: P1	A48 W/B Peds	-	1	-	I		2	39	-	0	-	0	0.0%
Ped Link: P2	A48 E/B Peds	-	1	-	J		1	7	-	0	-	0	0.0%

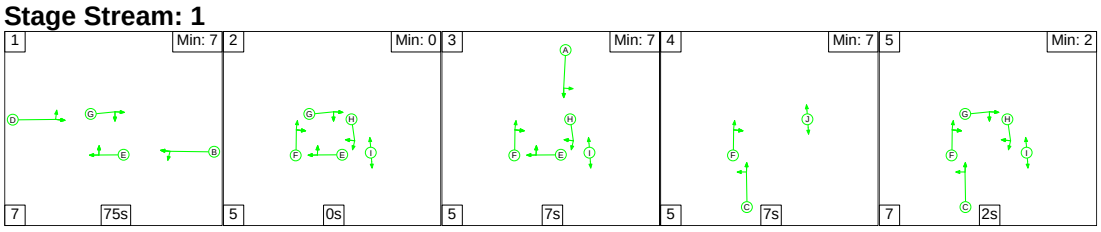
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Full Island Farm 2033 Scenario	**-**	**-**	**0**	**0**	**0**	**39.0**	**86.1**	**0.0**	**125.0**	**-**	**-**	**-**	**-**
Ewenny Roundabout	**-**	**-**	**0**	**0**	**0**	**39.0**	**86.1**	**0.0**	**125.0**	**-**	**-**	**-**	**-**
1/1	632	632	-	-	-	4.2	1.1	-	5.3	30.2	16.2	1.1	17.2
1/2+1/3	685	685	-	-	-	4.5	1.1	-	5.6	29.4	17.2	1.1	18.2
2/2+2/1	450	306	-	-	-	16.2	73.3	-	89.5	715.7	23.1	73.3	96.4
3/1	357	357	-	-	-	1.8	0.3	-	2.1	21.5	7.2	0.3	7.5
3/2+3/3	416	416	-	-	-	2.1	0.3	-	2.4	20.6	7.3	0.3	7.6
4/1+4/2	604	604	-	-	-	7.4	5.8	-	13.2	78.4	12.1	5.8	17.8
5/1	502	502	-	-	-	0.0	0.3	-	0.3	2.0	0.0	0.3	0.3
5/2	999	999	-	-	-	0.6	1.3	-	1.9	6.8	8.8	1.3	10.1
5/3	36	36	-	-	-	0.0	0.0	-	0.0	1.4	0.0	0.0	0.0
6/1	592	592	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/2	999	999	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
7/1	138	138	-	-	-	0.6	0.1	-	0.8	19.8	1.7	0.1	1.8
7/2	114	114	-	-	-	0.3	0.1	-	0.4	12.1	0.5	0.1	0.6
8/1	308	308	-	-	-	0.2	0.2	-	0.4	4.8	2.1	0.2	2.3
8/2	389	389	-	-	-	0.1	0.3	-	0.4	4.1	3.0	0.3	3.3
8/3	66	66	-	-	-	0.0	0.0	-	0.0	2.0	0.0	0.0	0.0
9/1	262	262	-	-	-	0.8	0.4	-	1.2	16.4	2.2	0.4	2.6
9/2	350	350	-	-	-	0.1	0.7	-	0.9	8.9	0.9	0.7	1.7
10/1	366	366	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	263	263	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -63.1 Total Delay for Signalled Lanes (pcuHr): 124.31 Cycle Time (s): 120
PRC Over All Lanes (%): -63.1 Total Delay Over All Lanes(pcuHr): 125.04

Scenario 3: '2033 With Dev AM' (FG3: '2033 WITH Island Farm AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1

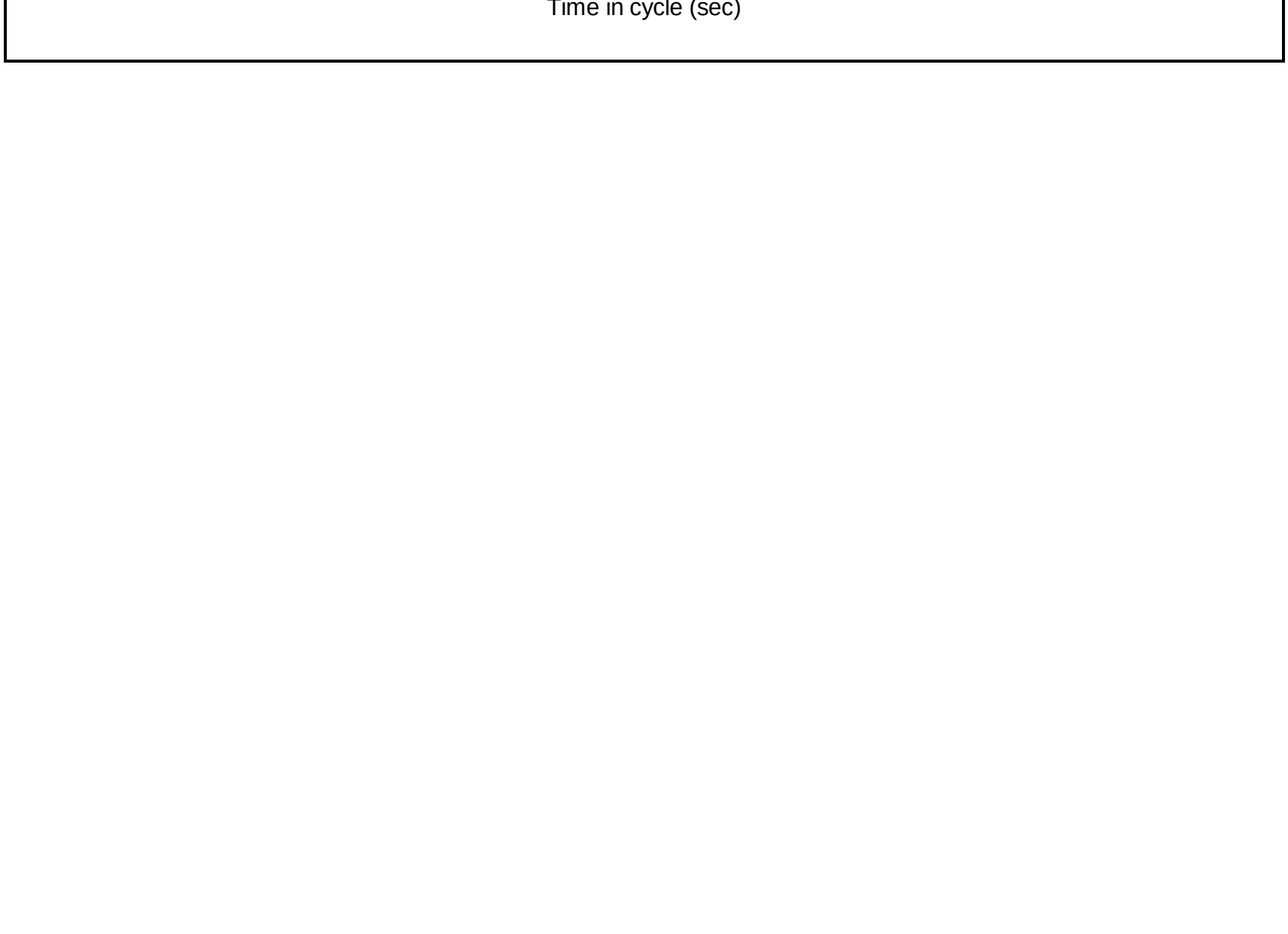


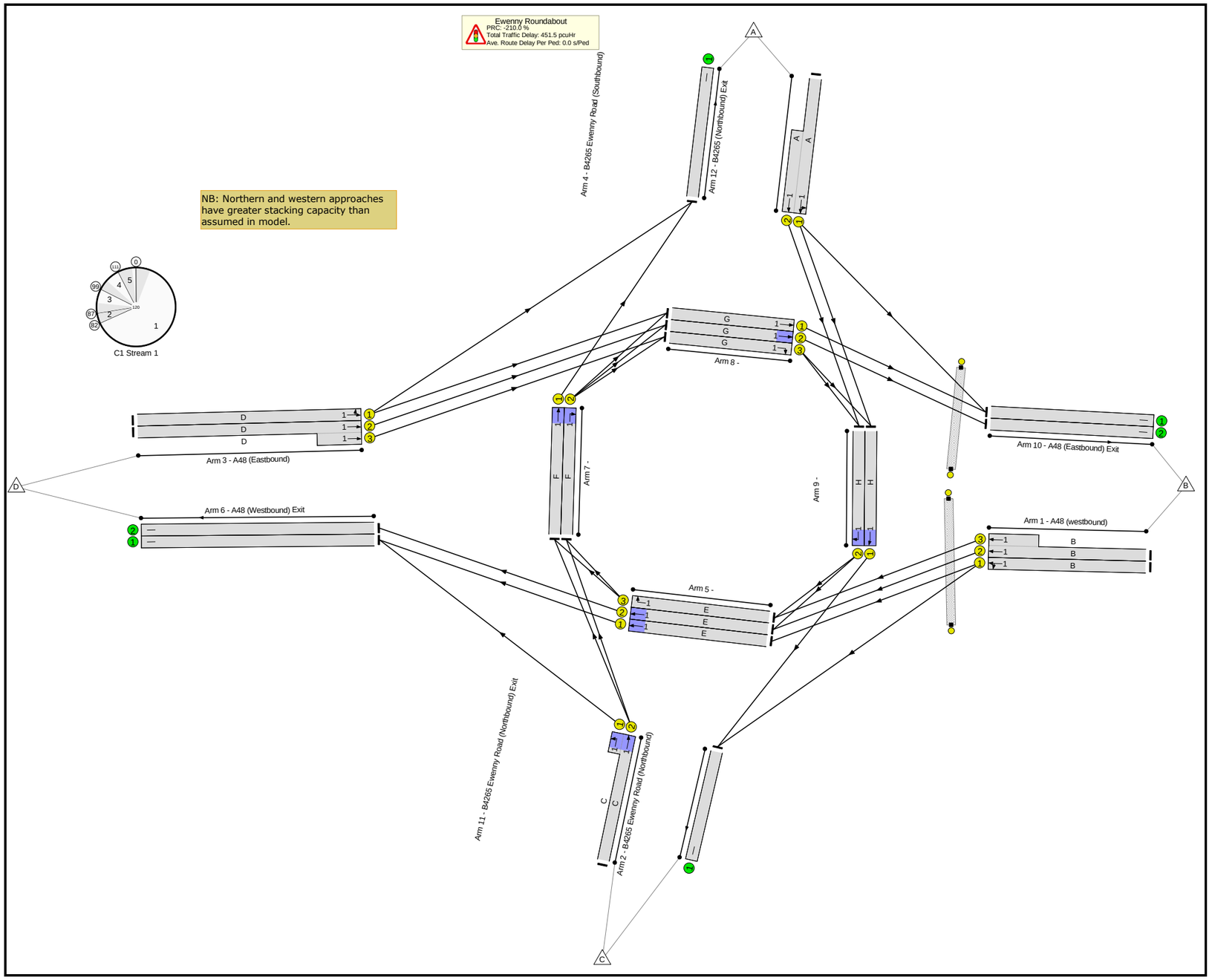
Stage Timings

Stage Stream: 1

Stage	1	2	3	4	5
Duration	75	0	7	7	2
Change Point	0	82	87	99	111

Signal Timings Diagram




Ewenny Roundabout
PRC: -210.0 %
Total Traffic Delay: 451.5 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
NB: Northern and western approaches have greater stacking capacity than assumed in model.
C1 Stream 1
Arm 4 - B4265 Ewenny Road (Southbound)
Arm 12 - B4265 (Northbound) Exit
Arm 8 -
Arm 3 - A48 (Eastbound)
Arm 7 -
Arm 9 -
Arm 10 - A48 (Eastbound) Exit
Arm 6 - A48 (Westbound) Exit
Arm 1 - A48 (westbound)
Arm 5 -
Arm 11 - B4265 Ewenny Road (Northbound) Exit
Arm 2 - B4265 Ewenny Road (Northbound)
A
B
C
D

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: Full Island Farm 2033 Scenario	-	-	**N/A**	-	-		-	-	-	-	-	-	**279.0%**
Ewenny Roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**279.0%**
1/1	A48 (westbound) Ahead Left	U	1	N/A	B		1	75	-	341	1879	1190	28.7%
1/2+1/3	A48 (westbound) Ahead	U	1	N/A	B		1	75	-	443	2055:1915	979+368	32.9 : 32.9%
2/2+2/1	B4265 Ewenny Road (Northbound) Left Ahead	U	1	N/A	C		1	16	-	682	1915:1814	242+49	234.8 : 234.8%
3/1	A48 (Eastbound) Ahead Left	U	1	N/A	D		1	77	-	791	1891	1229	64.4%
3/2+3/3	A48 (Eastbound) Ahead	U	1	N/A	D		1	77	-	922	2055:1915	1130+230	67.8 : 67.8%
4/1+4/2	B4265 Ewenny Road (Southbound) Ahead Left	U	1	N/A	A		1	7	-	564	1855:1915	124+100	279.0 : 219.6%
5/1	Ahead	U	1	N/A	E		1	94	-	153	1760	1393	11.0%
5/2	Ahead	U	1	N/A	E		1	94	-	541	1741	1378	30.6%
5/3	Right	U	1	N/A	E		1	94	-	121	1717	1359	8.9%
6/1	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	267	1965	1965	10.3%
6/2	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	541	1965	1965	21.5%
7/1	Ahead	U	1	N/A	F		1	33	-	410	1760	499	48.9%
7/2	Right	U	1	N/A	F		1	33	-	279	1717	486	24.4%
8/1	Ahead	U	1	N/A	G		1	89	-	634	1760	1320	38.9%
8/2	Ahead	U	1	N/A	G		1	89	-	835	1741	1306	60.9%
8/3	Right	U	1	N/A	G		1	89	-	156	1717	1288	12.1%
9/1	Ahead	U	1	N/A	H		2	21	-	353	1760	337	67.2%
9/2	Right	U	1	N/A	H		2	21	-	219	1717	329	30.3%
10/1	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	782	Inf	Inf	0.0%
10/2	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	835	Inf	Inf	0.0%
11/1	B4265 Ewenny Road (Northbound) Exit	U	N/A	N/A	-		-	-	-	541	Inf	Inf	0.0%
12/1	B4265 (Northbound) Exit	U	N/A	N/A	-		-	-	-	777	Inf	Inf	0.0%
Ped Link: P1	A48 W/B Peds	-	1	-	I		2	21	-	0	-	0	0.0%
Ped Link: P2	A48 E/B Peds	-	1	-	J		1	7	-	0	-	0	0.0%

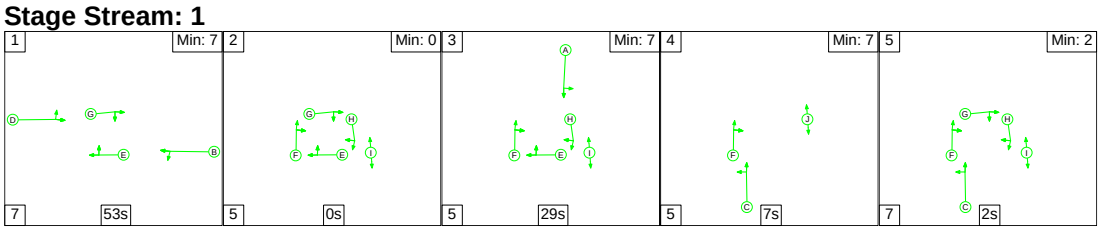
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Full Island Farm 2033 Scenario	**-**	**-**	**0**	**0**	**0**	**77.8**	**373.7**	**0.0**	**451.5**	**-**	**-**	**-**	**-**
Ewenny Roundabout	**-**	**-**	**0**	**0**	**0**	**77.8**	**373.7**	**0.0**	**451.5**	**-**	**-**	**-**	**-**
1/1	341	341	-	-	-	0.9	0.2	-	1.1	12.0	5.0	0.2	5.2
1/2+1/3	443	443	-	-	-	1.1	0.2	-	1.4	11.3	4.7	0.2	4.9
2/2+2/1	682	290	-	-	-	36.5	196.6	-	233.1	1230.5	47.7	196.6	244.4
3/1	791	791	-	-	-	2.8	0.9	-	3.7	16.7	15.8	0.9	16.7
3/2+3/3	922	922	-	-	-	3.1	1.0	-	4.2	16.2	17.3	1.0	18.3
4/1+4/2	564	223	-	-	-	27.5	171.1	-	198.6	1267.8	33.5	171.1	204.6
5/1	153	153	-	-	-	0.0	0.1	-	0.1	1.5	0.0	0.1	0.1
5/2	422	422	-	-	-	0.3	0.2	-	0.6	4.8	1.9	0.2	2.2
5/3	121	121	-	-	-	0.0	0.0	-	0.0	1.5	0.5	0.0	0.5
6/1	202	202	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
6/2	422	422	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
7/1	244	244	-	-	-	2.3	0.5	-	2.8	40.8	4.6	0.5	5.1
7/2	119	119	-	-	-	0.4	0.2	-	0.6	17.4	0.6	0.2	0.7
8/1	513	513	-	-	-	0.2	0.3	-	0.5	3.6	2.7	0.3	3.0
8/2	795	795	-	-	-	0.2	0.8	-	1.0	4.3	9.7	0.8	10.4
8/3	156	156	-	-	-	0.0	0.1	-	0.1	1.7	0.0	0.1	0.1
9/1	227	227	-	-	-	2.4	1.0	-	3.4	53.6	6.2	1.0	7.2
9/2	100	100	-	-	-	0.1	0.2	-	0.3	10.5	0.7	0.2	0.9
10/1	566	566	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	795	795	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	611	611	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -210.0 Total Delay for Signalled Lanes (pcuHr): 451.31 Cycle Time (s): 120
PRC Over All Lanes (%): -210.0 Total Delay Over All Lanes(pcuHr): 451.50

Scenario 4: '2033 With Dev PM' (FG4: '2033 WITH Island Farm PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1

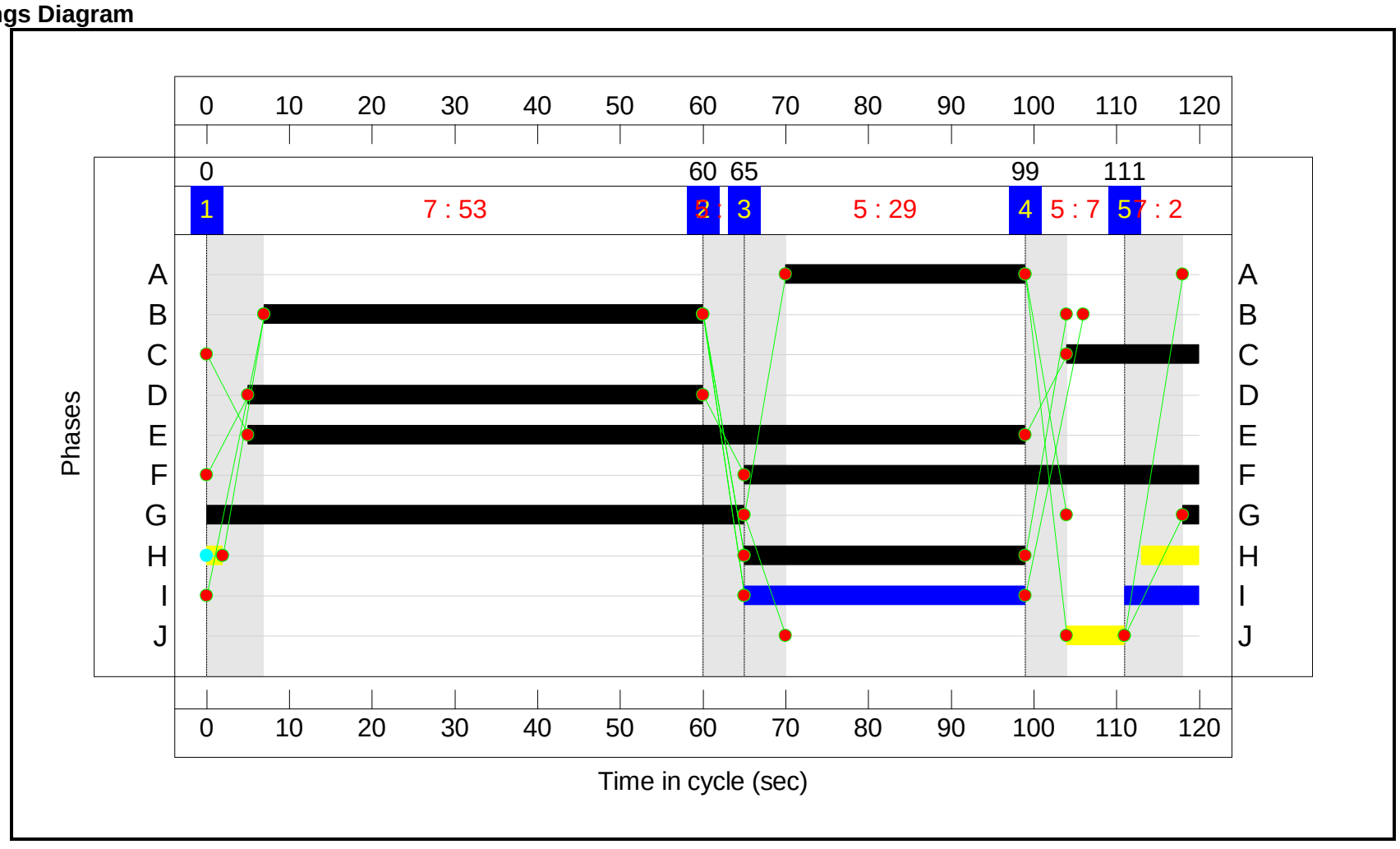


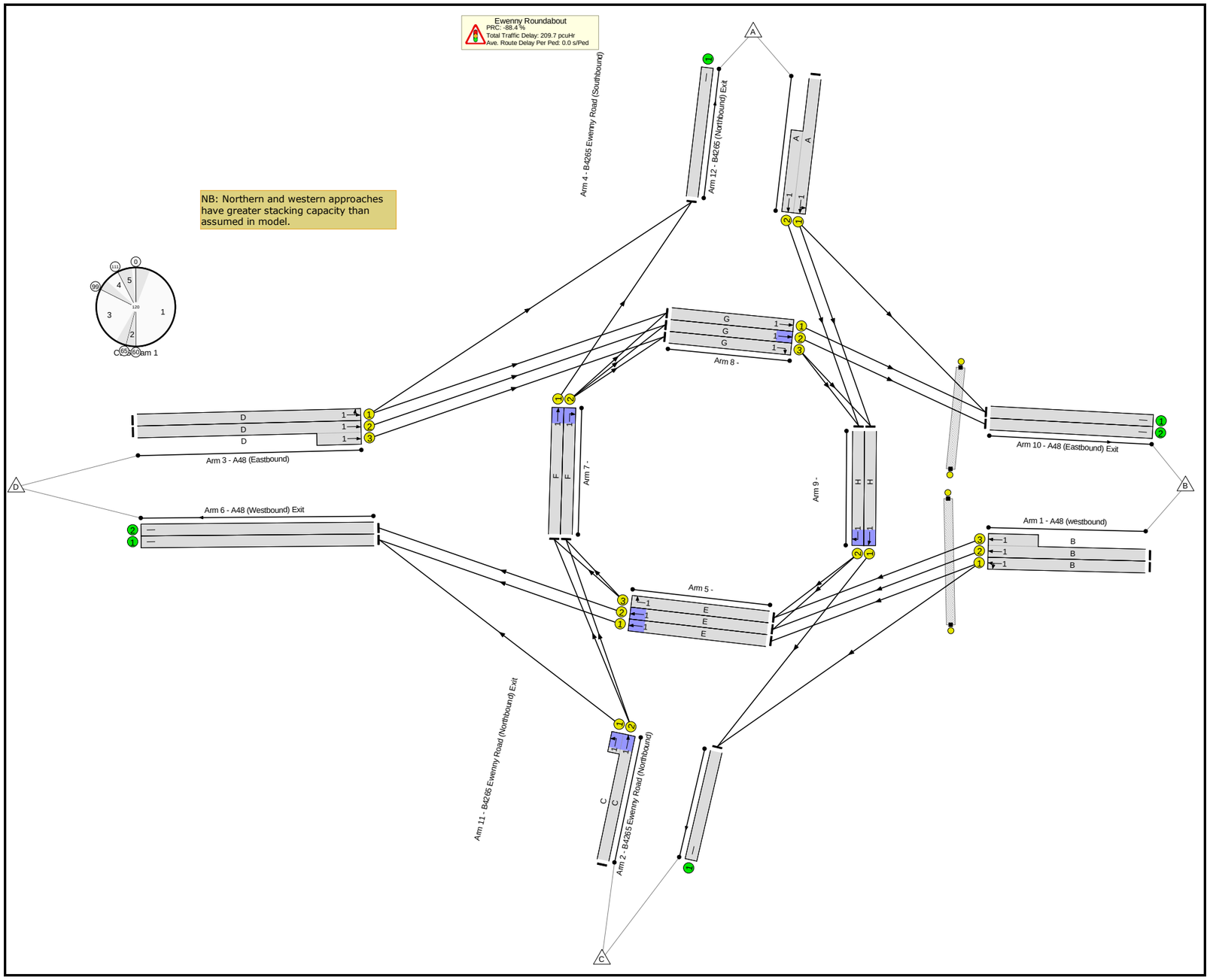
Stage Timings

Stage Stream: 1

Stage	1	2	3	4	5
Duration	53	0	29	7	2
Change Point	0	60	65	99	111

Signal Timings Diagram




Ewenny Roundabout
PRC: -88.4 %
Total Traffic Delay: 209.7 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
NB: Northern and western approaches have greater stacking capacity than assumed in model.
Arm 4 - B4265 Ewenny Road (Southbound)
Arm 12 - B4265 (Northbound) Exit
Arm 8 -
Arm 3 - A48 (Eastbound)
Arm 10 - A48 (Eastbound) Exit
Arm 7 -
Arm 9 -
Arm 6 - A48 (Westbound) Exit
Arm 1 - A48 (westbound)
Arm 5 -
Arm 11 - B4265 Ewenny Road (Northbound) Exit
Arm 2 - B4265 Ewenny Road (Northbound)
A
B
C
D

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: Full Island Farm 2033 Scenario	-	-	**N/A**	-	-		-	-	-	-	-	-	**169.6%**
Ewenny Roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**169.6%**
1/1	A48 (westbound) Ahead Left	U	1	N/A	B		1	53	-	686	1900	855	80.2%
1/2+1/3	A48 (westbound) Ahead	U	1	N/A	B		1	53	-	745	2055:1915	883+45	80.3 : 80.3%
2/2+2/1	B4265 Ewenny Road (Northbound) Left Ahead	U	1	N/A	C		1	16	-	523	1915:1814	214+94	169.6 : 169.6%
3/1	A48 (Eastbound) Ahead Left	U	1	N/A	D		1	55	-	403	1893	883	45.6%
3/2+3/3	A48 (Eastbound) Ahead	U	1	N/A	D		1	55	-	483	2055:1915	795+200	48.6 : 48.6%
4/1+4/2	B4265 Ewenny Road (Southbound) Ahead Left	U	1	N/A	A		1	29	-	737	1886:1915	254+418	109.7 : 109.7%
5/1	Ahead	U	1	N/A	E		1	94	-	534	1760	1393	38.3%
5/2	Ahead	U	1	N/A	E		1	94	-	1167	1741	1378	81.7%
5/3	Right	U	1	N/A	E		1	94	-	36	1717	1359	2.6%
6/1	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	694	1965	1965	32.0%
6/2	A48 (Westbound) Exit	U	N/A	N/A	-		-	-	-	1167	1965	1965	57.3%
7/1	Ahead	U	1	N/A	F		1	55	-	209	1760	821	16.8%
7/2	Right	U	1	N/A	F		1	55	-	190	1717	801	14.0%
8/1	Ahead	U	1	N/A	G		1	67	-	360	1760	997	30.8%
8/2	Ahead	U	1	N/A	G		1	67	-	448	1741	987	42.8%
8/3	Right	U	1	N/A	G		1	67	-	97	1717	973	10.0%
9/1	Ahead	U	1	N/A	H		2	43	-	318	1760	660	45.2%
9/2	Right	U	1	N/A	H		2	43	-	458	1717	644	64.9%
10/1	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%
10/2	A48 (Eastbound) Exit	U	N/A	N/A	-		-	-	-	448	Inf	Inf	0.0%
11/1	B4265 Ewenny Road (Northbound) Exit	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
12/1	B4265 (Northbound) Exit	U	N/A	N/A	-		-	-	-	380	Inf	Inf	0.0%
Ped Link: P1	A48 W/B Peds	-	1	-	I		2	43	-	0	-	0	0.0%
Ped Link: P2	A48 E/B Peds	-	1	-	J		1	7	-	0	-	0	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Full Island Farm 2033 Scenario	**-**	**-**	**0**	**0**	**0**	**53.3**	**156.4**	**0.0**	**209.7**	**-**	**-**	**-**	**-**
Ewenny Roundabout	**-**	**-**	**0**	**0**	**0**	**53.3**	**156.4**	**0.0**	**209.7**	**-**	**-**	**-**	**-**
1/1	686	686	-	-	-	5.4	2.0	-	7.4	38.8	19.6	2.0	21.6
1/2+1/3	745	745	-	-	-	5.8	2.0	-	7.8	37.8	21.0	2.0	23.0
2/2+2/1	523	308	-	-	-	22.1	108.5	-	130.6	898.7	30.2	108.5	138.6
3/1	403	403	-	-	-	2.4	0.4	-	2.8	25.4	9.1	0.4	9.5
3/2+3/3	483	483	-	-	-	2.8	0.5	-	3.3	24.3	9.3	0.5	9.8
4/1+4/2	737	672	-	-	-	11.5	37.4	-	49.0	239.1	22.2	37.4	59.7
5/1	534	534	-	-	-	0.0	0.3	-	0.3	2.1	0.0	0.3	0.3
5/2	1127	1127	-	-	-	0.7	2.2	-	2.9	9.4	13.3	2.2	15.5
5/3	36	36	-	-	-	0.0	0.0	-	0.0	1.4	0.0	0.0	0.0
6/1	628	628	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/2	1127	1127	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
7/1	138	138	-	-	-	0.6	0.1	-	0.7	17.9	1.7	0.1	1.8
7/2	112	112	-	-	-	0.3	0.1	-	0.4	11.3	0.5	0.1	0.6
8/1	307	307	-	-	-	0.2	0.2	-	0.4	5.2	2.1	0.2	2.4
8/2	423	423	-	-	-	0.2	0.4	-	0.5	4.5	4.5	0.4	4.9
8/3	97	97	-	-	-	0.0	0.1	-	0.1	2.2	0.0	0.1	0.1
9/1	298	298	-	-	-	1.1	0.4	-	1.6	18.8	3.2	0.4	3.6
9/2	418	418	-	-	-	0.2	0.9	-	1.1	9.5	0.9	0.9	1.8
10/1	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	423	423	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	450	450	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	309	309	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -88.4 Total Delay for Signalled Lanes (pcuHr): 208.83 Cycle Time (s): 120
PRC Over All Lanes (%): -88.4 Total Delay Over All Lanes(pcuHr): 209.74

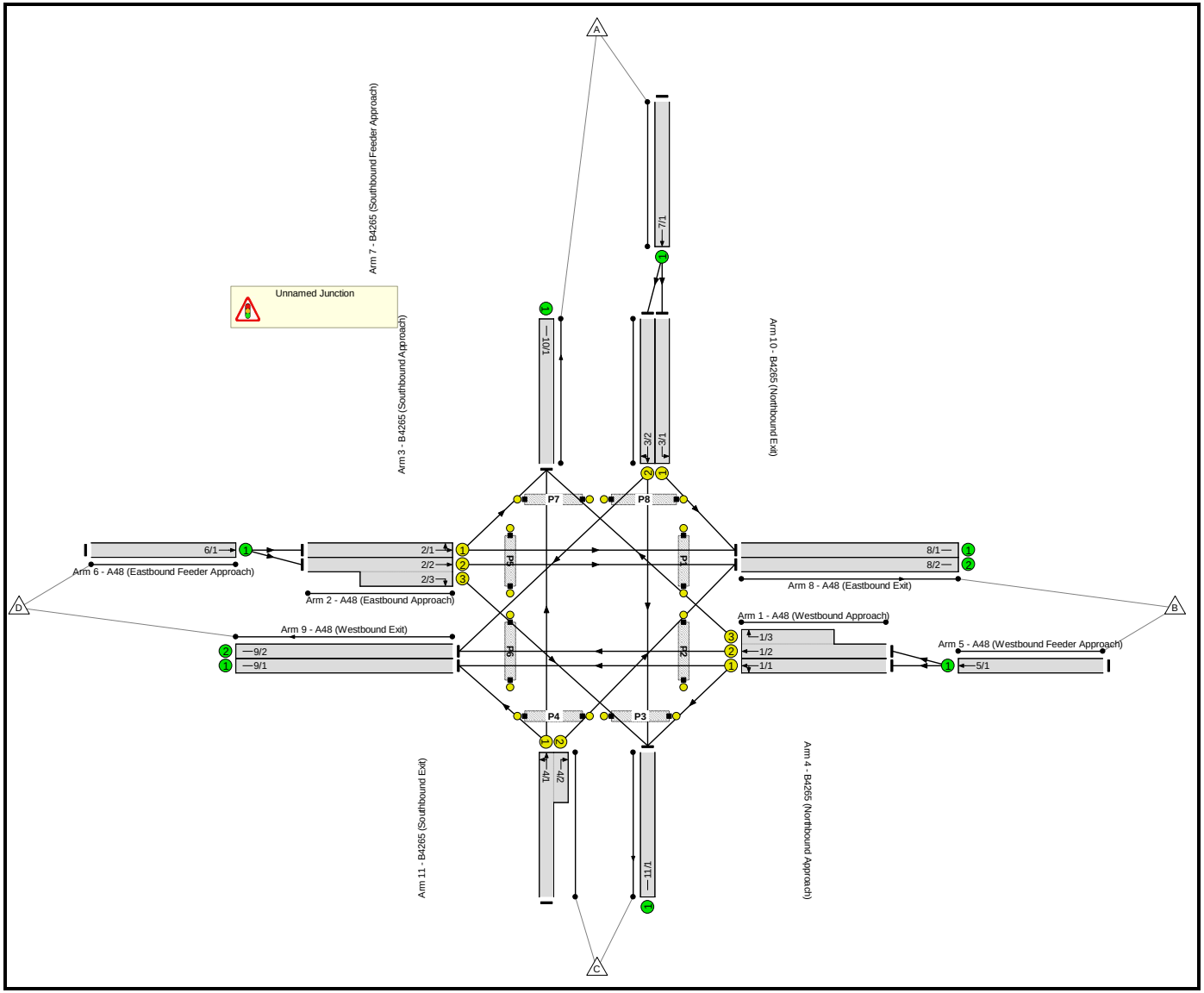
Full Input Data And Results

User and Project Details

Project:	**Ewenny Roundabout_New Signalised Layout**
Title:	**Island Farm Full Scheme Flows**
Location:	
Additional detail:	
File name:	New Layout_Wider Scheme Flows.lsg3x
Author:	MM
Company:	Corun
Address:	

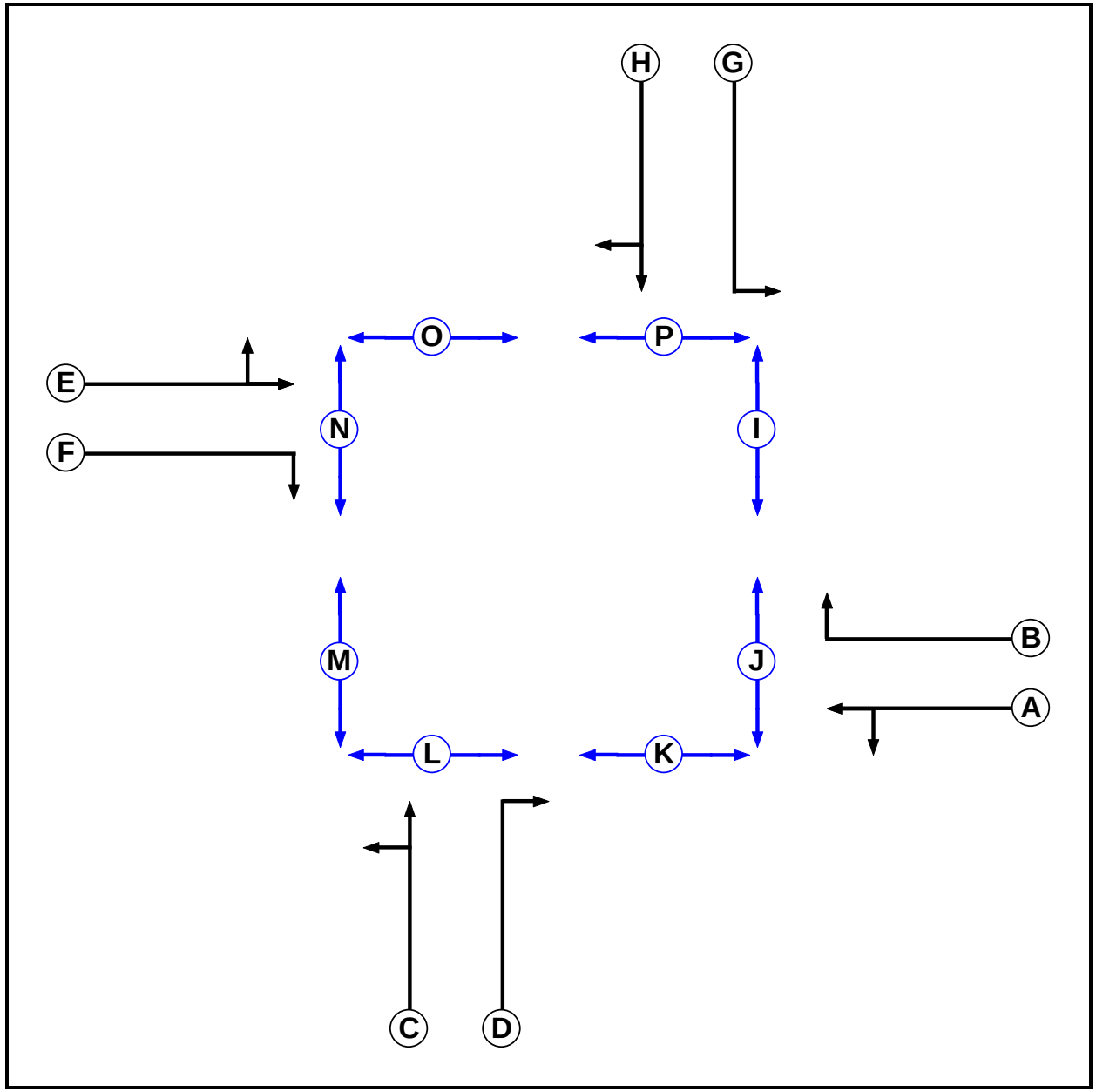
Full Input Data And Results

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		5	5
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		5	5
G	Traffic		7	7
H	Traffic		7	7
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		7	7
N	Pedestrian		7	7
O	Pedestrian		7	7
P	Pedestrian		7	7

Full Input Data And Results

Phase Intergreens Matrix

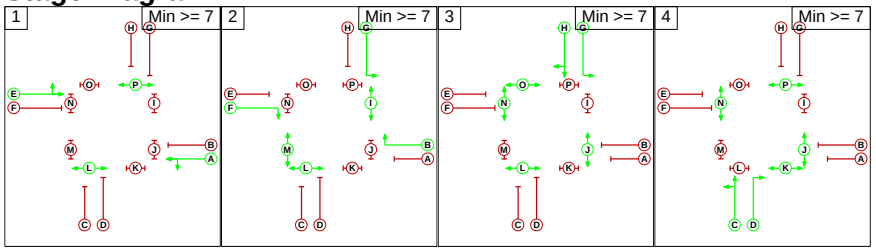
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		-	5	5	-	5	-	5	-	7	7	-	7	-	7	-
B	-		5	5	5	-	-	-	-	7	-	-	-	-	7	-
C	5	5		-	5	5	-	5	7	-	-	7	7	-	7	-
D	5	5	-		5	5	5	5	7	-	-	7	-	-	-	-
E	-	5	5	5		-	5	5	7	-	7	-	-	7	7	-
F	5	-	5	5	-		-	-	-	-	7	-	-	7	-	-
G	-	-	-	5	5	-		-	-	-	-	-	-	-	-	7
H	5	-	5	5	5	-	-		7	-	7	-	7	-	-	7
I	-	-	7	7	7	-	-	7		-	-	-	-	-	-	-
J	7	7	-	-	-	-	-	-	-		-	-	-	-	-	-
K	7	-	-	-	7	7	-	7	-	-		-	-	-	-	-
L	-	-	7	7	-	-	-	-	-	-	-		-	-	-	-
M	7	-	7	-	-	-	-	7	-	-	-	-		-	-	-
N	-	-	-	-	7	7	-	-	-	-	-	-	-		-	-
O	7	7	7	-	7	-	-	-	-	-	-	-	-	-		-
P	-	-	-	-	-	-	7	7	-	-	-	-	-	-	-	

Phases in Stage

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

Full Input Data And Results

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage				
		1	2	3	4
From Stage	1		7	7	7
	2	7		7	7
	3	7	7		7
	4	7	7	7	

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A48 (Westbound Approach))	U	A	2	3	10.4	Geom	-	2.80	0.00	Y	Arm 9 Ahead	Inf
											Arm 11 Left	Inf
1/2 (A48 (Westbound Approach))	U	A	2	3	10.4	Geom	-	2.80	0.00	N	Arm 9 Ahead	Inf
1/3 (A48 (Westbound Approach))	U	B	2	3	9.6	Geom	-	2.80	0.00	N	Arm 10 Right	Inf
2/1 (A48 (Eastbound Approach))	U	E	2	3	10.4	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf
											Arm 10 Left	Inf
2/2 (A48 (Eastbound Approach))	U	E	2	3	10.4	Geom	-	3.00	0.00	N	Arm 8 Ahead	Inf
2/3 (A48 (Eastbound Approach))	U	F	2	3	9.6	Geom	-	3.00	0.00	N	Arm 11 Right	Inf
3/1 (B4265 (Southbound Approach))	U	G	2	3	10.4	Geom	-	3.30	0.00	Y	Arm 8 Left	Inf
3/2 (B4265 (Southbound Approach))	U	H	2	3	10.4	Geom	-	3.00	0.00	N	Arm 9 Right	Inf
											Arm 11 Ahead	Inf
4/1 (B4265 (Northbound Approach))	U	C	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 9 Left	Inf
											Arm 10 Ahead	Inf
4/2 (B4265 (Northbound Approach))	U	D	2	3	5.2	Geom	-	2.80	0.00	N	Arm 8 Right	Inf
5/1 (A48 (Westbound Feeder Approach))	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm 1 Ahead	Inf
6/1 (A48 (Eastbound Feeder Approach))	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf

7/1 (B4265 (Southbound Feeder Approach))	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (A48 (Eastbound Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (A48 (Eastbound Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (A48 (Westbound Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (A48 (Westbound Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (B4265 (Northbound Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (B4265 (Southbound Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2033 No Development AM'	08:00	09:00	01:00	
2: '2033 No Development PM'	17:00	18:00	01:00	
3: '2033 WITH Development AM'	08:00	09:00	01:00	
4: '2033 WITH Development PM'	17:00	18:00	01:00	

Scenario 1: '2033 Without Dev AM' (FG1: '2033 No Development AM', Plan 1: '4 Stage Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	148	147	168	463
	B	121	0	147	429	697
	C	250	247	0	66	563
	D	258	1102	96	0	1456
	Tot.	629	1497	390	663	3179

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2033 Without Dev AM
Junction: Unnamed Junction	
1/1	361
1/2 (with short)	336(In) 215(Out)
1/3 (short)	121
2/1	809
2/2 (with short)	647(In) 551(Out)
2/3 (short)	96
3/1	148
3/2	315
4/1 (with short)	563(In) 316(Out)
4/2 (short)	247
5/1	697
6/1	1456
7/1	463
8/1	699
8/2	798
9/1	280
9/2	383
10/1	629
11/1	390

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A48 (Westbound Approach))	2.80	0.00	Y	Arm 9 Ahead	Inf	59.3 %	1895	1895
				Arm 11 Left	Inf	40.7 %		
1/2 (A48 (Westbound Approach))	2.80	0.00	N	Arm 9 Ahead	Inf	100.0 %	2035	2035
1/3 (A48 (Westbound Approach))	2.80	0.00	N	Arm 10 Right	Inf	100.0 %	2035	2035
2/1 (A48 (Eastbound Approach))	3.00	0.00	Y	Arm 8 Ahead	Inf	68.1 %	1915	1915
				Arm 10 Left	Inf	31.9 %		
2/2 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
2/3 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 11 Right	Inf	100.0 %	2055	2055
3/1 (B4265 (Southbound Approach))	3.30	0.00	Y	Arm 8 Left	Inf	100.0 %	1945	1945
3/2 (B4265 (Southbound Approach))	3.00	0.00	N	Arm 9 Right	Inf	53.3 %	2055	2055
				Arm 11 Ahead	Inf	46.7 %		
4/1 (B4265 (Northbound Approach))	2.80	0.00	Y	Arm 9 Left	Inf	20.9 %	1895	1895
				Arm 10 Ahead	Inf	79.1 %		
4/2 (B4265 (Northbound Approach))	2.80	0.00	N	Arm 8 Right	Inf	100.0 %	2035	2035
5/1 (A48 (Westbound Feeder Approach))	3.00	0.00	Y	Arm 1 Ahead	Inf	100.0 %	1915	1915
6/1 (A48 (Eastbound Feeder Approach))	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/1 (B4265 (Southbound Feeder Approach) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A48 (Eastbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A48 (Eastbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A48 (Westbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A48 (Westbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (B4265 (Northbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 (Southbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2033 Without Dev PM' (FG2: '2033 No Development PM', Plan 1: '4 Stage Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	58	196	350	604
	B	36	0	130	1151	1317
	C	150	168	0	132	450
	D	125	582	66	0	773
	Tot.	311	808	392	1633	3144

Traffic Lane Flows

Lane	Scenario 2: 2033 Without Dev PM
Junction: Unnamed Junction	
1/1	705
1/2 (with short)	612(In) 576(Out)
1/3 (short)	36
2/1	416
2/2 (with short)	357(In) 291(Out)
2/3 (short)	66
3/1	58
3/2	546
4/1 (with short)	450(In) 282(Out)
4/2 (short)	168
5/1	1317
6/1	773
7/1	604
8/1	349
8/2	459
9/1	707
9/2	926
10/1	311
11/1	392

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A48 (Westbound Approach))	2.80	0.00	Y	Arm 9 Ahead	Inf	81.6 %	1895	1895
				Arm 11 Left	Inf	18.4 %		
1/2 (A48 (Westbound Approach))	2.80	0.00	N	Arm 9 Ahead	Inf	100.0 %	2035	2035
1/3 (A48 (Westbound Approach))	2.80	0.00	N	Arm 10 Right	Inf	100.0 %	2035	2035
2/1 (A48 (Eastbound Approach))	3.00	0.00	Y	Arm 8 Ahead	Inf	70.0 %	1915	1915
				Arm 10 Left	Inf	30.0 %		
2/2 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
2/3 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 11 Right	Inf	100.0 %	2055	2055
3/1 (B4265 (Southbound Approach))	3.30	0.00	Y	Arm 8 Left	Inf	100.0 %	1945	1945
3/2 (B4265 (Southbound Approach))	3.00	0.00	N	Arm 9 Right	Inf	64.1 %	2055	2055
				Arm 11 Ahead	Inf	35.9 %		
4/1 (B4265 (Northbound Approach))	2.80	0.00	Y	Arm 9 Left	Inf	46.8 %	1895	1895
				Arm 10 Ahead	Inf	53.2 %		
4/2 (B4265 (Northbound Approach))	2.80	0.00	N	Arm 8 Right	Inf	100.0 %	2035	2035
5/1 (A48 (Westbound Feeder Approach))	3.00	0.00	Y	Arm 1 Ahead	Inf	100.0 %	1915	1915
6/1 (A48 (Eastbound Feeder Approach))	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/1 (B4265 (Southbound Feeder Approach) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A48 (Eastbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A48 (Eastbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A48 (Westbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A48 (Westbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (B4265 (Northbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 (Southbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2033 With Dev AM' (FG3: '2033 WITH Development AM', Plan 1: '4 Stage Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	148	197	219	564
	B	121	0	188	475	784
	C	289	279	0	114	682
	D	367	1190	156	0	1713
	Tot.	777	1617	541	808	3743

Traffic Lane Flows

Lane	Scenario 3: 2033 With Dev AM
Junction: Unnamed Junction	
1/1	425
1/2 (with short)	359(In) 238(Out)
1/3 (short)	121
2/1	962
2/2 (with short)	751(In) 595(Out)
2/3 (short)	156
3/1	148
3/2	416
4/1 (with short)	682(In) 403(Out)
4/2 (short)	279
5/1	784
6/1	1713
7/1	564
8/1	743
8/2	874
9/1	351
9/2	457
10/1	777
11/1	541

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A48 (Westbound Approach))	2.80	0.00	Y	Arm 9 Ahead	Inf	55.8 %	1895	1895
				Arm 11 Left	Inf	44.2 %		
1/2 (A48 (Westbound Approach))	2.80	0.00	N	Arm 9 Ahead	Inf	100.0 %	2035	2035
1/3 (A48 (Westbound Approach))	2.80	0.00	N	Arm 10 Right	Inf	100.0 %	2035	2035
2/1 (A48 (Eastbound Approach))	3.00	0.00	Y	Arm 8 Ahead	Inf	61.9 %	1915	1915
				Arm 10 Left	Inf	38.1 %		
2/2 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
2/3 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 11 Right	Inf	100.0 %	2055	2055
3/1 (B4265 (Southbound Approach))	3.30	0.00	Y	Arm 8 Left	Inf	100.0 %	1945	1945
3/2 (B4265 (Southbound Approach))	3.00	0.00	N	Arm 9 Right	Inf	52.6 %	2055	2055
				Arm 11 Ahead	Inf	47.4 %		
4/1 (B4265 (Northbound Approach))	2.80	0.00	Y	Arm 9 Left	Inf	28.3 %	1895	1895
				Arm 10 Ahead	Inf	71.7 %		
4/2 (B4265 (Northbound Approach))	2.80	0.00	N	Arm 8 Right	Inf	100.0 %	2035	2035
5/1 (A48 (Westbound Feeder Approach))	3.00	0.00	Y	Arm 1 Ahead	Inf	100.0 %	1915	1915
6/1 (A48 (Eastbound Feeder Approach))	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/1 (B4265 (Southbound Feeder Approach) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A48 (Eastbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A48 (Eastbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A48 (Westbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A48 (Westbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (B4265 (Northbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 (Southbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2033 With Dev PM' (FG4: '2033 WITH Development PM', Plan 1: '4 Stage Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	58	221	458	737
	B	36	0	152	1243	1431
	C	173	190	0	160	523
	D	171	618	97	0	886
	Tot.	380	866	470	1861	3577

Traffic Lane Flows

Lane	Scenario 4: 2033 With Dev PM
Junction: Unnamed Junction	
1/1	773
1/2 (with short)	658(In) 622(Out)
1/3 (short)	36
2/1	480
2/2 (with short)	406(In) 309(Out)
2/3 (short)	97
3/1	58
3/2	679
4/1 (with short)	523(In) 333(Out)
4/2 (short)	190
5/1	1431
6/1	886
7/1	737
8/1	367
8/2	499
9/1	781
9/2	1080
10/1	380
11/1	470

Full Input Data And Results

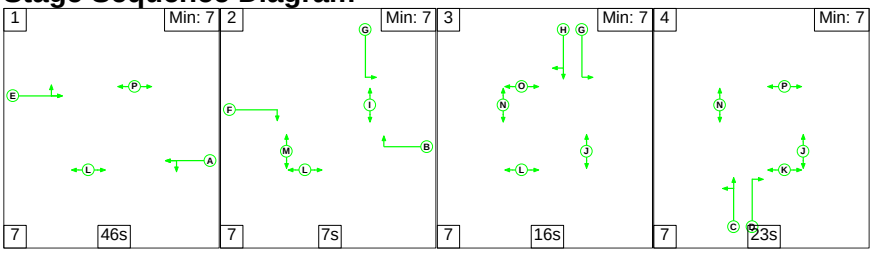
Lane Saturation Flows

Junction: Unnamed Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A48 (Westbound Approach))	2.80	0.00	Y	Arm 9 Ahead	Inf	80.3 %	1895	1895
				Arm 11 Left	Inf	19.7 %		
1/2 (A48 (Westbound Approach))	2.80	0.00	N	Arm 9 Ahead	Inf	100.0 %	2035	2035
1/3 (A48 (Westbound Approach))	2.80	0.00	N	Arm 10 Right	Inf	100.0 %	2035	2035
2/1 (A48 (Eastbound Approach))	3.00	0.00	Y	Arm 8 Ahead	Inf	64.4 %	1915	1915
				Arm 10 Left	Inf	35.6 %		
2/2 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 8 Ahead	Inf	100.0 %	2055	2055
2/3 (A48 (Eastbound Approach))	3.00	0.00	N	Arm 11 Right	Inf	100.0 %	2055	2055
3/1 (B4265 (Southbound Approach))	3.30	0.00	Y	Arm 8 Left	Inf	100.0 %	1945	1945
3/2 (B4265 (Southbound Approach))	3.00	0.00	N	Arm 9 Right	Inf	67.5 %	2055	2055
				Arm 11 Ahead	Inf	32.5 %		
4/1 (B4265 (Northbound Approach))	2.80	0.00	Y	Arm 9 Left	Inf	48.0 %	1895	1895
				Arm 10 Ahead	Inf	52.0 %		
4/2 (B4265 (Northbound Approach))	2.80	0.00	N	Arm 8 Right	Inf	100.0 %	2035	2035
5/1 (A48 (Westbound Feeder Approach))	3.00	0.00	Y	Arm 1 Ahead	Inf	100.0 %	1915	1915
6/1 (A48 (Eastbound Feeder Approach))	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/1 (B4265 (Southbound Feeder Approach) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A48 (Eastbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A48 (Eastbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A48 (Westbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A48 (Westbound Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (B4265 (Northbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (B4265 (Southbound Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2033 Without Dev AM' (FG1: '2033 No Development AM', Plan 1: '4 Stage Cycle')

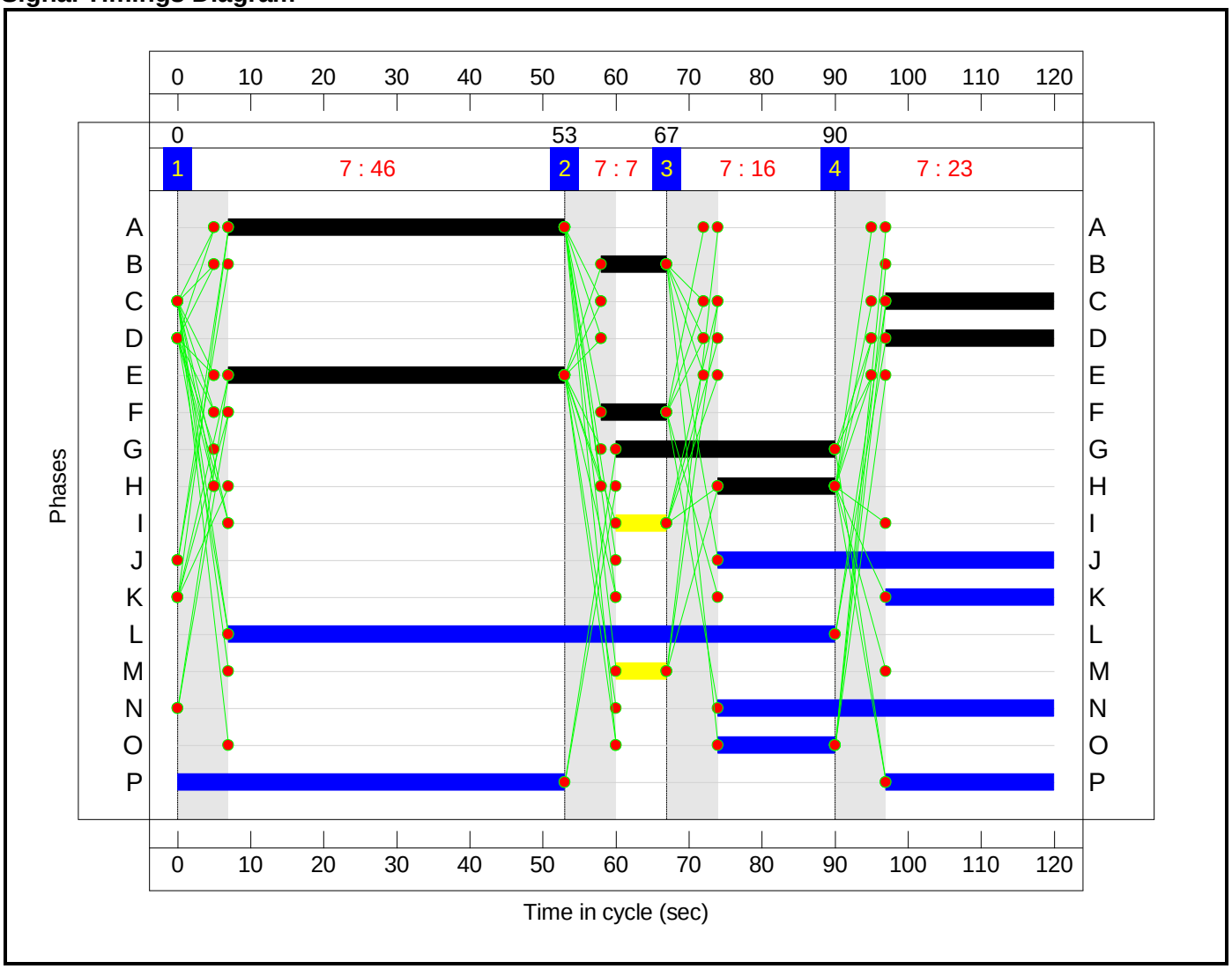
Stage Sequence Diagram



Stage Timings

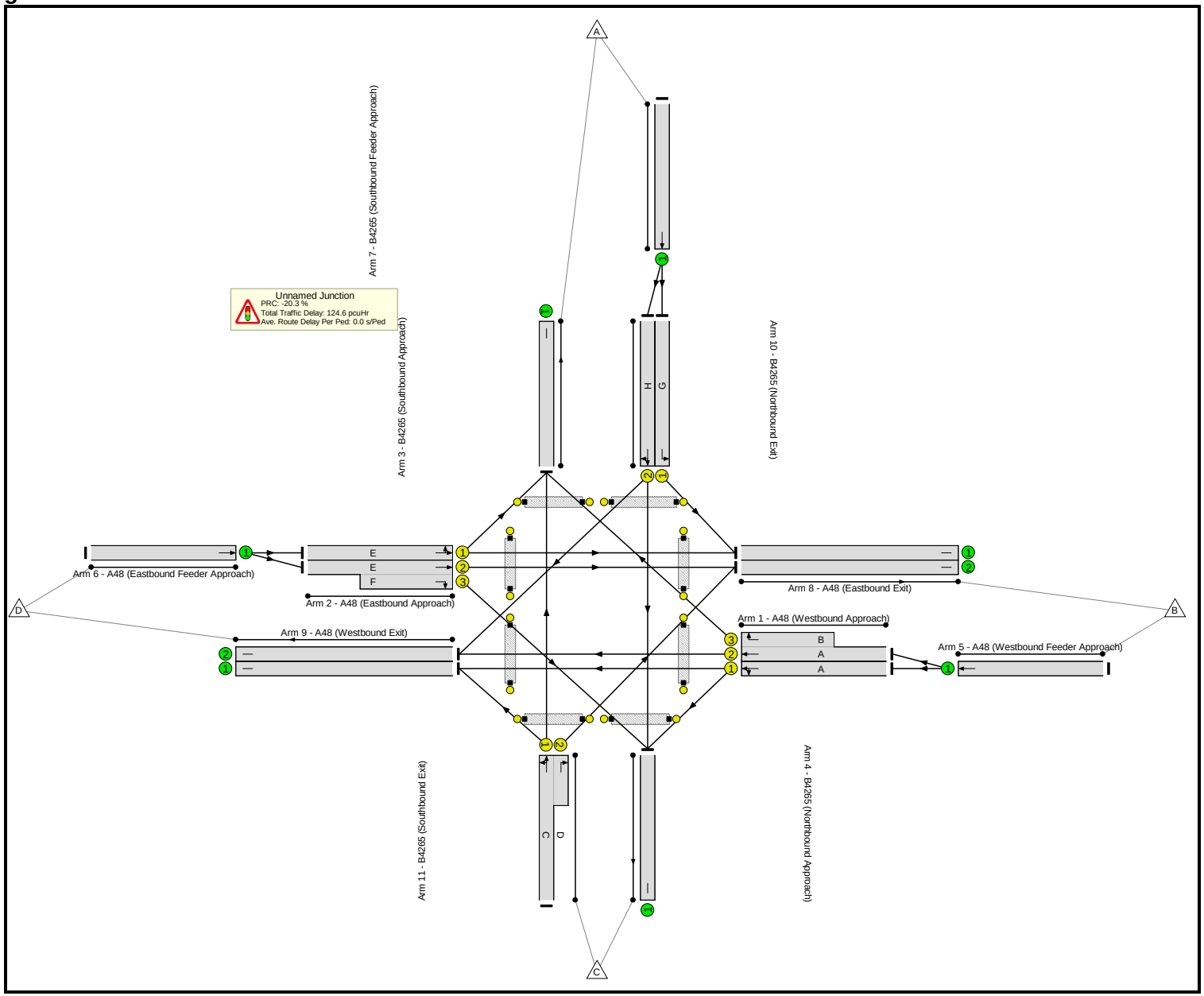
Stage	1	2	3	4
Duration	46	7	16	23
Change Point	0	53	67	90

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Island Farm Full Scheme Flows	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.2%**
1/1	A48 (Westbound Approach) Ahead Left	U	N/A	N/A	A		1	46	-	361	1895	742	48.6%
1/2+1/3	A48 (Westbound Approach) Ahead Right	U	N/A	N/A	A B		1	46:9	-	336	2035:2035	301+170	71.4 : 71.4%
2/1	A48 (Eastbound Approach) Ahead Left	U	N/A	N/A	E		1	46	-	809	1915	750	107.9%
2/2+2/3	A48 (Eastbound Approach) Ahead Right	U	N/A	N/A	E F		1	46:9	-	647	2055:2055	732+128	75.3 : 75.3%
3/1	B4265 (Southbound Approach) Left	U	N/A	N/A	G		1	30	-	148	1945	502	29.5%
3/2	B4265 (Southbound Approach) Right Ahead	U	N/A	N/A	H		1	16	-	315	2055	291	108.2%
4/1+4/2	B4265 (Northbound Approach) Right Left Ahead	U	N/A	N/A	C D		1	23	-	563	1895:2035	292+228	108.2 : 108.2%
5/1	A48 (Westbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	697	1915	1915	36.4%
6/1	A48 (Eastbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	1456	1915	1915	76.0%
7/1	B4265 (Southbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	463	Inf	Inf	0.0%

Full Input Data And Results

8/1	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
8/2	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	798	Inf	Inf	0.0%
9/1	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	280	Inf	Inf	0.0%
9/2	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	383	Inf	Inf	0.0%
10/1	B4265 (Northbound Exit)	U	N/A	N/A	-		-	-	-	629	Inf	Inf	0.0%
11/1	B4265 (Southbound Exit)	U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	46	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	23	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	L		1	83	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	N		1	46	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	7	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	O		1	16	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	P		1	76	-	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: Island Farm Full Scheme Flows	**-**	**-**	**0**	**0**	**0**	**40.8**	**83.9**	**0.0**	**124.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**40.8**	**83.9**	**0.0**	**124.6**	**-**	**-**	**-**	**-**
1/1	361	361	-	-	-	2.8	0.5	-	3.2	32.1	9.0	0.5	9.5
1/2+1/3	336	336	-	-	-	3.3	1.2	-	4.5	48.3	4.8	1.2	6.1
2/1	809	750	-	-	-	11.6	35.2	-	46.8	208.4	28.9	35.2	64.2
2/2+2/3	647	647	-	-	-	6.1	1.5	-	7.6	42.2	16.5	1.5	18.0
3/1	148	148	-	-	-	1.5	0.2	-	1.7	40.8	3.9	0.2	4.2
3/2	315	291	-	-	-	5.5	16.7	-	22.2	253.8	11.3	16.7	28.0
4/1+4/2	563	520	-	-	-	10.0	26.7	-	36.7	235.0	16.9	26.7	43.6
5/1	697	697	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
6/1	1456	1456	-	-	-	0.0	1.6	-	1.6	3.9	0.0	1.6	1.6
7/1	463	463	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	659	659	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	275	275	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	370	370	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	591	591	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	379	379	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

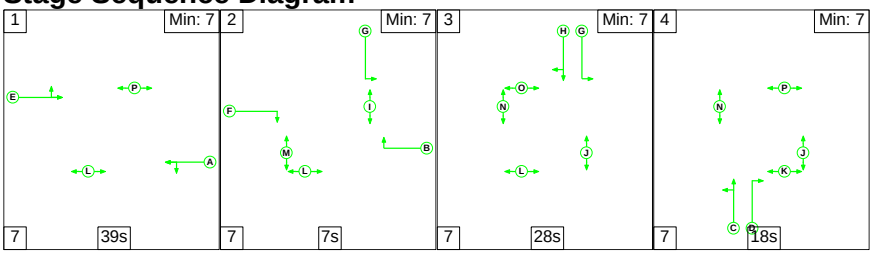
C1

PRC for Signalled Lanes (%): -20.3
PRC Over All Lanes (%): -20.3
Total Delay for Signalled Lanes (pcuHr): 122.78
Total Delay Over All Lanes(pcuHr): 124.64
Cycle Time (s): 120

Full Input Data And Results

Scenario 2: '2033 Without Dev PM' (FG2: '2033 No Development PM', Plan 1: '4 Stage Cycle')

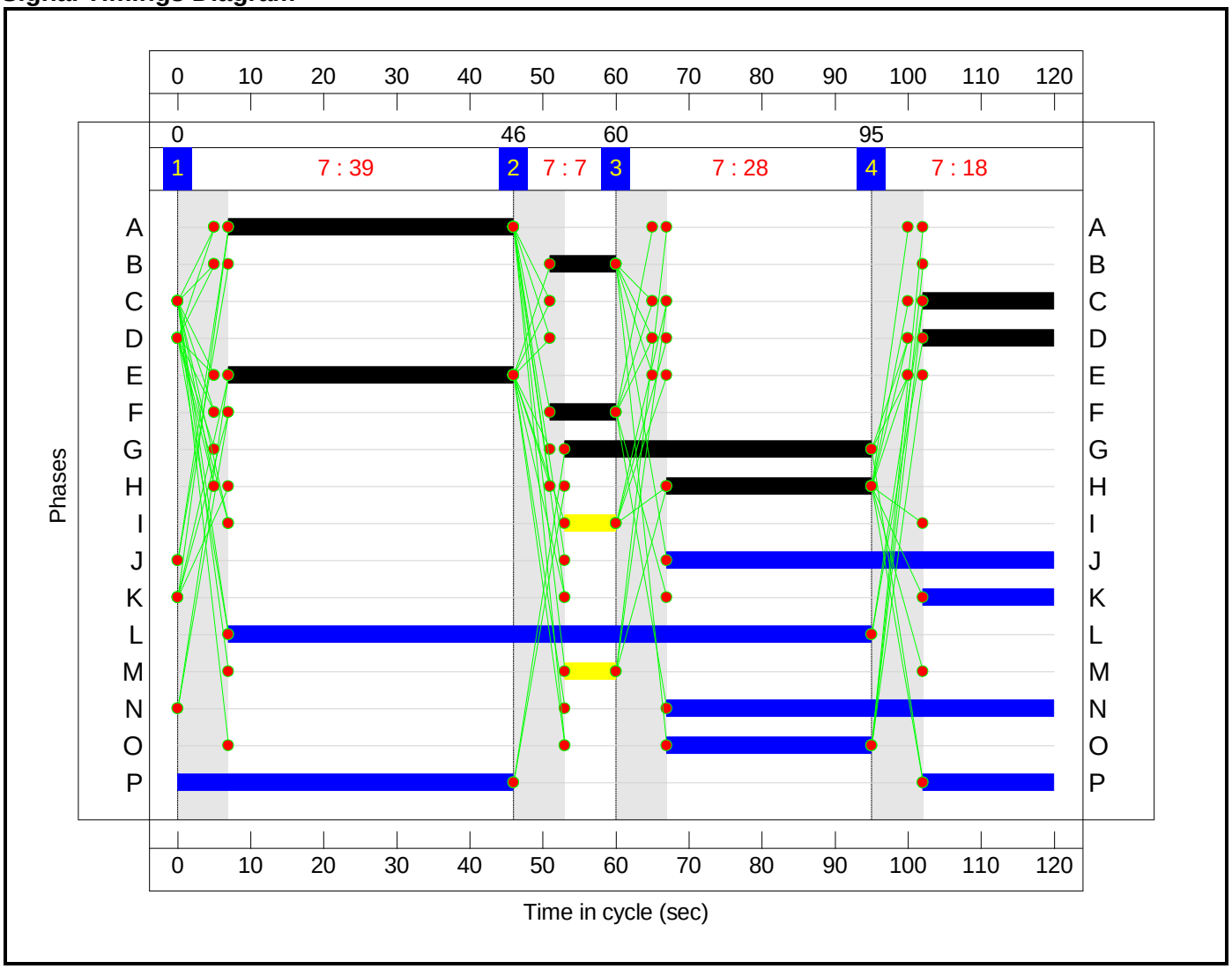
Stage Sequence Diagram



Stage Timings

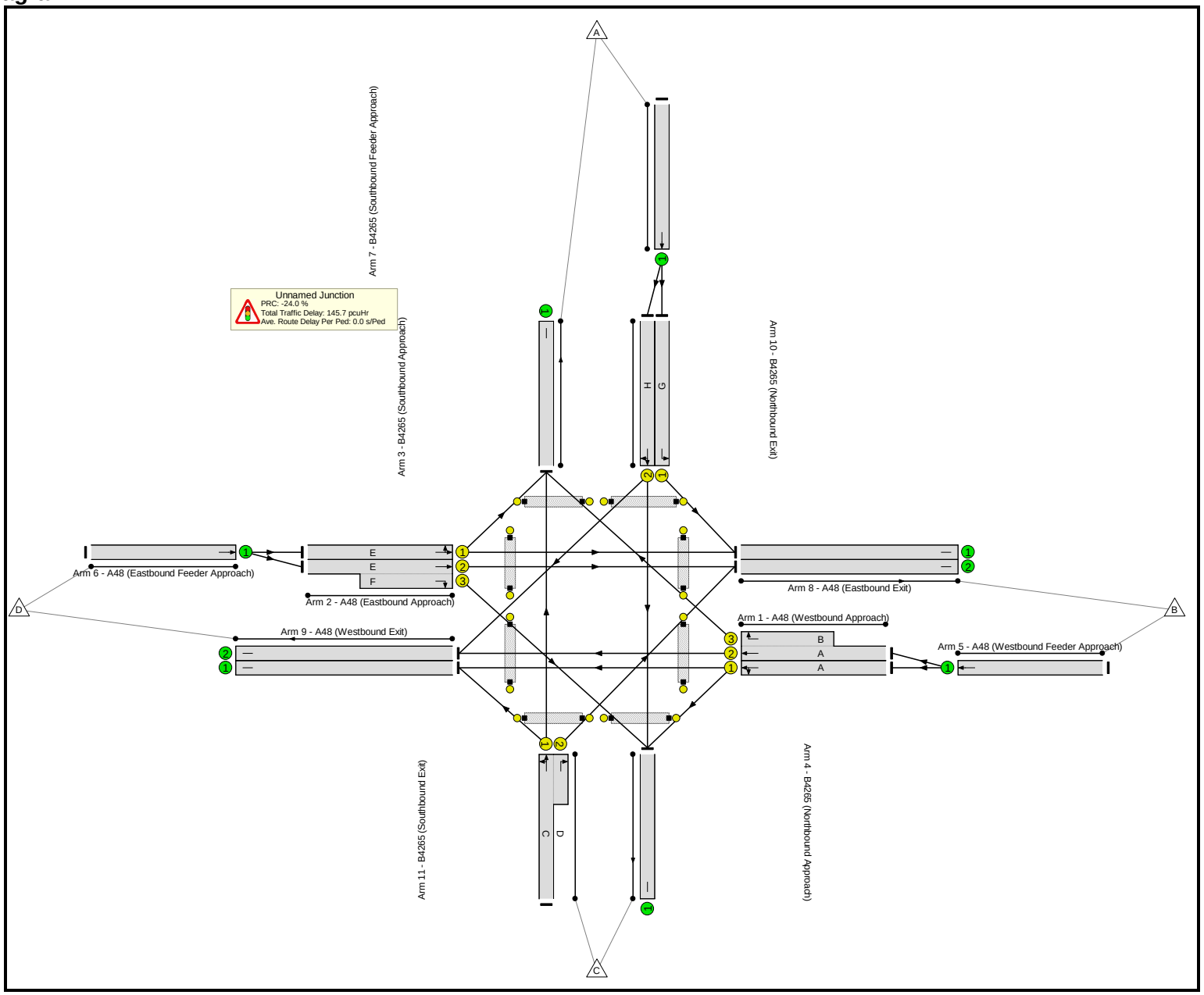
Stage	1	2	3	4
Duration	39	7	28	18
Change Point	0	46	60	95

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: Island Farm Full Scheme Flows	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.6%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.6%**
1/1	A48 (Westbound Approach) Ahead Left	U	N/A	N/A	A		1	39	-	705	1895	632	111.6%
1/2+1/3	A48 (Westbound Approach) Ahead Right	U	N/A	N/A	A B		1	39:9	-	612	2035:2035	662+41	87.0 : 87.0%
2/1	A48 (Eastbound Approach) Ahead Left	U	N/A	N/A	E		1	39	-	416	1915	638	65.2%
2/2+2/3	A48 (Eastbound Approach) Ahead Right	U	N/A	N/A	E F		1	39:9	-	357	2055:2055	615+140	47.3 : 47.3%
3/1	B4265 (Southbound Approach) Left	U	N/A	N/A	G		1	42	-	58	1945	697	8.3%
3/2	B4265 (Southbound Approach) Right Ahead	U	N/A	N/A	H		1	28	-	546	2055	497	109.9%
4/1+4/2	B4265 (Northbound Approach) Right Left Ahead	U	N/A	N/A	C D		1	18	-	450	1895:2035	256+153	110.1 : 110.1%
5/1	A48 (Westbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	1317	1915	1915	68.8%
6/1	A48 (Eastbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	773	1915	1915	40.4%
7/1	B4265 (Southbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%

Full Input Data And Results

8/1	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	349	Inf	Inf	0.0%
8/2	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	459	Inf	Inf	0.0%
9/1	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	707	Inf	Inf	0.0%
9/2	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	926	Inf	Inf	0.0%
10/1	B4265 (Northbound Exit)	U	N/A	N/A	-		-	-	-	311	Inf	Inf	0.0%
11/1	B4265 (Southbound Exit)	U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	53	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	18	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	L		1	88	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	N		1	53	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	7	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	O		1	28	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	P		1	64	-	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: Island Farm Full Scheme Flows	**-**	**-**	**0**	**0**	**0**	**44.3**	**101.4**	**0.0**	**145.7**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**44.3**	**101.4**	**0.0**	**145.7**	**-**	**-**	**-**	**-**
1/1	705	632	-	-	-	12.1	41.0	-	53.1	271.2	25.9	41.0	66.9
1/2+1/3	612	612	-	-	-	6.5	3.1	-	9.6	56.6	18.4	3.1	21.6
2/1	416	416	-	-	-	3.9	0.9	-	4.9	42.1	11.8	0.9	12.7
2/2+2/3	357	357	-	-	-	3.5	0.4	-	3.9	39.5	7.5	0.4	8.0
3/1	58	58	-	-	-	0.4	0.0	-	0.5	28.3	1.3	0.0	1.3
3/2	546	497	-	-	-	9.1	29.3	-	38.4	253.1	19.8	29.3	49.2
4/1+4/2	450	409	-	-	-	8.8	25.1	-	33.9	271.6	14.2	25.1	39.2
5/1	1317	1317	-	-	-	0.0	1.1	-	1.1	3.0	0.0	1.1	1.1
6/1	773	773	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
7/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	349	349	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	444	444	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	635	635	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	894	894	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	297	297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	361	361	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

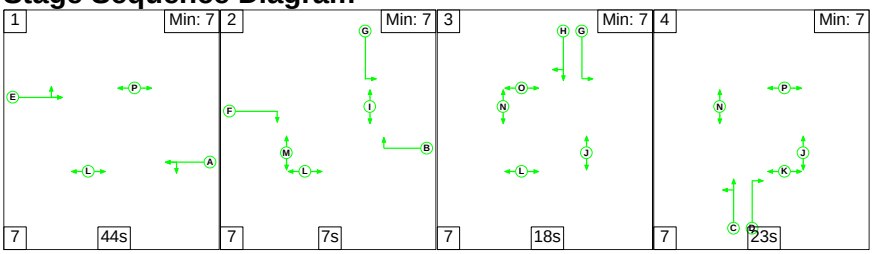
C1 PRC for Signalled Lanes (%): -24.0 Total Delay for Signalled Lanes (pcuHr): 144.30 Cycle Time (s): 120

PRC Over All Lanes (%): -24.0 Total Delay Over All Lanes(pcuHr): 145.74

Full Input Data And Results

Scenario 3: '2033 With Dev AM' (FG3: '2033 WITH Development AM', Plan 1: '4 Stage Cycle')

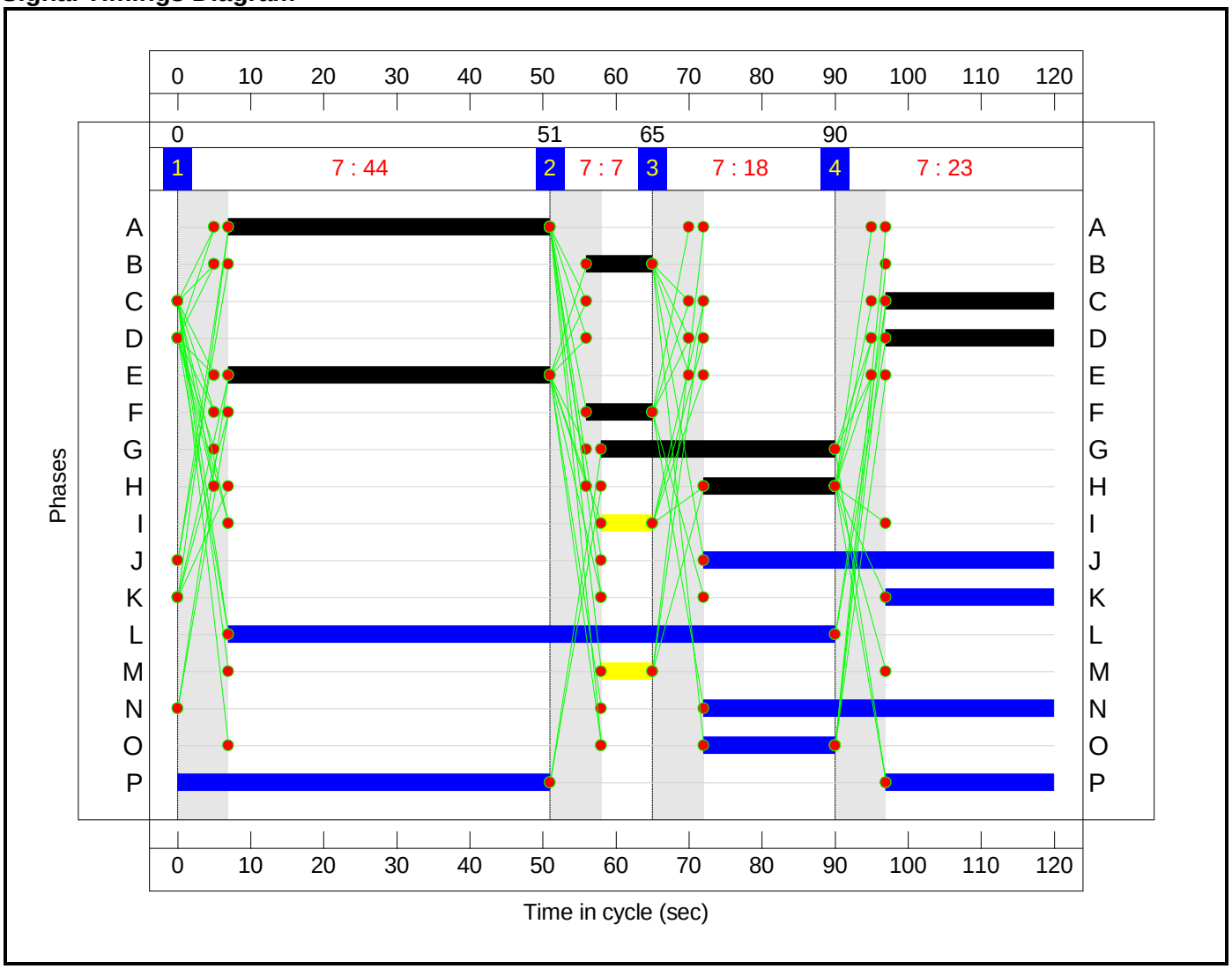
Stage Sequence Diagram



Stage Timings

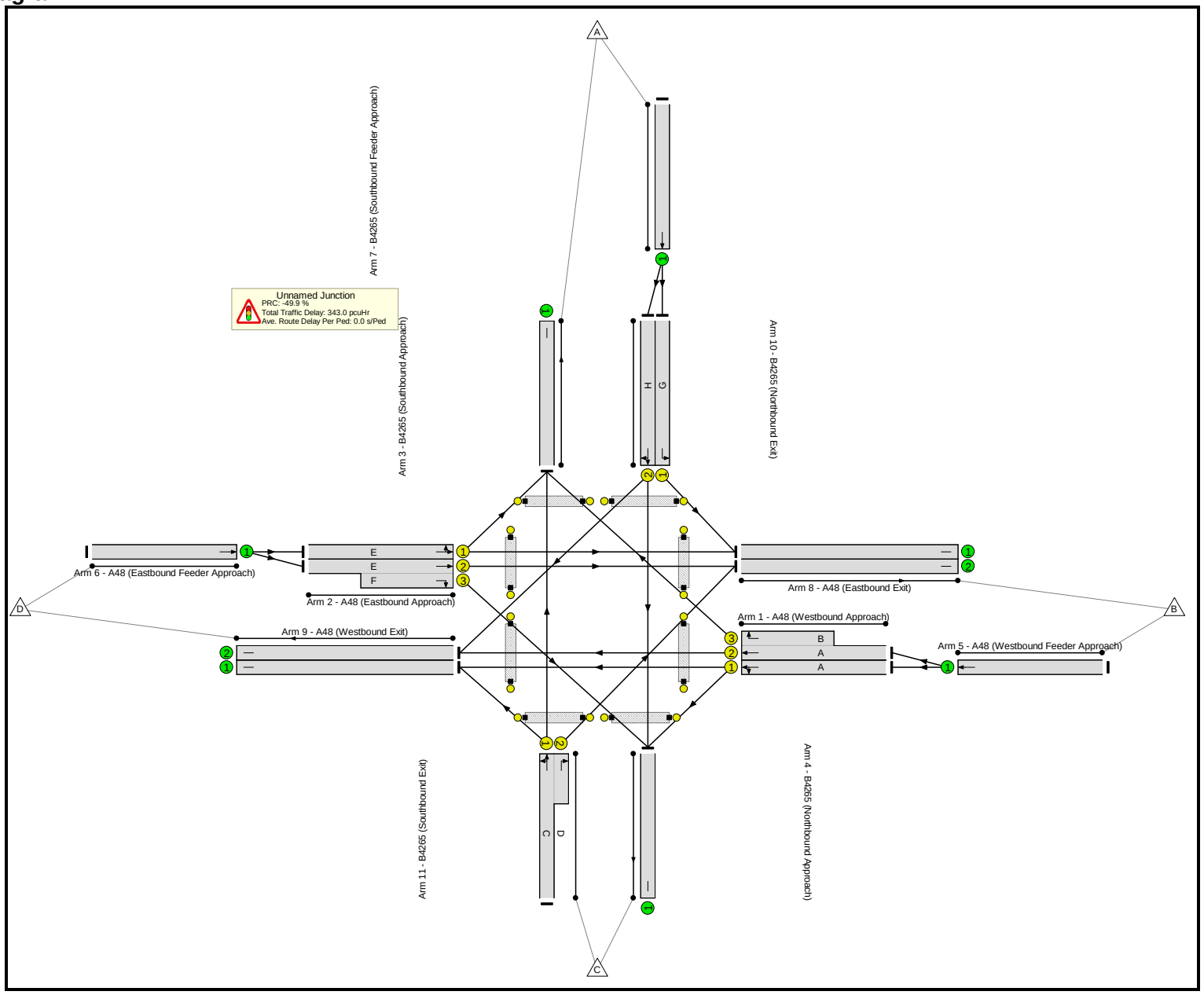
Stage	1	2	3	4
Duration	44	7	18	23
Change Point	0	51	65	90

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Island Farm Full Scheme Flows	-	-	**N/A**	-	-		-	-	-	-	-	-	**134.9%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**134.9%**
1/1	A48 (Westbound Approach) Ahead Left	U	N/A	N/A	A		1	44	-	425	1895	711	59.8%
1/2+1/3	A48 (Westbound Approach) Ahead Right	U	N/A	N/A	A B		1	44:9	-	359	2035:2035	334+170	71.4 : 71.4%
2/1	A48 (Eastbound Approach) Ahead Left	U	N/A	N/A	E		1	44	-	962	1915	718	134.0%
2/2+2/3	A48 (Eastbound Approach) Ahead Right	U	N/A	N/A	E F		1	44:9	-	751	2055:2055	674+171	88.3 : 91.1%
3/1	B4265 (Southbound Approach) Left	U	N/A	N/A	G		1	32	-	148	1945	535	27.7%
3/2	B4265 (Southbound Approach) Right Ahead	U	N/A	N/A	H		1	18	-	416	2055	325	127.9%
4/1+4/2	B4265 (Northbound Approach) Right Left Ahead	U	N/A	N/A	C D		1	23	-	682	1895:2035	299+207	134.9 : 134.9%
5/1	A48 (Westbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	784	1915	1915	40.9%
6/1	A48 (Eastbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	1713	1915	1915	89.5%
7/1	B4265 (Southbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	564	Inf	Inf	0.0%

Full Input Data And Results

8/1	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	743	Inf	Inf	0.0%
8/2	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	874	Inf	Inf	0.0%
9/1	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	351	Inf	Inf	0.0%
9/2	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
10/1	B4265 (Northbound Exit)	U	N/A	N/A	-		-	-	-	777	Inf	Inf	0.0%
11/1	B4265 (Southbound Exit)	U	N/A	N/A	-		-	-	-	541	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	48	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	23	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	L		1	83	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	N		1	48	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	7	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	O		1	18	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	P		1	74	-	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: Island Farm Full Scheme Flows	**-**	**-**	**0**	**0**	**0**	**71.3**	**271.7**	**0.0**	**343.0**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**71.3**	**271.7**	**0.0**	**343.0**	**-**	**-**	**-**	**-**
1/1	425	425	-	-	-	3.6	0.7	-	4.3	36.5	11.3	0.7	12.1
1/2+1/3	359	359	-	-	-	3.6	1.2	-	4.8	47.9	5.6	1.2	6.8
2/1	962	718	-	-	-	24.2	123.9	-	148.1	554.1	40.2	123.9	164.1
2/2+2/3	751	751	-	-	-	7.9	3.7	-	11.6	55.7	20.4	3.7	24.1
3/1	148	148	-	-	-	1.4	0.2	-	1.6	38.8	3.9	0.2	4.1
3/2	416	325	-	-	-	9.8	47.5	-	57.3	495.8	16.9	47.5	64.4
4/1+4/2	682	506	-	-	-	20.9	90.1	-	111.0	585.7	30.1	90.1	120.2
5/1	784	784	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
6/1	1713	1713	-	-	-	0.0	4.1	-	4.1	8.6	0.0	4.1	4.1
7/1	564	564	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	592	592	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	802	802	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	322	322	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	409	409	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	609	609	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	498	498	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

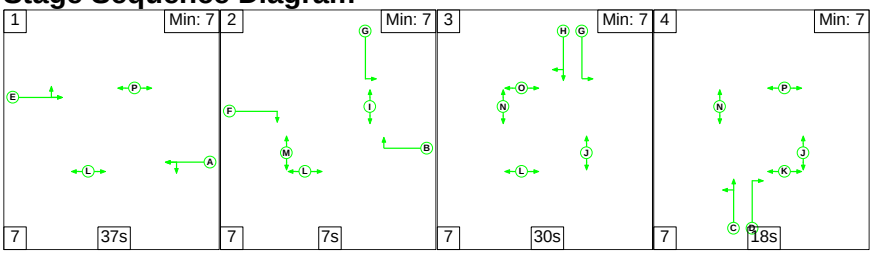
C1

PRC for Signalled Lanes (%): -49.9
PRC Over All Lanes (%): -49.9
Total Delay for Signalled Lanes (pcuHr): 338.62
Total Delay Over All Lanes(pcuHr): 343.04
Cycle Time (s): 120

Full Input Data And Results

Scenario 4: '2033 With Dev PM' (FG4: '2033 WITH Development PM', Plan 1: '4 Stage Cycle')

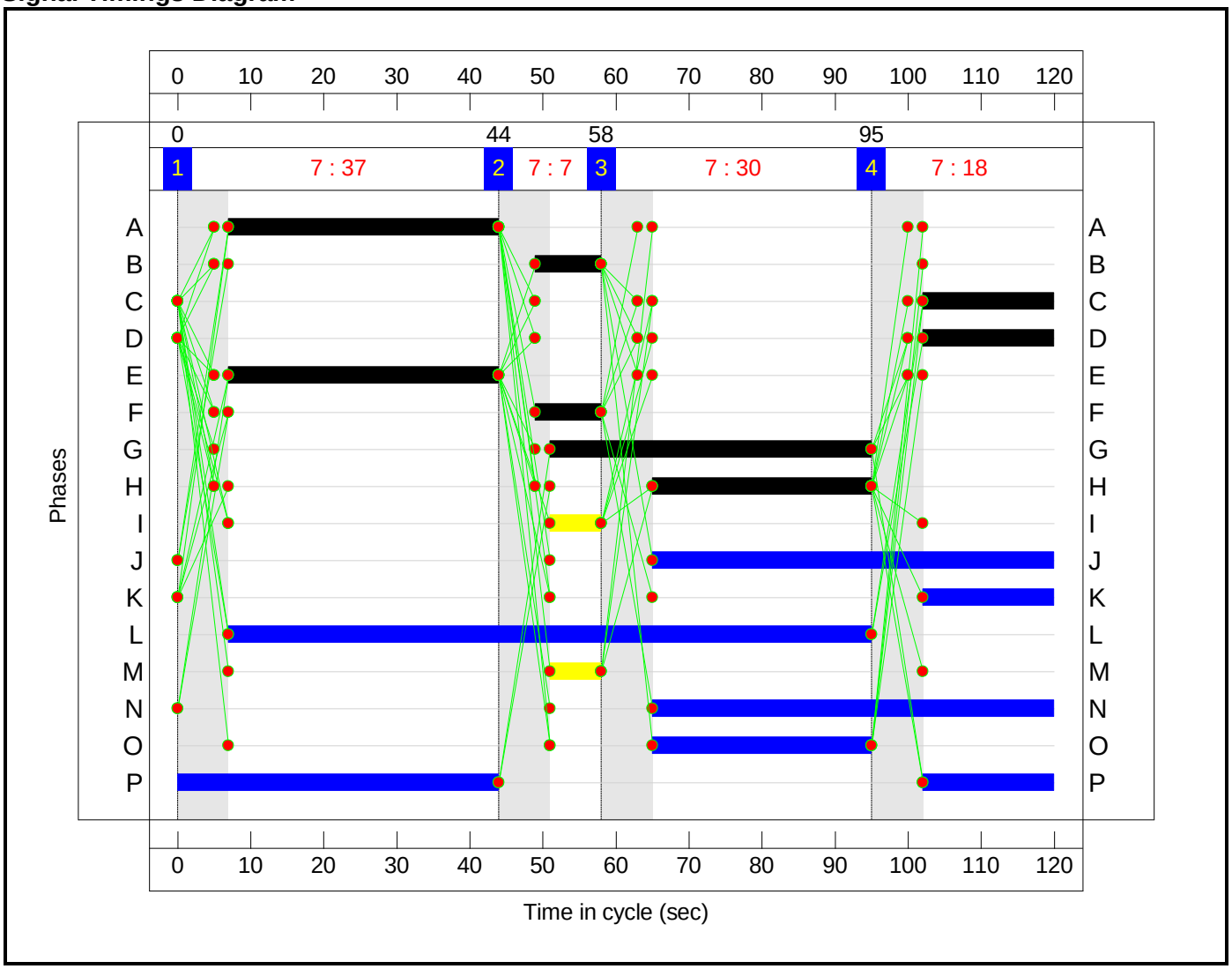
Stage Sequence Diagram



Stage Timings

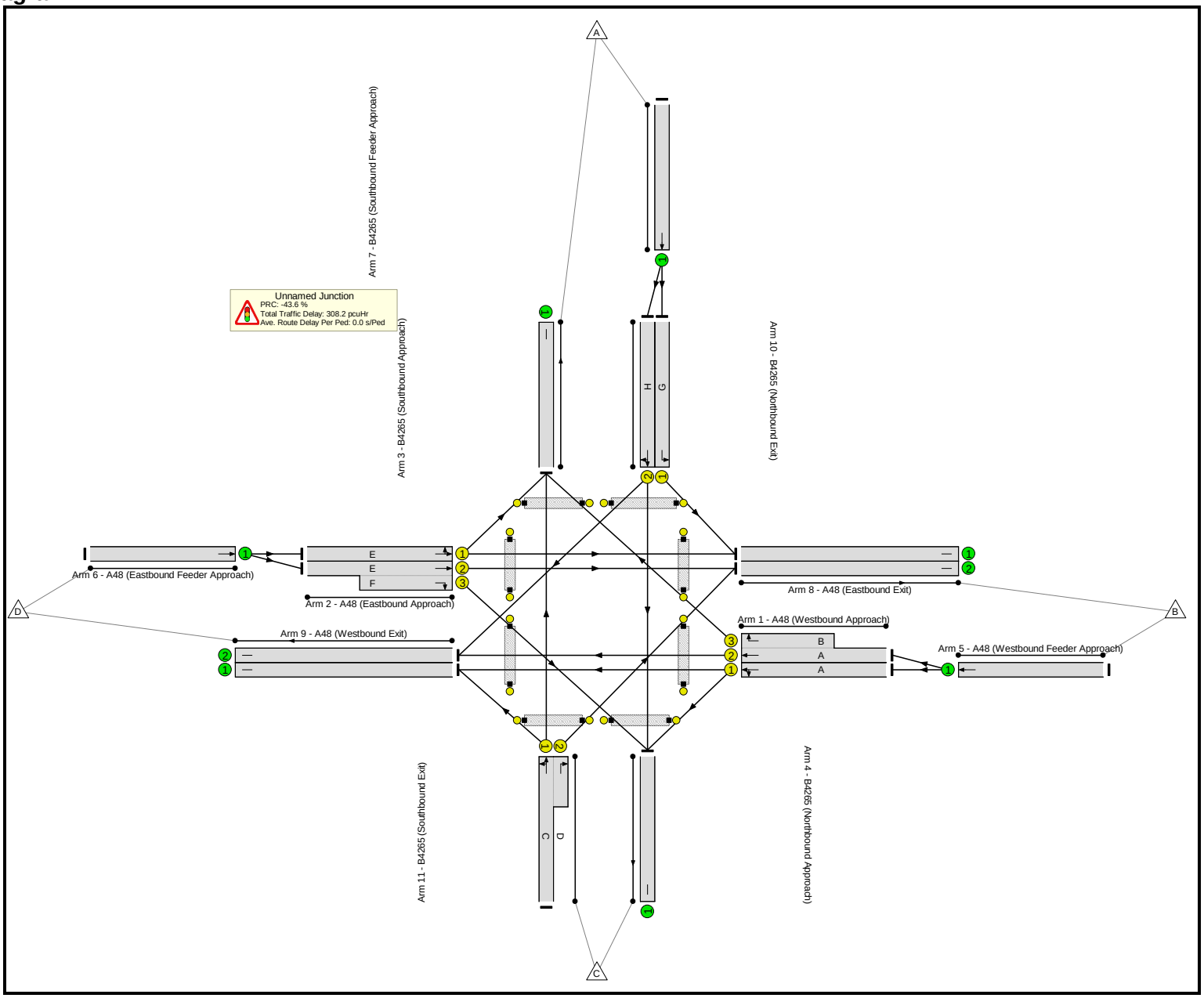
Stage	1	2	3	4
Duration	37	7	30	18
Change Point	0	44	58	95

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: Island Farm Full Scheme Flows	-	-	**N/A**	-	-		-	-	-	-	-	-	**129.2%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**129.2%**
1/1	A48 (Westbound Approach) Ahead Left	U	N/A	N/A	A		1	37	-	773	1895	600	128.8%
1/2+1/3	A48 (Westbound Approach) Ahead Right	U	N/A	N/A	A B		1	37:9	-	658	2035:2035	631+37	98.5 : 98.5%
2/1	A48 (Eastbound Approach) Ahead Left	U	N/A	N/A	E		1	37	-	480	1915	606	79.2%
2/2+2/3	A48 (Eastbound Approach) Ahead Right	U	N/A	N/A	E F		1	37:9	-	406	2055:2055	568+171	54.4 : 56.6%
3/1	B4265 (Southbound Approach) Left	U	N/A	N/A	G		1	44	-	58	1945	729	8.0%
3/2	B4265 (Southbound Approach) Right Ahead	U	N/A	N/A	H		1	30	-	679	2055	531	127.9%
4/1+4/2	B4265 (Northbound Approach) Right Left Ahead	U	N/A	N/A	C D		1	18	-	523	1895:2035	258+147	129.2 : 129.2%
5/1	A48 (Westbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	1431	1915	1915	74.7%
6/1	A48 (Eastbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	886	1915	1915	46.3%
7/1	B4265 (Southbound Feeder Approach) Ahead	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%

Full Input Data And Results

8/1	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	367	Inf	Inf	0.0%
8/2	A48 (Eastbound Exit)	U	N/A	N/A	-		-	-	-	499	Inf	Inf	0.0%
9/1	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	781	Inf	Inf	0.0%
9/2	A48 (Westbound Exit)	U	N/A	N/A	-		-	-	-	1080	Inf	Inf	0.0%
10/1	B4265 (Northbound Exit)	U	N/A	N/A	-		-	-	-	380	Inf	Inf	0.0%
11/1	B4265 (Southbound Exit)	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	55	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	18	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	L		1	88	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	N		1	55	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	7	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	O		1	30	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	P		1	62	-	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: Island Farm Full Scheme Flows	**-**	**-**	**0**	**0**	**0**	**67.0**	**241.2**	**0.0**	**308.2**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**67.0**	**241.2**	**0.0**	**308.2**	**-**	**-**	**-**	**-**
1/1	773	600	-	-	-	19.0	88.6	-	107.6	501.3	31.5	88.6	120.2
1/2+1/3	658	658	-	-	-	7.5	10.6	-	18.1	99.1	21.2	10.6	31.8
2/1	480	480	-	-	-	5.0	1.8	-	6.8	51.2	14.5	1.8	16.4
2/2+2/3	406	406	-	-	-	4.3	0.6	-	4.9	43.1	8.2	0.6	8.8
3/1	58	58	-	-	-	0.4	0.0	-	0.4	26.9	1.2	0.0	1.3
3/2	679	531	-	-	-	15.7	76.3	-	92.0	487.6	28.4	76.3	104.6
4/1+4/2	523	405	-	-	-	15.1	61.3	-	76.4	526.1	21.8	61.3	83.1
5/1	1431	1431	-	-	-	0.0	1.5	-	1.5	3.7	0.0	1.5	1.5
6/1	886	886	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
7/1	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	367	367	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	456	456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	606	606	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	980	980	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	341	341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	388	388	-	-	-	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	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -43.6 Total Delay for Signalled Lanes (pcuHr): 306.29 Cycle Time (s): 120

PRC Over All Lanes (%): -43.6 Total Delay Over All Lanes(pcuHr): 308.19