



FORTY ACRE FARM, BEDHAMPTON

SUSTAINABILITY REVIEW REPORT

October 2018

Barratt David Wilson Homes

**RESIDENTIAL DEVELOPMENT
FORTY ACRE FARM
BEDHAMPTON**

SUSTAINABILITY REVIEW REPORT

CONTROLLED DOCUMENT

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RESIDENTIAL DEVELOPEMENT FORTY ACRE FARM BEDHAMPTON

SUSTAINABILITY REVIEW REPORT

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1. INTRODUCTION

1.1 This Sustainability Review Report (SRR) has been prepared by Paul Basham Associates (PBA) on behalf of Barratt David Wilson Homes to respond to highway officer comments following the submission of a planning application for 320 residential dwellings, a 66-bedroom care home, allotments, habitat mitigation zone, provision of public open space and associated infrastructure at Forty Acre Farm, Bedhampton (application reference: APP/18/00450).

1.2 The purpose of this SRR is to:

- Review sustainable travel options to school (infant, junior and secondary)
- Review sustainable travel options to local amenities
- Review of PV Squared calculations and additional crossing provision

1.3 In the preparation of this report, a number of site visits have been undertaken which include all the route options.

1.4 To support the route to school, a review of Hampshire's guidance has been conducted to identify how many school age children would likely be generated by the proposed development. Hampshire County Council (HCC's) guidelines are as follows:

- 0.30 primary school aged children (ages 4-11) per dwelling
- 0.21 secondary school aged children (ages 11-16) per dwelling

Using Hampshire's guidelines, this equates to 96 primary aged school children and 67 secondary school aged children from the 320 homes.

1.5 HCC also outlines guidance for free school transport where the Council will provide such free transport if the child attends the nearest catchment school or one that is nearer to the home and the distance (measured by the nearest available walking route from where the property meets the adopted road, public footpaths, bridleways and other pathways to the nearest school grounds) is:

- More than 2 miles (3.2km) for Year R to Year 3
- More than 3 miles (4.8km) for Year 4 to Year 11 (with a reduction to more than 2 miles if the child meets the low income criteria).

2. SUSTAINABLE TRAVEL OPTIONS TO PRIMARY SCHOOL

- 2.1 The proposed site location with reference to the Bidbury Infants and Bidbury Junior School is identified below in **Figure 1** with the site location red and the schools in blue.

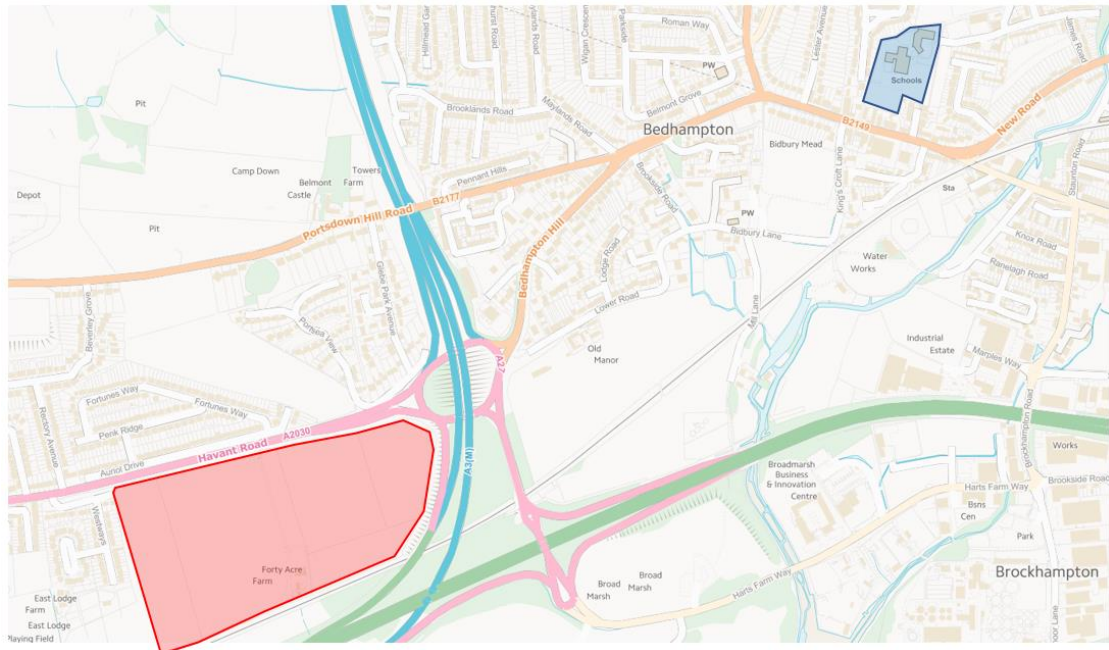


Figure 1: Site location in connect of local schools

- 2.2 This section reviews the sustainable routes to school and will be based on a RAG (Red, Amber, Green) style grading system for the following criteria:
- Convenience
 - Number of road crossings
 - Gradients
 - Directness
 - Journey Time/Travel Distance
 - Safety
 - Cost of any highway works
- 2.3 This grading criteria follows the five core principles identified in Local Transport Note 1/04 'Policy, Planning and Design for Walking and Cycling' of *Convenient, Accessible, Safe, Comfortable* and *Attractive*.

- 2.4 The review of the route to the primary schools has been split into 9 sections (a-i), with the first four options reviewing the route from the site up to the Bedhampton Hill /Portsdown Hill Road/Maylands Roundabout via the north and south of the Rusty Cutter and via Glebe Park Avenue (a-d). Once pedestrians have accessed this roundabout the route towards the Bidbury Schools would be the same and this route has therefore been covered separately, with two options, the first along the northern side of the carriageway (e) and the second along the southern side of the carriageway (f). The remaining three sections (g-i) review alternative travel modes including cycling, a park and stride and public transport.

a. Existing Route around north of Rusty Cutter

- 2.5 As part of the development proposals a 3m wide footway/cycleway is provided along the southern side of the Havant Road carriageway up to the existing bus stop on the southern side of the carriageway to the east of the development. At the location of the existing bus stop there is an existing uncontrolled pedestrian crossing (including central refuge) which is provided with dropped kerbs and tactile paving as evident in **Photograph 1**.



Photograph 1: Uncontrolled crossing at Havant Road

- 2.6 Crossing Havant Road south to north pedestrians (and cyclists) connect onto a newly implemented footway/cycleway which borders the northern side of Havant Road and was implemented in association with a nearby 47-unit residential development known as 'One Eight Zero' (APP/14/00199). The footway/cycleway continues around the north of the Rusty Cutter roundabout although the width does vary and there is a small section at the Bedhampton Hill/Havant Road junction where cyclists would need to dismount and proceed on the carriageway for circa 60m. Images of the footway/cycleway up to the A3(M) northbound on-slip are provided in **Photographs 2-5**.



Photograph 2: New footway/cycleway along Havant Road



Photograph 3: Footway on Bedhampton Hill (Where footway/cycleway ceases)



Photograph 4: Where cyclists re-join footway/cycleway



Photograph 5: Footway/cycleway on Rusty Cutter leading up to A3M northbound on-slip

- 2.7 At the A3(M) northbound on-slip there is an existing uncontrolled crossing which is facilitated by bollards, dropped kerbs and tactile paving as evident in **Photograph 6**. The footway/cycleway continues north under the A3(M) motorway bridge. At this point, cyclists are to dismount and the footway width decreases to c. 1.5m although guard railing is in place which helps create a safe pedestrian environment (see **Photograph 7**). The A3(M) southbound off-slip is signalised which allows pedestrians to cross when vehicle movements are stopped on the red phase. This crossing is facilitated by dropped kerbs and tactile paving as demonstrated in **Photograph 8**. There are currently no pedestrian lights at this arm, and it is therefore proposed that a light is placed at this arm for pedestrians to clearly see when it is safe to cross.



Photograph 6: Uncontrolled crossing across A3M Northbound on-slip



Photograph 7: Footway under A3M Motorway Bridge



Photograph 8: Crossing across A3(M) southbound



Photograph 9: Footway/cycleway leading up to Bedhampton Hill Road

- 2.8 Once onto Bedhampton Hill, the footway/cycleway continues for some 65m (see **Photograph 9**), where only the footway continues north up Bedhampton Hill. Cyclists are instead routed across the Bedhampton Hill exit and entry arms (facilitated by dropped kerbs and tactile paving). The footway/cycleway then continues south towards the A27 and Harts Farm Way and east onto Lower Way.
- 2.9 Along Bedhampton Hill there is an existing footway between 1.7m to 2m in width running along the western side of the carriageway (see **Photograph 10**). At the Bedhampton Hill/Bedhampton Hill junction there is currently a pedestrian refuge island with dropped kerbs (see **Photograph 11**). As part of the development, it is proposed that the footway/cycleway which does not currently continue along Bedhampton Hill is extended up to the Bedhampton Hill/Bedhampton Hill junction and circa 35m north of this junction providing a 3m wide footway/cycleway utilising existing highway verge. The existing pedestrian refuge island crossing is also to be upgraded to provide tactile paving along with an increased pedestrian refuge width to facilitate cyclists waiting at the island. A plan demonstrating the proposals is attached as **Appendix A**.
- 2.10 Once past this junction a new pedestrian refuge island is proposed within the existing hatching of the tight turn lane into Maple Wood which would be wide enough to facilitate pedestrians waiting (see **Photograph 12**). This allows pedestrians to cross onto the southern side of Bedhampton Hill which provides the most practical and quickest route for pedestrians with wider footways, fewer junctions to cross and lesser gradients (reviewed in more detail below) (see **Photograph 13**). At the termination of the footway/cycleway signage and corduroy paving would be provided to direct cyclists to join the carriageway. The highway works proposed along Bedhampton Hill are considered sufficient to provide an attractive pedestrian and cyclist route along a section of hill. Photographs of the conditions along this route and the existing crossings are demonstrated below.



Photograph 10: Conditions along Bedhampton Hill



Photograph 11: Bedhampton Hill/Bedhampton Hill Crossing



Photograph 12: Location of existing hatching and new pedestrian refuge island



Photograph 13: Southern side of Bedhampton Hill

- 2.11 Once on the southern side of Bedhampton Hill the existing conditions up to the Bedhampton Hill/Portsmouth Hill Road/Maylands Road roundabout are considered sufficient and should not require any off-site highway works. The footway varies in width with a minimum width of around 1m with a more consistent width of 1.2m which in accordance with Manual for Streets is sufficient to allow a parent and child to walk along the footway. There is also a grass verge along the footway which provides a separation from the carriageway which helps to create a safe and attractive pedestrian route. The gradient of the footway itself is relatively consistent however the grass verge slopes up towards the carriageway and any widening of the footway would require regrading of the footway to increase the crossfall (thus making this less attractive) and possibly require drainage features to stop water from the footway entering private drives. Both sides of the Bedhampton Hill carriageway have dropped kerbs which interact with the pedestrians utilising the footway.
- 2.12 There are also concerns with upgrading the existing footway to a footway/cycleway on the northern and southern side of Bedhampton Hill due to the high number of individual driveways which are accessed through the existing footway and the interaction between cyclists and these driveways on this section. It is therefore proposed that the footway remains untouched given it is considered sufficient in its current state to support pedestrian trips to the local schools and facilities.



Photograph 14: Southern side of Bedhampton Hill



Photograph 15: Southern side of Bedhampton Hill

- 2.13 By continuing on the southern side of Bedhampton Hill pedestrians would not need to cross the Bedhampton Hill/Portsmouth Hill Road/Maylands Road roundabout. Instead pedestrians would need to cross the quieter Brookside Road/Bedhampton Road junction. The conditions at this junction and along the southern carriageway of Bedhampton Road are discussed in more detail below.
- 2.14 Alternatively, if pedestrians do not wish to cross Bedhampton Hill following the termination of the footway/cycleway they could instead continue on the northern side of Bedhampton Hill. Similar to the southern side of Bedhampton Hill, the footway varies in width with a minimum width of again 1m and a more consistent width of 1.2m. The footway is also separated from the carriageway by a grass verge which includes street lighting. Individual driveways are accessed via this footway similar to the south and whilst the footway itself appears level the verge slopes down into the carriageway. Any widening works would therefore again result in re-grading the footway to a steeper crossfall or alternatively a small retaining feature. Images of the conditions along the northern side of Bedhampton Hill are demonstrated in **Photographs 16 and 17**.



Photograph 16: Northern side of Bedhampton Hill



Photograph 17: Northern side of Bedhampton Hill

- 2.15 By utilising the northern footway of Bedhampton Hill at the Bedhampton Hill/Portsdown Hill Road/Maylands Road roundabout, pedestrians need to cross the Portsdown Hill Road and Maylands Road arms of the roundabout. Alternatively, pedestrians could cross on to the southern side of Bedhampton Hill (see **Photograph 18**) and negate crossing the roundabout. Should they wish to re-join the northern footway this could be completed at either of the existing uncontrolled crossings along Bedhampton Road to the east of the roundabout. The options for crossing on Bedhampton Road are discussed later in this report, whilst the next paragraph reviews crossing at the roundabout.
- 2.16 The footway on the northern side of Bedhampton Hill wraps around onto the Portsdown Hill Road arm of the roundabout where a dropped kerb exists to cross pedestrians onto the northern side of Portsdown Hill Road. The remainder of this crossing route is assessed under '*Route via Glebe Park Avenue and Portsdown Hill Road*' whilst the dropped kerbs at Portsdown Hill Road are identified in **Photograph 19**.



Photograph 18: Crossing north to south of Bedhampton Hill



Photograph 19: Portsdown Hill Road Dropped Kerbs

- 2.17 To walk to the Bidbury Schools via the existing route north of the Rusty Cutter this route is considered direct and convenient. The route includes a total of 7 crossings up to the Bedhampton Hill if pedestrians wish to continue on the northern side of Bedhampton Hill (identified in **Figure 2**), or 6 crossings if pedestrians wish to continue on the southern side of Bedhampton Hill (identified in **Figure 3**).



Figure 2: Existing route north of Rusty Cutter and northern side of Bedhampton Hill crossing points



Figure 3: Existing route north of Rusty Cutter and southern side of Bedhampton Hill crossing points

b. Route around south of Rusty Cutter

- 2.18 An alternative pedestrian route is to the south and travel anticlockwise around the Rusty Cutter Roundabout. As part of the development, a 3m wide footway/cycleway is proposed along the southern Havant Road carriageway. To the east, the proposals submitted as part of the planning application continued to the existing uncontrolled pedestrian crossing point and bus stop some 230m to the west of the Rusty Cutter Roundabout island (as the crow flies distance) on Havant Road (referenced in **paragraph 2.4** and **Photograph 1**).
- 2.19 Following the application submission, a review has been conducted to understand whether a pedestrian route around the south of the Rusty Cutter roundabout would be feasible. It is not considered deliverable to continue the proposed footway/cycleway along the southern side of carriageway up to the A3(M) northbound off-slip due to a lack of level highway verge. Whilst there is a large area of highway within this land from the Havant Road/Bedhampton Hill junction to the east there is a significant levels difference between Havant Road and the highways land along with substantial vegetation meaning that the land currently available to implement such a footway/cycleway would not be sufficient. To continue the 3m footway/cycleway, the verge would have to be built up to existing levels on Havant Road and would result in piled retaining walls. Constructing piled retaining walls would result in lane closures and would also result in vegetation/tree loss, losing screening to the site.
- 2.20 Given the above, it is proposed that the route would involve pedestrians walking through the north of the site (not alongside the southern carriageway of Havant Road) with a Disability Discrimination Act (DDA) compliant ramp up to the A3(M) Northbound off-slip from the site where there is an existing area of hard standing, see **Photograph 20**. Pedestrians can then cross this arm when the lights are on red (i.e. walk with the phasing) onto the southern side of the Circulatory South arm. Whilst there is some hardstanding here (see **Photograph 21**) this area would need to be improved which could result in the relocation of street/signal furniture along with partial removal of the Armco barrier. It is then proposed pedestrians cross the Circulatory South arm of the Rusty Cutter onto the centre of the island, again with pedestrians walking when traffic is held by the red signal. Pedestrians are then able to walk anti-clockwise around the inside of the roundabout up to A3(M) Southbound off-slip and northern circulatory arms. Each of these arms can be crossed when each is on red, again walking with phasing with pedestrians then connected onto the western side of Bedhampton Road and the existing footway/cycleway.



Photograph 20: Existing area of hardstanding at A3(M) northbound off-slip



Photograph 21: Existing area at south side of Circulatory South arm



Photograph 22: Existing area of hardstanding at A3(M) North Circulatory



Photograph 23: Area where anti-clockwise footway is proposed on central island

2.21 In order to facilitate this route, highway works would be required to implement a footway along the northern site boundary (but not along Havant Road), a ramp up to a waiting area and a footway around the Rusty Cutter Roundabout central Island (anti-clockwise). It would also be proposed that signal heads are placed on all 4 signalised arms of the roundabout to highlight to pedestrians when they are able to cross. Such a scheme would be walk with signals and no push button would be needed. Plans demonstrating the proposals are attached as **Appendix B** to this report which include a detailed plan of the footway leading up to the area of hardstanding in **Photograph 20** and an indicative plan for the remainder of the route.

2.22 Once onto Bedhampton Hill the existing conditions are reviewed in paragraphs 2.8 to 2.17.

- 2.23 This route provides a significant improvement for pedestrians, including walk with signal control crossings around the Rusty Cutter Roundabout. Such a route would negate the need for any additional signals or any alterations to the signal timings/operation of the Rusty Cutter Roundabout. This option therefore demonstrates nil detriment as a result of providing pedestrian facilities and given that no changes to the junction models would be required, Highways England stance as of 30th August 2018 which stated that ‘the summary results continue to show that the impact of the proposed development at this junction will be minimal and not severe and is therefore acceptable to Highways England’ can be retained.
- 2.24 To walk to the Bidbury Schools via a southern route around the Rusty Cutter utilising controlled crossing points is considered attractive, safe, direct and convenient. The route includes a total of 7 crossings up to the Bedhampton Hill if pedestrians wish to continue on the northern side of Bedhampton Hill (identified in **Figure 4**), or 6 crossings if pedestrians wish to continue on the southern side of Bedhampton Hill (identified in **Figure 5**).



Figure 4: Route south of Rusty Cutter and northern side of Bedhampton Hill crossing points



Figure 5: Route south of Rusty Cutter and southern side of Bedhampton Hill crossing points

c. Route around north of Rusty Cutter with additional signalised arms

- 2.25 As part of the application, the Transport Assessment (TA) prepared by Paul Basham Associates (document reference: 041.0023/TA/1) identified a pedestrian improvement scheme at the Rusty Cutter Roundabout. This included the signalisation of the Havant Road and Western Circulatory arm of the Rusty Cutter. Within the TA it was proposed that the existing uncontrolled crossing on the A3(M) northbound on-slip would be used and upgraded with a signal head to allow pedestrians to cross within the Intergreen (set at 8 seconds) of the two new signalised arms at Havant Road and Circulatory West. As part of the proposals a new signal head was also proposed at the A3(M) southbound off-slip to allow pedestrians to see clearly when they are able to cross (as refereed above). Both crossings would utilise red time phases within the junction to minimise delay to vehicle traffic as much as possible.
- 2.26 As a consequence of introducing more signals, the crossing has introduced delay where traffic is no longer free flowing and thus affected the overall capacity of the roundabout. In particular, the Havant Road arm was constrained to hold queues on this arm rather than arms internal to the roundabout. As part of these works a third lane was also proposed to the Western Circulatory arm of the Rusty Cutter Roundabout making use of the existing grass verge on the roundabout island. A plan indicatively demonstrating the proposals was attached as Appendix S of the Transport Assessment submitted with the planning application.

2.27 Following a meeting with Hampshire County Council and Highways England (16th July 2018) these proposals in their current form were determined not acceptable. Highways England would not accept pedestrian crossing signal equipment on their land nor would they accept a pedestrian crossing having a negative impact on vehicle operation, delay or safety of the roundabout. It was confirmed that Highways England would not accept a scheme unless this provided nil-detriment which is not deliverable if signals are introduced on the Circulatory West arm. A copy of the meeting minutes are attached as **Appendix C** for reference, whilst an overlay demonstrating the Highways England and Hampshire County Council land boundaries is attached as **Appendix B**.

2.28 In order to complete a robust report with all options addressed, these proposals have been revisited following updates being required (by Highways England (HE)) on the Rusty Cutter junction model. This updated modelling exercise includes the proposed works outlined above (reference in the TA) with the signalisation of Havant Road and the western circulatory arm and an additional 3rd arm to the western circulatory. As the proposals were for pedestrians walking in the Intergreen time (set at 8 seconds) no specific pedestrian infrastructure has been modelled. The results of the updated model runs on the HE approved model (including the Sensitivity Test scenario) are demonstrated in **Table 1**, whilst the outputs are attached as **Appendix D** which includes the HE approved models without any works to the Rusty Cutter.

Rusty Cutter Roundabout		AM			PM		
		DoS	Max Q	Delay (s)	DoS	Max Q	Delay (s)
Baseline 2016 (agreed model)	A3 NB Off Slip	84.3%	14.5	33.4	84.8%	11.1	39.0
	Havant Road	48.1%	1.6	5.4	51.6%	1.7	4.3
	A3 SB Off Slip	77.1%	9.5	19.4	74.6%	8.2	24.6
	Bedhampton Hill	48.2%	2.3	4.1	37.5%	2.3	3.2
	A27	42.6%	0.4	2.2	53.6%	0.6	2.3
	Circulatory South	84.4%	14.5	33.8	83.4%	15.2	27.1
	Circulatory North	62.3%	6.4	22.2	77.2%	7.7	14.9
Baseline 2023 (agreed model)	A3 NB Off Slip	94.2%	20.5	51.7	94.4%	16.1	60.0
	Havant Road	59.3%	2.1	7.6	63.3%	3.6	5.4
	A3 SB Off Slip	84.8%	11.7	21.9	85.3%	10.7	30.5
	Bedhampton Hill	60.9%	3.3	7.0	44.5%	2.9	4.3

	A27	49.2%	0.5	2.3	61.4%	1.6	2.5
	Circulatory South	94.6%	22.1	53.9	92.9%	20.9	39.8
	Circulatory North	72.5%	9.2	24.7	88.3%	9.5	17.1
Baseline 2023 Plus Committed Development (agreed model)	A3 NB Off Slip	94.2%	20.5	51.7	94.4%	16.1	60.0
	Havant Road	60.0%	2.3	7.7	63.4%	3.7	5.5
	A3 SB Off Slip	84.8%	11.7	21.9	85.5%	10.8	30.7
	Bedhampton Hill	61.0%	3.3	7.0	44.7%	2.9	4.3
	A27	49.3%	0.5	2.3	61.7%	1.6	2.5
	Circulatory South	94.6%	22.1	53.9	93.2%	21.2	40.6
	Circulatory North	72.5%	9.2	24.7	88.3%	9.5	17.1
Baseline 2023 Plus Committed Development Plus 50% Proposed Development (agreed model with signals)	A3 NB Off Slip	94.2%	20.5	51.7	94.4%	16.1	60.0
	Havant Road	66.9%	7.8	30.7	91.6%	11.1	48.7
	A3 SB Off Slip	86.1%	12.4	23.7	85.5%	10.8	30.7
	Bedhampton Hill	62.5%	3.4	6.9	45.1%	3.0	4.4
	A27	49.4%	0.5	2.3	62.1%	1.7	2.6
	Circulatory South	95.2%	22.7	53.8	94.2%	22.0	42.8
	Circulatory West	68.9%	11.6	24.5	90.9%	21.5	26.5
	Circulatory North	70.2%	10.7	22.3	83.6%	4.7	13.1
	Circulatory East	55.2%	0.6	0.6	63.8%	0.3	1.5
Baseline 2028 (agreed model)	A3 NB Off Slip	99.1%	27.6	77.9	99.3%	21.8	88.9
	Havant Road	65.5%	2.9	9.5	70.0%	4.5	6.9
	A3 SB Off Slip	89.0%	14.2	25.0	89.6%	12.5	34.6
	Bedhampton Hill	68.1%	4.0	8.8	48.1%	3.3	4.9
	A27	52.4%	0.7	2.3	65.4%	2.2	2.8
	Circulatory South	99.2%	29.4	79.6	97.6%	27.2	58.5
	Circulatory North	76.2%	10.0	26.5	87.5%	12.1	20.4
	A3 NB Off Slip	99.1%	27.6	77.9	99.3%	21.8	88.9

Baseline 2028 Plus Committed Development (agreed model)	Havant Road	65.5%	2.9	9.5	70.0%	4.5	6.9
	A3 SB Off Slip	89.0%	14.2	25.0	89.6%	12.5	34.6
	Bedhampton Hill	68.1%	4.0	8.8	48.1%	3.3	4.9
	A27	52.4%	0.7	2.3	65.4%	2.2	2.8
	Circulatory South	99.2%	29.4	79.6	97.6%	27.2	58.5
	Circulatory North	76.2%	10.0	26.5	87.5%	12.1	20.4
Baseline 2028 Plus Committed Development Plus Proposed Development (agreed model with signals)	A3 NB Off Slip	99.1%	27.6	77.9	99.3%	21.8	88.9
	Havant Road	71.9%	9.1	31.8	96.7%	15.5	67.1
	A3 SB Off Slip	89.0%	14.2	25.0	89.8%	12.6	34.9
	Bedhampton Hill	71.3%	4.1	10.1	49.5%	3.3	5.0
	A27	52.9%	13.0	26.1	66.7%	2.6	3.0
	Circulatory South	100.3%	32.0	86.2	99.7%	31.9	72.5
	Circulatory West	74.7%	12.3	24.0	95.4%	26.0	38.5
	Circulatory North	75.5%	12.0	29.5	88.0%	7.3	16.8
	Circulatory East	58.9%	0.7	2.2	39.1%	0.3	1.5
Baseline 2028 Plus Committed Development Plus Proposed Development Plus HBC Local Plan Sensitivity Test (agreed model with signals)	A3 NB Off Slip	99.1%	27.6	77.9	99.3%	21.8	88.9
	Havant Road	71.9%	9.1	31.8	96.7%	15.5	67.1
	A3 SB Off Slip	90.4%	15.8	26.6	90.6%	13.2	36.1
	Bedhampton Hill	72.2%	4.3	10.5	49.7%	3.4	5.1
	A27	53.3%	0.8	2.4	67.7%	2.7	3.1
	Circulatory South	100.8%	33.3	91.2	100.5%	34.5	80.5
	Circulatory West	75.0%	12.3	24.0	96.2%	27.1	41.0
	Circulatory North	77.2%	12.0	29.5	88.0%	7.3	16.9
	Circulatory East	56.1%	0.7	2.3	39.3%	0.3	1.5

Table 1: Rusty Cutter Modelling

- 2.29 The re-run of the Rusty Cutter modelling identifies that in the Baseline 2028 plus committed development plus proposed development scenario the introduction of additional signalised arms increases the DoS value on the Havant Road arm due to the model deliberately constraining this arm to avoid queuing on the roundabout. The results also demonstrate that a nil detriment scenario can be obtained with the additional arms, even though the increase in DoS values between the with and without proposed development scenarios remain low.
- 2.30 In this meeting it was agreed that the scheme proposed within the Transport Assessment would be parked (although the assessment has been included above to provide a robust response and assessment). Instead a scheme which takes pedestrians onto the roundabout itself has been considered. An option around the southern side of the Rusty Cutter and anti-clockwise around the Rusty Cutter has been identified above. Hampshire County Council also wanted Paul Basham Associates to assess the relocation of the existing footway which runs along the northern carriageway of the Northern Circulatory arm to the southern side of the carriageway despite concerns being raised by Highways England due to the structure of the A3(M).
- 2.31 As part of this work, the Western Circulatory arm and Havant Road arms would still need to remain signalised with pedestrians crossing Havant Road north to south onto the existing area of highway verge in the red time and then west to east across the Western Circulatory arm onto the central island, also in the red time. If the footway was relocated to the south pedestrians would walk along the southern side of the Northern Circulatory carriageway and then cross south to the north during the red time of the Northern circulatory to join the existing footway and then east to west across the A3(M) southbound off-slip to join onto Bedhampton Hill. A review of the number of crossings this would involve is identified below which demonstrates 9 crossings if pedestrians travel on the northern side of Bedhampton Hill (**Figure 6**) and 8 crossings if pedestrians travel on the southern side of Bedhampton Hill (**Figure 7**).



Figure 6: Route north of Rusty Cutter with additional signals and northern side of Bedhampton Hill crossing points



Figure 7: Route north of Rusty Cutter with additional signals and southern side of Bedhampton Hill crossing points

- 2.32 To relocate the footway on the southern side of the carriageway of the A3(M) bridge would require the removal of the established footway/cycleway to the north. The works would also result in significant engineering works to realign HCC carriageway under the A3(M). As mentioned in the meeting Highways England were nervous for any works to be completed under the bridge to the potential effects on the structure of the A3(M) bridge. These proposals would also result in significant traffic management during the road works which would likely result in lane closures for a significant period of time.
- 2.33 As referred to above in **Table 1** and paragraph 2.23 there are concerns relating to the introduction of the signals of these two arms as nil detriment cannot be demonstrated as requested by Highways England. It is therefore considered that a preferable option which would not affect the operation of the Rusty Cutter Roundabout would be route pedestrians anti-clockwise and around the south with a new footway provided through the north-eastern part of the proposed development presented in section b.

d. Route via Glebe Park Avenue and Portsdown Hill Road

- 2.34 To access Glebe Park Avenue pedestrians would utilise the existing uncontrolled crossing on Havant Road (see **Photograph 1**) and using the existing footway/cycleway on the northern side of Havant Road. Pedestrians would then walk along Bedhampton Hill which provides a circa 1.2m footway complete with wide grass verges creating an attractive pedestrian environment (**Photograph 24**) to reach Glebe Park Avenue.



Photograph 24: Bedhampton Hill (west of Rusty Cutter)



Photograph 25: Junction of Bedhampton Hill/Glebe Park Avenue

2.35 Glebe Park Avenue is approximately 350m in length and serves primarily as a residential road. Glebe Park Avenue has footways flanking both sides of the carriageway which are approximately 2m in width. Regular street lighting is present which helps create an attractive and safe pedestrian environment. Glebe Park Avenue is subject to a steep incline south to north which will make this route less attractive for some pedestrians and cyclists (see **Photograph 26**). Glebe Park Avenue is also subject to a 6'-6" width restriction preventing Heavy Goods Vehicles using this route as a through route, enhancing the attractiveness of the route.



Photograph 26: Glebe Park Avenue looking north

- 2.36 At the northern end Glebe Park Avenue forms a priority junction with Portsdown Hill Road (see **Photograph 27**). Portsdown Hill Road is facilitated by footways on both sides of the carriageway up to the eastern side of the bridge which vary in width between c.1.2m – 2m. The route along Portsdown Hill Road includes a bridge over the A3(M) which is complete with railings and safety fencing. At the eastern extent of the bridge the footway on the southern side ceases with the footway only continuing on the northern side of Portsdown Hill Road. There are currently no pedestrian crossings points in vicinity of the Glebe Park Avenue/Portsdown Hill Road junction to aid pedestrians onto the northern footway which would allow a continuous connection into Bedhampton. A crossing could be provided as part of this development (via a contribution) in the form of a dropped kerb and tactile paving to facilitate pedestrians crossing.



Photograph 27: Portsdown Hill/Glebe Park Avenue Junction



Photograph 28: Portsdown Hill looking east

- 2.37 Continuing east along Portsdown Hill Road dropped kerbs and tactile paving are provided at the Pennant Hills/Portsdown Hill Road junction (**Photograph 29**). From this junction (eastbound) there is a continuous footway flanking the northern side of the carriageway. This footway varies in width due to party walls and boundaries and connects to the Bedhampton Hill/Portsdown Hill Road/Maylands Road roundabout (see **Photographs 30 and 31**). This footway, its condition and width was considered acceptable as part of the Linden Homes ‘Hawthorn Mews’ development (application reference: APP/13/00266) with two pedestrian refuge islands which connect onto the northern footway with no improvements provided along the footway. The Transport Assessment prepared as part of the Linden Homes application made reference to walking to Bidbury Schools as being acceptable, suggesting the route and conditions were acceptable.

- 2.38 At the Bedhampton Hill/Portsdown Hill Road/Maylands Road roundabout, pedestrians would cross the Maylands Road arm and remain on the northern side of the Bedhampton Road carriageway. The crossing of this arm is facilitated by dropped kerbs (**Photograph 32**). If pedestrians wish to travel along the southern carriageway of Bedhampton Hill there are two uncontrolled pedestrian crossings equipped with dropped kerbs, tactile paving and a refuge area circa 70m and 180m to the east of the roundabout respectively (**Photographs 33 and 34**).



Photograph 29: Pennants Hill/Portsdown Hill Road Junctions



Photograph 30: Portsdown Hill looking east



Photograph 31: Portsdown Hill Road looking east



Photograph 32: Crossing at Maylands Road



Photograph 33: Crossing on Bedhampton Road



Photograph 34: Crossing on Bedhampton Road

2.39 To walk to the Bidbury Schools via Glebe Park Avenue this route is considered safe, further improved if a pedestrian crossing is provided to facilitate pedestrians crossing Portsdown Hill Road from the south to the north which could be offered by the developer with the cost of highway works being reflective of the development scale. The gradient of this route does makes this less attractive and convenient although this is still a realistic option. The route includes a total of 6 crossings up to the Bedhampton Hill/Portsdown Hill Road/Maylands Road roundabout which are identified in **Figure 7**.



Figure 7: Route via Glebe Avenue crossing points

- 2.40 All crossings are provided with dropped kerbs (except the proposed crossing at Portsdown Hill Road) with the majority also including tactile paving.

e. Northern side of Bedhampton Road (east of Bedhampton Road/Portsdown Hill Road/Maylands Road Roundabout)

- 2.41 Once on the northern side of Bedhampton Road there are 3 crossings, of which two are dropped kerbs (with only one facilitated by tactile paving) and one signalised crossing associated with the Bedhampton Road/Hulbert Road signalised junction. These crossing points are identified in **Figure 9**, whilst **Photographs 35, 36 and 37** demonstrate the conditions at these crossings.



Figure 9: Route along north of Bedhampton Road crossing points



Photograph 35: Crossing at Parade of Local Shops



Photograph 36: Signalised Crossing at Bedhampton Road/Hulbert Road



Photograph 37: Crossing at Lester Avenue/Bedhampton Road

2.42 The footway along the northern side of Bedhampton Road is in a reasonable condition and is generally of a shallow gradient. Up to the Lester Avenue/Bedhampton Road junction, the footway is separated from the carriageway by a grass verge and street trees helping to create a safe and attractive pedestrian environment. The condition of the footway along this route are displayed in **Photographs 38 and 39**.



Photograph 38: Footway along Bedhampton Road (west of signalised junction)

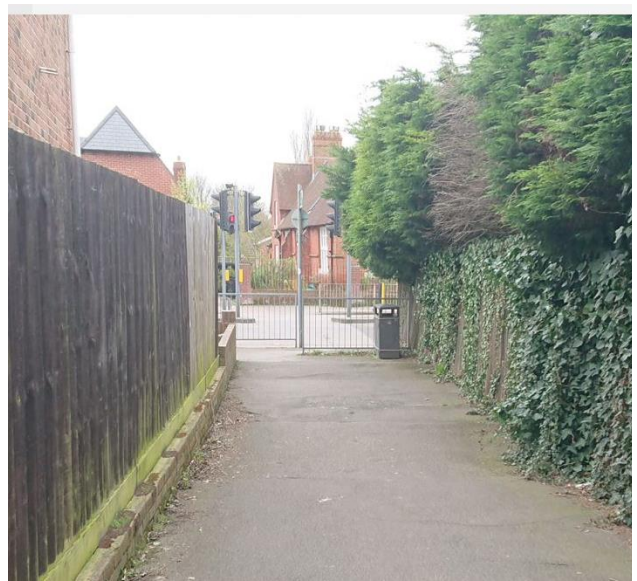


Photograph 39: Footway along Bedhampton Road (east of signalised junction)

2.43 After the Lester Avenue/Bedhampton Road junction the footway runs alongside the main carriageway of Bedhampton Road at a width of approximately 2.0m-2.2m. This route also runs past a local parade of shops which includes a pharmacy and convenience store. At the signalised crossing approximately 30m to the east of the Kings Croft Lane/Bedhampton Road junction there is a footpath which continues north connecting to the Bidbury Schools. This footpath has street lighting and is of an adequate width. Where the footpath connects to the footway along Bedhampton Road and the signalised crossing there is guard railing to prevent children exiting straight onto the carriageway. Conditions of the footpath are demonstrated in **Photographs 40 and 41**.



Photograph 40: Footpath to Bidbury School Conditions



Photograph 41: Footpath to Bidbury School Conditions

2.44 In summary, the route along the northern side of Bedhampton Road is considered safe, given the presence of street lighting and a controlled pedestrian crossing at the busiest junction. The route is also considered convenient given the dropped kerbs at crossings, the small number of junctions to cross, the directness of the route to the schools and the shallow gradient. It is therefore considered that no highways works would be required to support this route.

f. Southern side of Bedhampton Road (east of Bedhampton Road/Portsdown Hill Road/Maylands Road Roundabout)

2.45 Once on the southern side of Bedhampton Road there are 4 crossings, of which three are dropped kerbs (with one facilitated by tactile paving and one only having tactile paving on one side of the junction) and one signalised crossing across Bedhampton Road. These crossing points are identified in **Figure 10**, whilst **Photographs 42, 43, 44** and **45** demonstrate the conditions at these crossings.



Figure 10: Route along south of Bedhampton Road crossing points



Photograph 42: Crossing at Brookside Road



Photograph 43: Crossing at Nursery Road



Photograph 44: Crossing at Kings Croft Lane



Photograph 45: Signalised Crossing across Bedhampton Road

2.46 The footway along the southern side of Bedhampton Road is in a reasonable condition and is generally of a shallow gradient similar to the northern side with the width varying from 1.2m to 2.0m. Similar to the northern carriageway parts of the footway are segregated from the carriageway by a grass verge helping to create a safe and attractive pedestrian environment. The condition of the footway along this route are displayed in **Photographs 46 - 49**.



Photograph 46: Footway Conditions along Bedhampton Road



Photograph 47: Footway Conditions along Bedhampton Road



Photograph 48: Footway Conditions along Bedhampton Road



Photograph 49: Footway Conditions along Bedhampton Road

2.47 Once pedestrians have used the existing signalised crossing across Bedhampton Road they can connect to the footpath which runs from Bedhampton Road to the Bidbury schools. The conditions of this footpath are previously covered in paragraph 2.38 and **Photographs 40 and 41**.

2.48 The route along the southern side of the carriageway provides an attractive and safe route towards the Bidbury Schools. With a total of 4 roads to cross this is considered only a modest constraint considering the majority of these are small side roads which serve residential development. The gradient, as per the northern carriageway is shallow which helps provide an attractive route. The route is also considered direct with only one main road of Bedhampton Road to cross, but supported by a signal crossing.

g. Cycle Route via Lower Road

2.49 Once cyclists have utilised the existing footway/cycleway along the northern side of Havant Road and around the north of the Rusty Cutter cyclists are able to access Lower Road. Cyclists can cross the Bedhampton Hill arm of the Rusty Cutter Roundabout utilising an existing crossing point equipped with refuge areas and signage, demonstrated in **Photographs 50 and 51**.



Photograph 50: Pedestrian/cyclist crossing on Bedhampton Hill arm



Photograph 51: Pedestrian/cyclist crossing on Bedhampton Hill arm

- 2.50 Once the Bedhampton Hill arm is crossed, cyclists can connect onto Lower Road via an existing section of footway/cycle visible in **Photograph 52**. Lower Road is a low trafficked, low speed residential road which connects to Bidbury Lane and King's Croft Lane to the north onto Bedhampton Road and the existing signalised crossing point which connects with the local footpath running along the western boundary of the schools.



Photograph 52: Footway/cycleway from Lower Road to Rusty Cutter Roundabout

- 2.51 The route via Lower Road, Bidbury Lane and King's Croft Lane to the Bidbury Schools provides an attractive cycle route due to the low vehicle speeds and traffic volume given this route only provides a connection to residential units and does not therefore provide a through route for vehicles. The conditions along this route are presented in **Photographs 52 –56**.



Photograph 52: Lower Road



Photograph 56: Bidbury Lane



Photograph 55: Bidbury Lane



Photograph 56: Kings Croft Lane

- 2.52 Once at the northern end of Kings Croft Lane, cyclists are connected onto Bedhampton Road, cyclists then have the choice to walk and push their bike across the existing signalised crossing across Bedhampton Road and along the footpath referred to in paragraphs 2.38 or continue cycling along Bedhampton Road, New Road, James Road and Fraser Road into the school. It is considered that there is a safe and convenient cycle route up to the footpath off Bedhampton Road which leads to the Bidbury Schools.

h. Park and Stride at Cricket Club Car Park

- 2.53 An alternative option to walking and cycling would be the provision of a park and stride site. This approach was considered acceptable for the proposed development at Forty Acre Farm when the catchment school was to be Morelands Primary School. This was due to the gradients all pedestrian would traverse to access the school from the site and thus acceptance that a large proportion of parents would drive to the site. In order to cater for these vehicle trips, parking areas were reviewed in the vicinity of Morelands Primary School to ensure parents could drop off their children and park in suitable locations which are within walking distance of the site but also in locations which would not affect the operation of the local road network.
- 2.54 It is therefore also possible that given the location to the Strategic Road Network parents would attempt to drive to the Bidbury Schools before accessing the A27 or A3(M) to continue their on-ward journey. The car park associated with the Cricket Club in Bedhampton is a Havant Borough Council run car park and appears to serve the Cricket Club, St Thomas' Church and the park (see **Photograph 57**). The car park is accessed from Bedhampton Road, King's Croft Lane and Bidbury Lane. Once parked, parents and children would have a 400m walk (taken from the centre of the car park and following the attractive footpaths through the public open space (**Photograph 58**) to the signalised crossing on Bedhampton Road opposite the footpath which connects to the Bidbury Schools. The route is attractive, given it is through a park, safe and convenient with a walking time of approximately 5 minutes. This is therefore also considered as a realistic option to assist travel to school.



Photograph 57: Potential Park and Stride Site



Photograph 58: Paths through open space

i. Public Transport

- 2.55 As highlighted in the Transport Assessment submitted to support the planning application, the proposed development fronts onto Havant Road which acts as a high frequency bus corridor. The site is supported by two pairs of bus stops on Havant Road both within 200m either side of the site accesses (400m from the centre of the site). Both sets of bus stops benefit from shelters (except the eastern eastbound bus stop), seating, timetables and are served by Stagecoach services 21 and 23. The no. 23 service which operates on a 10-minute frequency runs past the footpath from Bedhampton Road to the Bidbury School, the journey takes approximately 5 minutes. The bus stops at the Brunswick Garden stop from which it is a 150m distance to the entrance of the footpath. Given the high frequency of the service and the short journey time this is considered as a safe, easy and convenient option to travel sustainably to the Bidbury Schools. The eastbound and westbound bus stops are presented in **Photographs 59** and **60**.



Photograph 59: Eastbound bus stop



Photograph 60: Westbound bus stop

- 2.56 In order to compare the routes to school a review of all options has been created below in **Table 2**, which makes reference to distance, walking time, the number of crossings, gradient, directness, cost of works and safety of route. Each criterion has been given a red, amber, green rating where red green is the best and red is the worst.

Route to southern end of footpath (Bidbury Schools)	Distance (Taken from centre of site)	Walking Time (80m per minute)	Number of Crossings	Gradient	Directness	Cost of Works	Safe
a. (North of Rusty Cutter Existing) and e. (Northern side of Bedhampton Hill)	1.96km	24.30	10	A	A	G	A
a. (North of Rusty Cutter Existing and f. (Southern side of Bedhampton Road)	1.91km	23.53	10	A	A	G	A
b. (South of Rusty Cutter) and e. (Northern side of Bedhampton Road)	1.91km	23.53	10	A	G	A	G
b. (South of Rusty Cutter) and f. (Southern side of Bedhampton Road)	1.88km	23.30	10	A	G	A	G
c. (North of Rusty Cutter with signals) and e. (Northern side of Bedhampton Road)	1.99km	24.53	12	A	A	R	G
c. (North of Rusty Cutter with signals) and f. (Southern side of Bedhampton Road)	1.94km	24.15	12	A	A	R	G
d. (Glebe Park Avenue and Portsdown Hill) and e. (Northern side of Bedhampton Road)	2.08km	26	9	R	R	G	G (with additional crossing)
d. (Glebe Park Avenue and Portsdown Hill) and f. (Southern side of Bedhampton Road)	2.08km	26	10	R	R	G	G (with additional crossing)
g. (Cycle route Lower Road using existing route north of Rusty Cutter)	2.04km	N/A	N/A	G	G	G	
h. (Park and Stride)	413m walk	4.10	1	G	G	G	G
i. (Public Transport)	400m walk at site and 100m walk from stop on Bedhampton Road	5 minutes and 1.15 minutes respectively	1 (on the return journey)	G	G	G	G

Table 2: Route to Bidbury Schools RAG assessment

- 2.57 It is evident from **Table 2** that the shortest walking route from the site and thus the most direct would be via the south of the Rusty Cutter and the southern side of Bedhampton Road which is 1.88km with a walking time of circa 23 minutes. **Table 2** also outlines that all routes via the Rusty Cutter Roundabout fall within the CIHT recommended maximum walking distance of 2km. The route via Glebe Park Avenue however is marginally above the 2km threshold at 2.08km, although this still remains below a 30-minute walk and below the threshold for free school transport. The route via Glebe Park Avenue is also the only route where the gradient is graded red, whilst all other routes via the Rusty Cutter have an amber grading due to Bedhampton Hill.
- 2.58 The 6 walking route options around the Rusty Cutter have a similar number of crossings whilst the route via Glebe Park Avenue includes the smallest number of crossing points (including a proposed crossing across Portsdown Hill).
- 2.59 When considering the cost of works, utilising the existing crossing on the northbound A3(M) on-slip with the upgrades including bollards, lighting, change in surfacing and the Glebe Park Avenue route with a new crossing provides the most cost-effective solutions. Works at the Rusty Cutter roundabout would be costlier, with the implementation of signals at the Havant Road arm and Western circulatory arm considered higher than the implementation of a footway internal to the site which connects onto the A3(M) northbound off-slip hence the respective red and amber grading.
- 2.60 It is also considered that it is only the existing route and crossing along the north of the Rusty Cutter which is given an amber gradient for the safety of the route. This route has been given an Amber as there is only one crossing location where safety concerns are perceived (the existing route across the A3(M) on-slip, albeit no accident history) with the remaining crossings considered sufficient along a route to school.
- 2.61 Paul Basham Associates therefore encourage HCC to support a route around the south of the Rusty Cutter and along the southern side of Bedhampton Road given that this route provides the shortest walking distance and travel time, has sufficient gradients and crossing points which would include a number of controlled crossings with costs proportionate to the scale of development.
- 2.62 This report has also presented that a number of additional options to walking are provided including a cycle route via Lower Road, a high frequency bus service and the potential to implement a park and stride site within a HBC run car park. The report therefore concludes that a safe and convenient route to school can be provided via a variety of travel modes.

3. SUSTAINABLE TRAVEL OPTIONS TO SECONDARY SCHOOL

- 3.1 Through the application it was also requested by HCC that the sustainable route towards Warblington School be assessed. The majority of the route would be as per the above assessment to the Bidbury Schools if parents/pupils are walking and cycling with the onward route from the Bidbury Schools assessed within this chapter.
- 3.2 From the Bidbury Schools pedestrians would walk via Bedhampton Road, West Street, East Street, Emsworth Road and Southleigh Road (i.e. through Havant Town Centre). To access West Street, pedestrians should travel on the southern side of Bedhampton Road whereby pedestrians can continue walking along the footway along West Street. West Street is flanked by footways on both sides of the carriageway. The junctions of West Street/Palk Road, West Street/Meyrick Road, West Street/Staunton Road, West Street/Brockhampton Road, the junction with Portsmouth Water, West Street/Boundary Road, West Street/Union Road, West Street/Liberty Close and West Street/Brockhampton Lane are all provided with dropped kerbs as a minimum to facilitate pedestrians crossing. It is worth noting that the width of the footway on the southern side of West Street does become constrained so it could be favourable to cross to the northern side of West Street.
- 3.3 To cross Park Road South to continue on West Street there is a signal controlled crossing complete with guard railing and tactile paving. To the east of Park Road South, West Street forms part of Havant Town Centre which is pedestrianised, although there is vehicle access to the east up to the junction with Homewell. To continue onto East Street, pedestrians must cross North Street which can be done using an existing dropped kerb and tactile paving crossing with guard railing and change in surfacing at the crossing. Pedestrians can then continue along the footway on East Street on the northern or southern side of the carriageway with a Zebra crossing provided at the junction with North Street.
- 3.4 Along East Street and Emsworth Road there are 3 junctions to cross on the northern side of the footway and 4 junctions to cross on the southern side all of which have dropped kerb crossing points as a minimum, although the majority also have tactile paving. For those travelling on the southern side of Emsworth Road, at the Green Pond Corner junction there is a signal control crossing north to south with a central refuge island to aid movements north and onto Southleigh Road.
- 3.5 Along Southleigh Road which leads directly to Warblington School there are two junctions both with dropped kerbs and one also with tactile paving.
- 3.6 Images of the route as a whole from the Bidbury Schools to Warblington School are presented below in **Photographs 61 – 66.**



Photograph 61: Conditions along West Street



Photograph 62: Signal Control Crossing at South Street



Photograph 63: Conditions along East Street



Photograph 64: Conditions along Emsworth Road



Photograph 65: Signal Control Crossing at Emsworth Road



Photograph 66: Conditions along Southleigh Road

- 3.7 Cyclists could also use the above route with on-road cycle lanes present along part of East Street and an on-road cycle route along Southleigh Road both evident in **Photographs 67** and **68** respectively.



Photograph 67: On-road cycle lanes along East Street



Photograph 68: Cycle route along Southleigh Road

- 3.8 Alternatively, cyclists (and indeed pedestrians) could travel along West Street up to the junction with Park Road N, travel along Park Road N, Elm Lane, Market Place, North Street, Waterloo Road, New Lane, along School Lane which is a dedicated footway/cycleway and onto Southleigh Road. Images of this route are presented in **Photographs 69 – 74**.



Photograph 69: Park Road North



Photograph 70: Elm Lane



Photograph 71: Market Place



Photograph 72: North Street



Photograph 73: Waterloo Road



Photograph 74: School Lane

- 3.9 An alternative sustainable travel option to Warblington School is via public transport. Havant Road is well serviced by Stagecoach bus services. The Stagecoach Number 23 could be used to access Havant Town Centre which is approximately a 10-minute bus journey. From here it is approximately a 17-minute walk via East Street, Emsworth Road and Southleigh Road and the route demonstrated above is considered acceptable. Given the high frequency of the bus service, the short journey time on the bus and the walking route being under 20 minutes this is considered a safe, convenient and attractive route to school.
- 3.10 Warblington School is also within close proximity of Warblington Train Station. Students/parents could therefore also utilise the train services from Bedhampton which stop at Warblington. To access Bedhampton Station pupils could either walk or use the Stagecoach no.23 bus service. From Warblington Station it is a two minutes walk south on Southleigh Road to access the secondary school. Train services from Bedhampton to Warblington are hourly and take approximately 5 minutes. The frequency of the train services for this route do not present an as favourable route as Stagecoach no. 23 and walking, however a route utilising train journeys is considered as an option.

- 3.11 Utilising the current pedestrian infrastructure via the north of the Rusty Cutter, the walking route to Warblington School is 4.4km (taken from the centre of the site). Based on a walking speed of 80m per minute, this equates to a walking time of 55 minutes. This distance is therefore above the Chartered Institution of Highways and Transportation (CIHT) 'Providing for Journeys on Foot' (2000) recommended walking distances to schools. Travelling via the south of the Rusty Cutter, on the southern side Bedhampton Road and the southern side of Emsworth Road would reduce the journey distance to 4.33km which is still above the recommended distance.
- 3.12 A review of the routes to Warblington School suggest that travelling via Stagecoach bus services would provide the quickest and most convenient travel option. However, walking and cycling are considered as safe options (subject to the proposed improvements along the south of the Rusty Cutter and along Bedhampton Hill), although the walking distance and time is likely to result in increased bus usage.

4. SUSTAINABLE ROUTES TOWARDS FACILITIES IN DRAYTON

- 4.1 Through the application, it was also requested that routes towards the facilities in Drayton are also reviewed. To the west of the site numerous facilities are provided circa 1km from the centre of the site which includes bus stops, a place of worship, public house and eateries. Circa 2km from the centre of the site to the west further facilities are provided in Drayton which include eateries, a Doctor's Surgery, convenience store, pharmacy, a beauty salon, Estate Agents, and various independent outlets. The route towards both groups of local facilities are assessed within this chapter.
- 4.2 To access the public house, eateries and convenience store at the junction of Lower Farlington Road/Havant pedestrians would utilise the footway which flanks both sides of the Havant Road carriageway. Whilst there is no dedicated cycle infrastructure for the majority of the route (except closest to the site in an eastbound direction) the width and gradient of Havant Road is considered conducive to cycling.
- 4.3 Travelling on the southern side of Havant Road pedestrians would cross 2 junctions to access the facilities at the Havant Road/Lower Farlington Road junction. Travelling further west on the southern side of Havant Road pedestrians would cross a further five junctions to access the Drayton Surgery. The 8 crossings are reviewed below.
- 4.4 The Westways/Havant Road, East Lodge Park/Havant Road, Lower Farlington Road/Havant Road, Lealand Road/Havant Road and Station Road/Havant Road junctions all support pedestrian movements by providing dropped kerbs and tactile paving, whilst the Waterworks Road/Havant Road and South Road/Havant Road are supported by dropped kerbs only. At the Eastern Road/Havant Road signalised junction, pedestrians are provided with dropped kerbs, tactile paving, push buttons and a pedestrian refuge area.
- 4.5 If pedestrians travelled on the northern side of the Havant Road carriageway (once Havant Road has been crossed south to north via a new pedestrian crossing provided by the development) 3 side junctions would be crossed plus a further crossing across Havant Road north to south to access facilities at the Lower Farlington Road/Havant Road junction. Continuing west, a further 3 junctions need to be crossed. Of these junctions, the Rectory Avenue/Havant Road, Gillman Road/Havant Road, Farlington Avenue/Havant Road and Portsdown Avenue/Havant Road junctions are provided with dropped kerbs and tactile paving, whilst the Old Rectory Road/Havant Road and Galt Road/Havant Road junctions are provided with dropped kerbs only.

4.6 Pedestrian and cyclist conditions along the route west towards local facilities are presented below in Photographs 75 – 80.



Photograph 75: Havant Road



Photograph 76: Havant Road/Lower Farlington Road



Photograph 77: Havant Road/Lower Road signalised junction



Photograph 78: Havant Road



Photograph 79: Signal control crossing adjacent to Portsdown Avenue



Photograph 80: Havant Road at local centre

- 4.7 Alternatively, to access the facilities in Drayton residents can utilise the Stagecoach bus services to the north of the site along Havant Road which operate every 10 minutes during peak travel periods. To access Drayton Surgery located in the centre of the Drayton this would be approximately a 5-minute bus journey. It is therefore considered that residents of the proposed development at Forty Acre Farm, can travel sustainably to the facilities in Drayton.

5. REVIEW OF CROSSINGS ON HAVANT ROAD

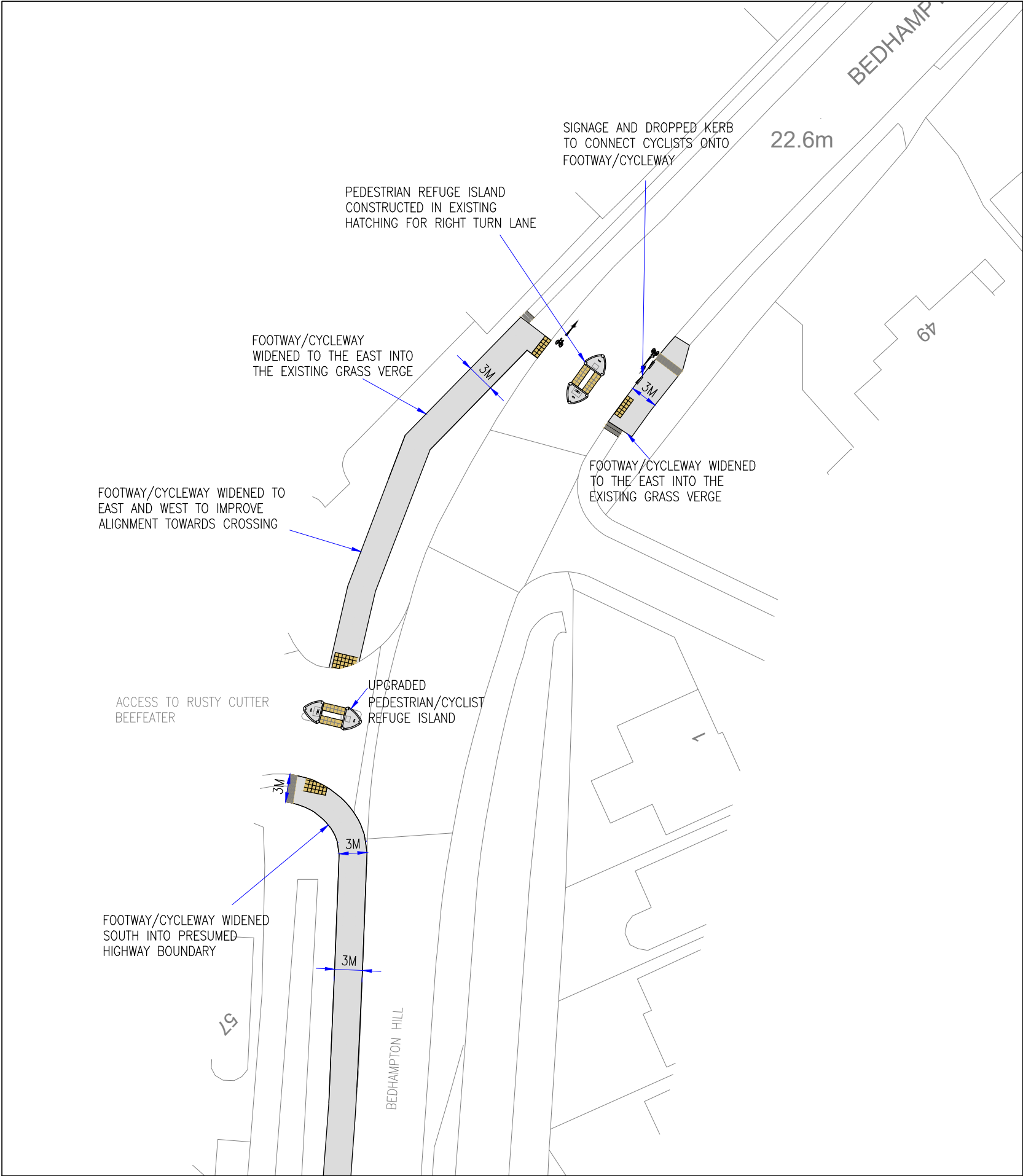
- 5.1 As part of the pre-application works a review of the pedestrian crossing demand was completed to understand whether the existing and proposed pedestrian movement would warrant a signal controlled crossing in the vicinity of the site frontage across Havant Road.
- 5.2 A PVM Squared (PVM^2) calculation was completed to determine whether a signal controlled crossing should be considered which included a weighting factor to consider disabled, elderly and children crossing. In order to complete the calculation, the results from the ATC survey completed in November 2015 were used, along with the results of a pedestrian crossing survey completed Wednesday 29th November 2017 between 7-9am and 5-6pm. The pedestrian survey criteria was agreed with Hampshire County Council before completion. The PVM^2 calculation completed in December 2017 identified a value of 0.42×10^8 . To ensure an accurate assessment was completed the combined pedestrian and cyclists trip generation for both the care home and general residential elements were factored up by 20% to account for those with mobility issues, the elderly and the young.
- 5.3 To complete the assessment, a review of pedestrian desire lines was completed in December 2017 to indicate the likely distribution of pedestrian trips which at the time suggested 10% of pedestrian may head north towards the golf club and Morelands Primary School, 50% heading east towards Bedhampton and 40% heading west towards Drayton. Given the change in primary school catchment, the 10% of pedestrians previously allocated to travel north would instead travel east towards Bedhampton and the Bidbury Schools. The revised distributions are therefore 40% of site pedestrians travelling west and 60% of site pedestrians travelling east.
- 5.4 It was therefore assumed that of the 40% of pedestrians heading west, none would require a crossing point in the vicinity of the site at Forty Acre Farm, continuing on the southern side of Havant Road to travel towards the facilities in Drayton. This assumption remains valid and unchanged. In order to complete a robust assessment, the PVM^2 calculation has been updated to assume that all 60% of pedestrians travelling east towards Bedhampton may cross Havant Road at no existing/proposed crossing point. This equates to a worst case PVM^2 value of 0.69×10^8 which still suggests that a signal controlled crossing would not be required to support existing or proposed pedestrian demand (falling below the 1×10^8 threshold). The PVM^2 calculation output is attached as **Appendix E**.
- 5.5 The proposals to route pedestrians around the south of the Rusty Cutter also support that a controlled crossing across Havant Road would not be required as there would be no need for pedestrians to cross.

6. SUMMARY AND CONCLUSIONS

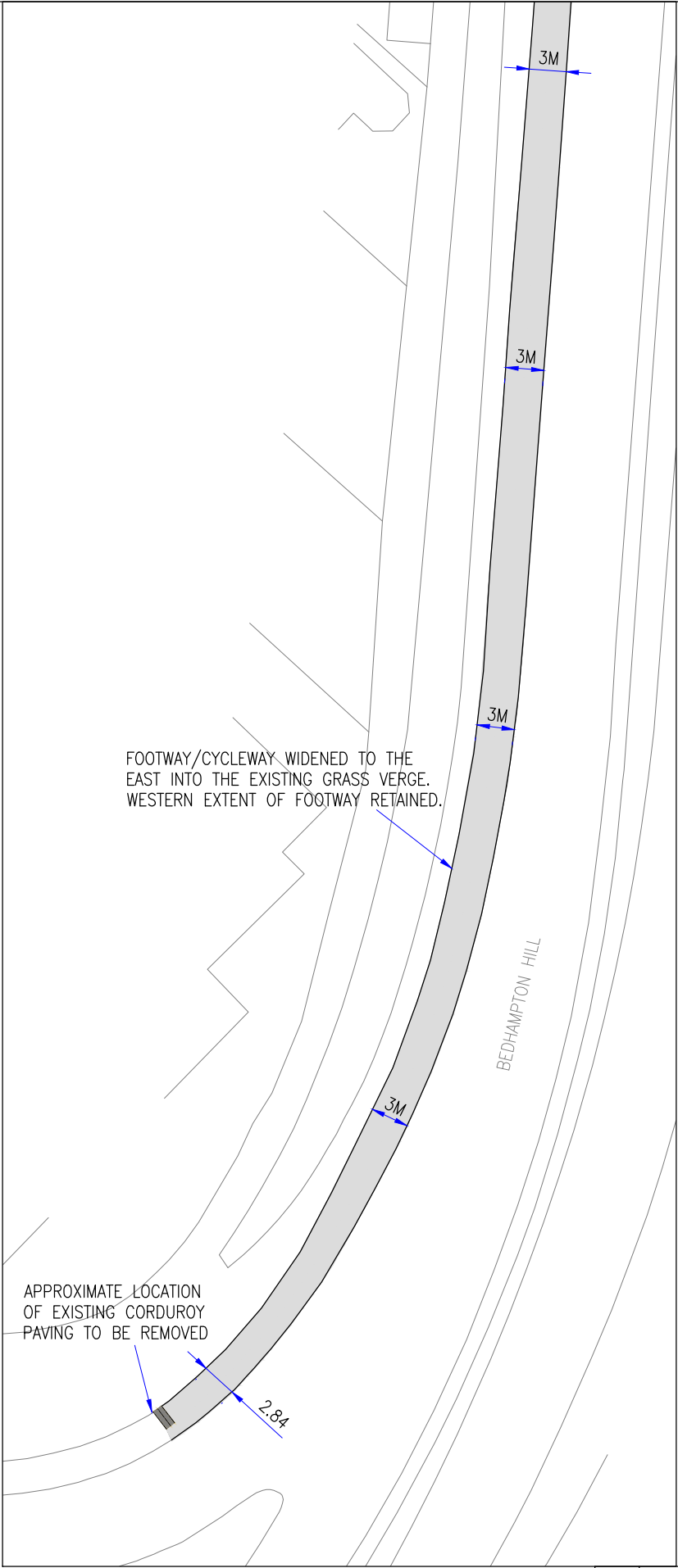
- 6.1 This Sustainability Review Report has been prepared by Paul Basham Associates on behalf of Barratt David Wilson Homes to review the sustainable travel options towards the Bidbury Schools, Warblington School, Drayton, Bedhampton and Havant.
- 6.2 Following a full RAG review of the route towards the Bidbury Schools, it is considered that the shortest and thus most direct, and convenient route would be via the south of the Rusty Cutter and southern side of Bedhampton Road, subject to an internal footway and pedestrian signal head at the A3(M) northbound off-slip, southern circulatory, northern circulatory and A3(M) southbound off-slip and works along Bedhampton Hill. This report has also presented that cycling, public transport and a park and stride are also convenient options which collectively ensure there is a safe, convenient and attractive route to the Bidbury Schools by a wide variety of travel modes.
- 6.3 The route to Warblington School has also been assessed within this report which identifies that the most likely travel method to the secondary school would be via a high frequency Stagecoach bus service which results in reasonable walking distances either end of the stops and includes a walk through the pedestrianised Havant Town Centre. Whilst the walking distance is beyond that proposed acceptable in accordance with CIHT guidance, with proposed works at the Rusty Cutter roundabout would make the route safe and more attractive to site occupants.
- 6.4 To the west of the site there are many facilities included within Drayton which is within an attractive walking distance. An assessment of the route towards Drayton has been completed within this report which suggests that the route is safe, direct, attractive and convenient with controlled crossing points on route. No further works are therefore proposed to connect pedestrians to the facilities in Drayton with a concentration of works across the site frontage and on the route towards the local primary schools and Bedhampton.

- 6.5 An updated PVM² value has also been provided within this report to reflect updated pedestrian desire lines following a reallocation of school catchment from Morelands Primary School to the Bidbury Schools. The updated pedestrian desire lines identified that it is likely 40% of site pedestrians would travel west towards Drayton and 60% of site pedestrians would travel east towards Bedhampton. To calculate the revised PVM² value it was therefore assumed that of the 40% of pedestrians heading west, none would require a crossing point in the vicinity of the site at Forty Acre Farm, continuing on the southern side of Havant Road to travel towards the facilities in Drayton. It was assumed that all 60% of pedestrians travelling east towards Bedhampton may cross Havant Road at no existing/proposed crossing point. This equates to a worst case PVM² value of 0.69×10^8 which still suggests that a signal controlled crossing would not be required to support existing or proposed pedestrian demand, falling below the 1×10^8 threshold.
- 6.6 This Sustainability Review Report has demonstrated that following improvements for a route around the south of the Rusty Cutter a safe, convenient and attractive walking route towards the local facilities in Bedhampton and the Bidbury Schools can be achieved, whilst the most likely method of travel to Warblington School would be via public transport although the walking route is considered safe (given improvements round the south of the Rusty Cutter Roundabout). The route towards the facilities in Drayton are also considered safe, convenient and attractive. An updated PVM² calculation demonstrates that a controlled crossing would not be required on Havant Road based on vehicle flows and anticipated pedestrian demand.
- 6.7 It is now considered that Hampshire County Council have the information required to make an assessment on the route to schools and local facilities and the need for a controlled crossing across Havant Road, and trust they will come to similar conclusions.

Appendix A



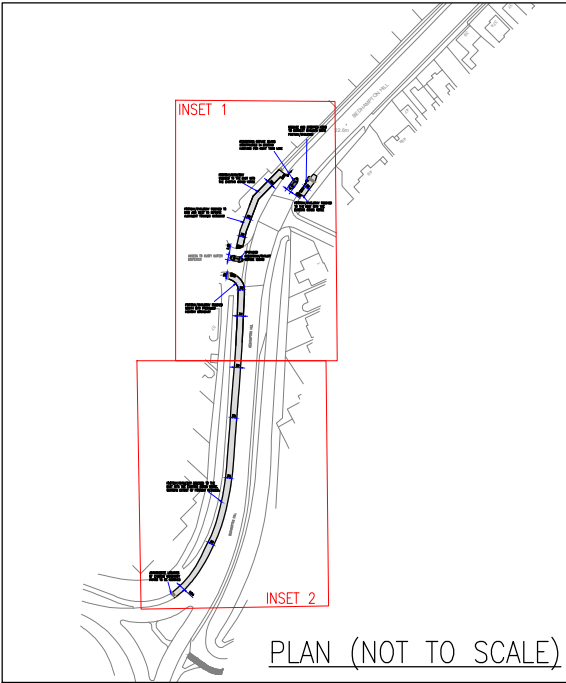
INSET 1: IMPROVED PEDESTRIAN AND CYCLIST CROSSINGS



INSET 2: FOOTWAY/CYCLEWAY

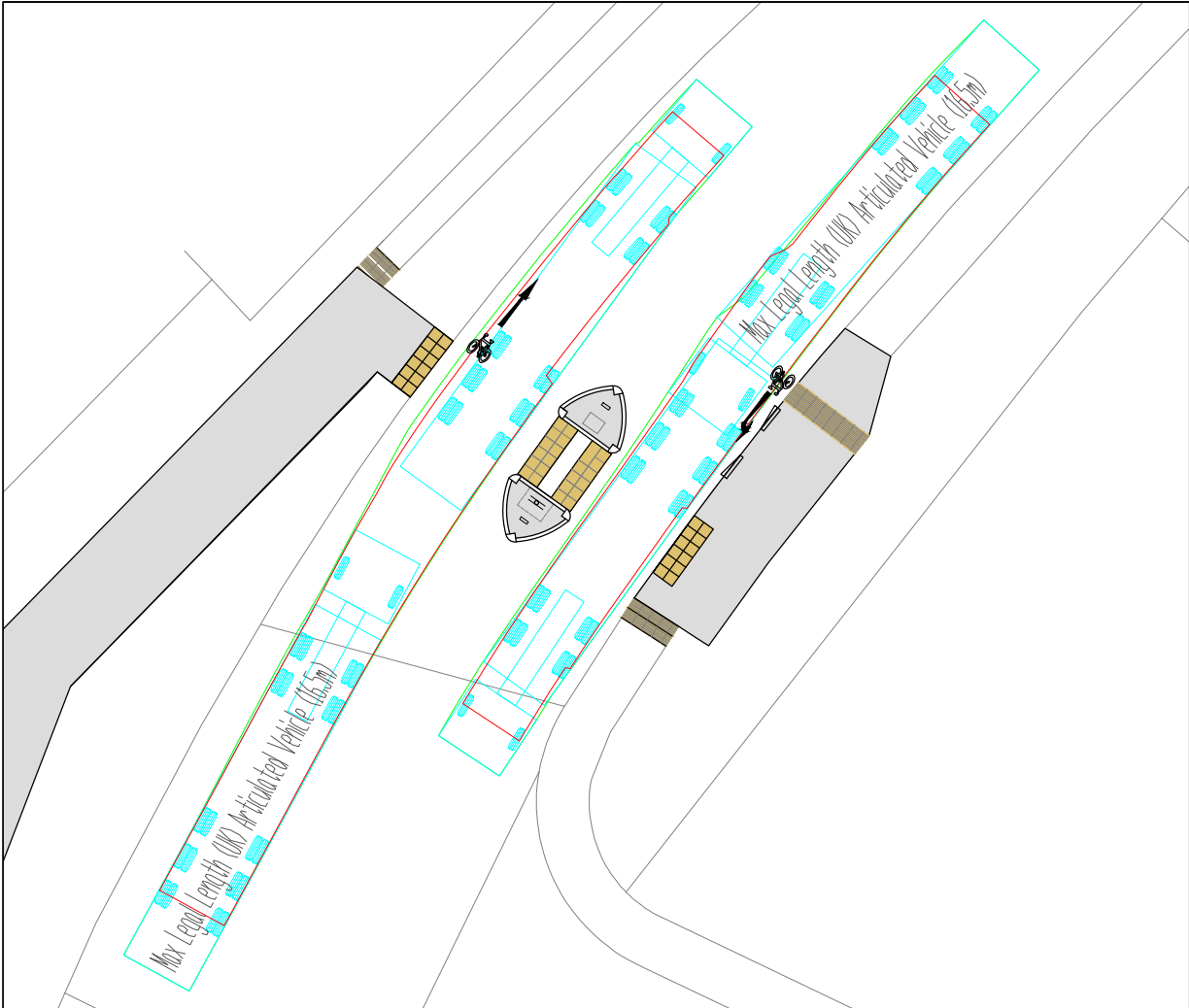
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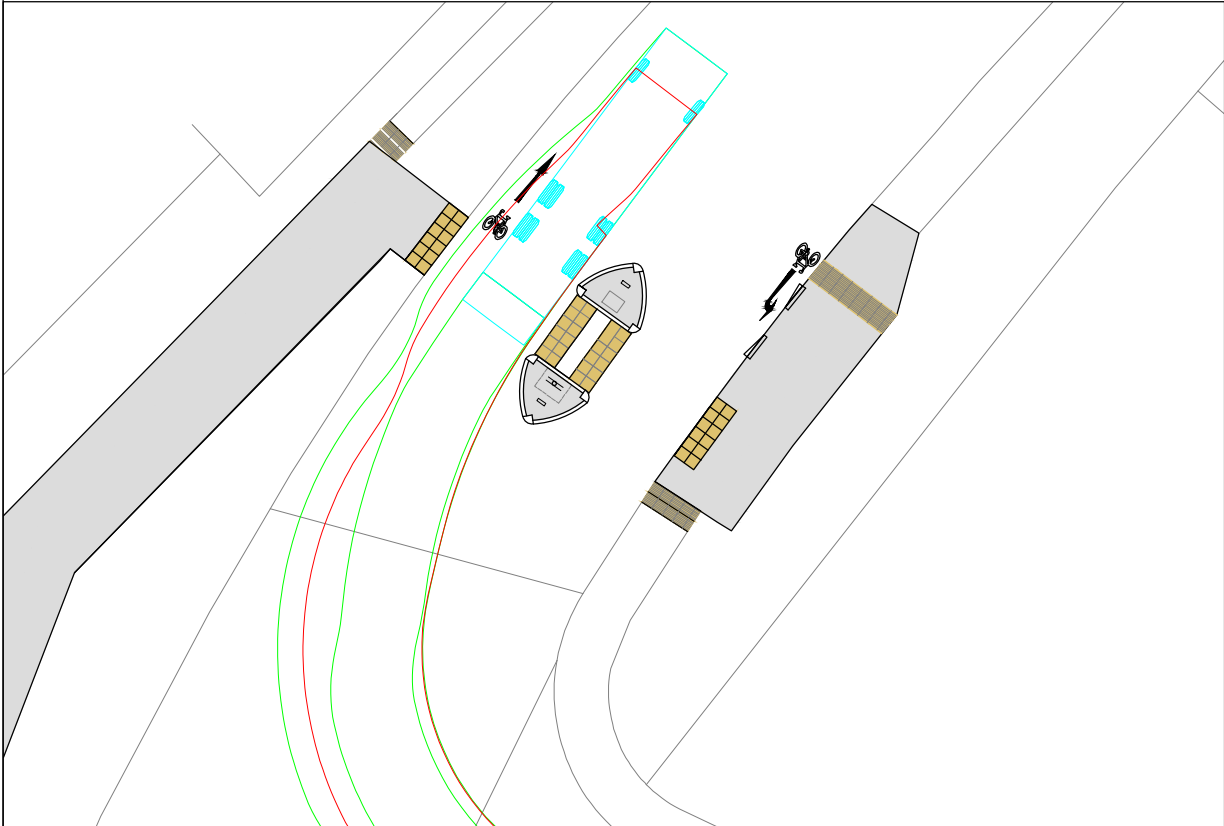


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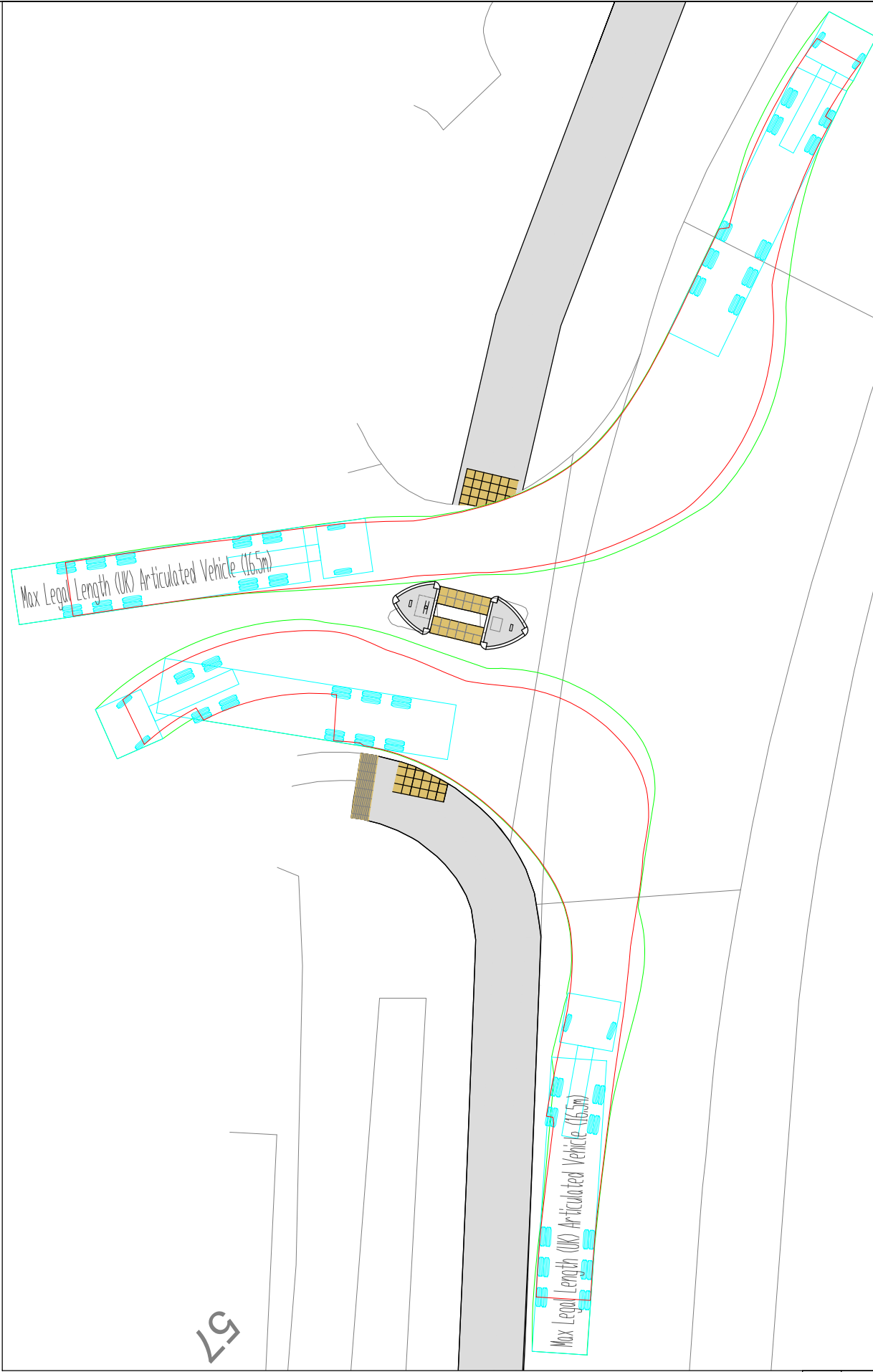
Project Name FORTY ACRE FARM BEDHAMPTON		Title ROUTE TO SCHOOL IMPROVEMENT PLAN	 Paul Basham Associates Ltd Lancaster Court, 8 Barnes Wallis Road, Fareham, PO15 5TU 01489 566134 info@paulbashamassociates.com www.paulbashamassociates.com	Client 	Checked By MS	Checked Date 26.04.18	Scale 1:500	(AT A3 SIZE)		
Project Phase PRELIMINARY					Drawn By JL	Drawn Date 25.04.18	Client Drawing No. -	PBA Drawing No. 041.0023.010	Revision -	



VEHICLE TRACKING THROUGH NORTHERN PEDESTRIAN CROSSING



REFUSE VEHICLE TRACKING RIGHT TURN OUT OF MAPLE WOOD

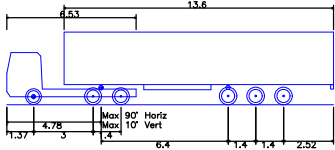


VEHICLE TRACKING THROUGH WESTERN PEDESTRIAN CROSSING

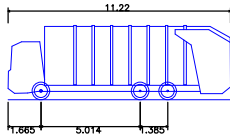
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VEHICLE PROFILES



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m



Phoenix 2 Duo Recycler (P2-15W with Elite 6x4 chassis)
Overall Length 11.220m
Overall Width 2.550m
Overall Body Height 3.756m
Min Body Ground Clearance 0.309m
Track Width 2.530m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 11.550m

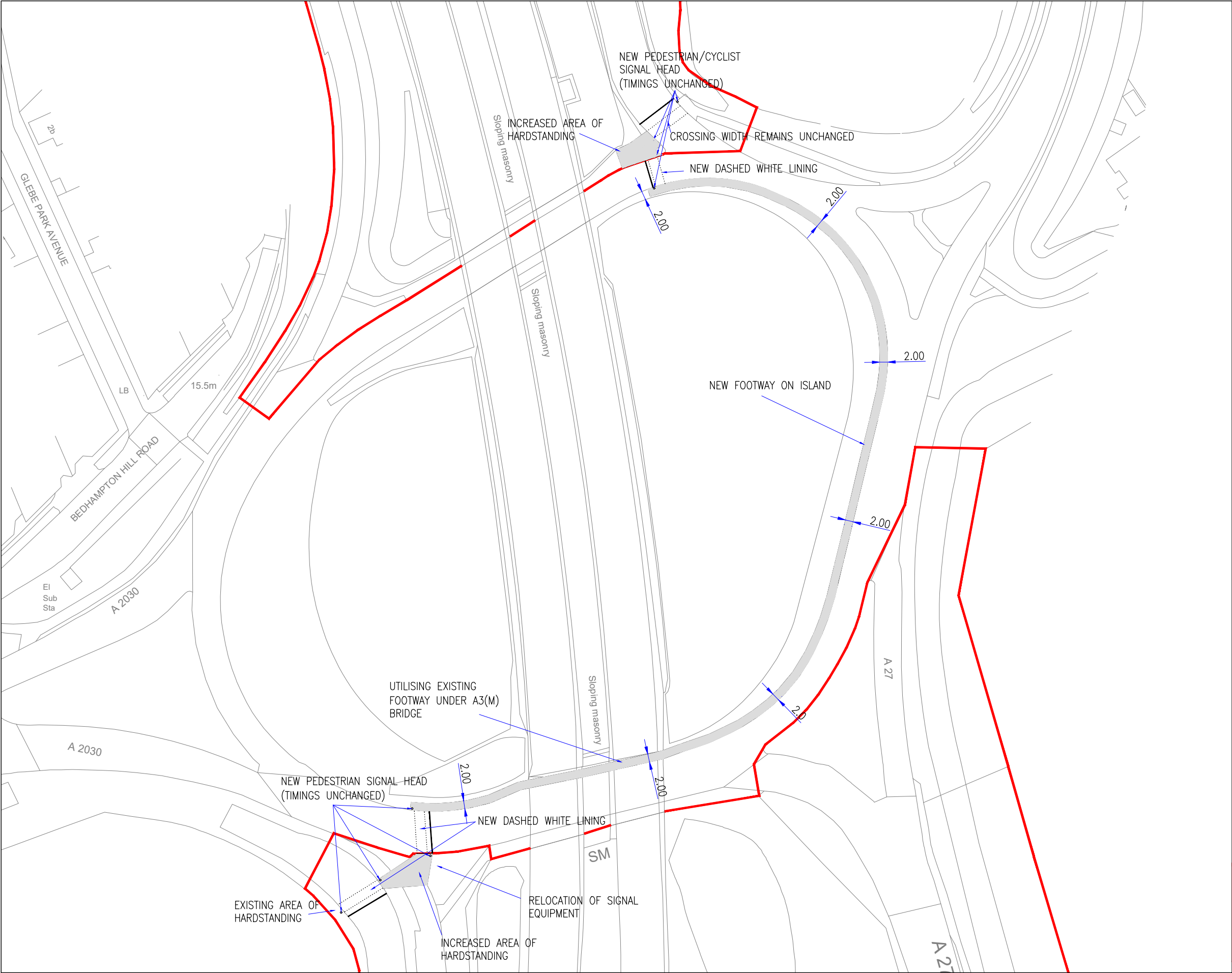


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Project Name		Title	 paulbasham associates Paul Basham Associates Ltd Lancaster Court, 8 Barnes Wallis Road, Fareham, PO15 5TU 01489 668134 info@paulbashamassociates.com www.paulbashamassociates.com	Client	Checked By		Checked Date	Scale		
FORTY ACRE FARM BEDHAMPTON					MS	26.04.18	1:250			
Project Phase		ROUTE TO SCHOOL IMPROVEMENT PLAN VEHICLE TRACKING	 BARRATT HOMES	Drawn By	Drawn Date	Client Drawing No.	PBA Drawing No.		Revision	
PRELIMINARY							JL	25.04.18	-	041.0023.011

Appendix B



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6. FURTHER DETAILS SUCH AS DROPPED KERBS AND TACTILE PAVING TO BE ADDED AT A LATER DATE ONCE DESIGN PROGRESSES.
7. THESE PROPOSALS DO NOT INCLUDE ANY KERB REALIGNMENT WORKS, WITH ALL NEW FOOTWAY TO TIE INTO EXISTING KERBLINES.

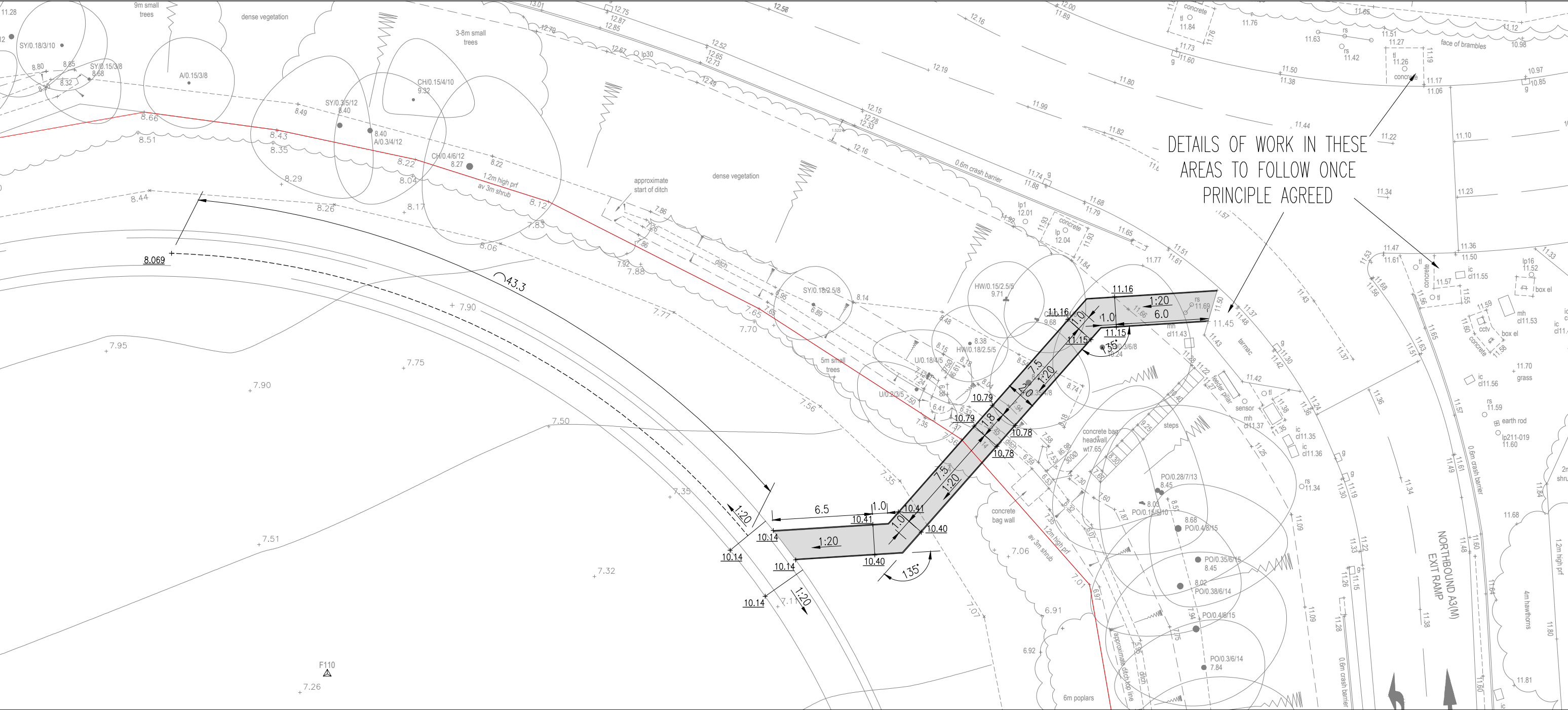
KEY:

 INDICATIVE HIGHWAYS ENGLAND BOUNDARY



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-		-	--	--	--
Rev	Description	Date	By	Chkd	
Project Name		Title		Client	
FORTY ACRE FARM BEDHAMPTON		INDICATIVE PEDESTRIAN IMPROVEMENT WORKS AT RUSTY CUTTER ROUNDABOUT		Checked By MS	
Project Phase		Checked Date		Scale	
PRELIMINARY		22.10.18		1:1000	
				(AT A3 SIZE)	
		Drawn By		Client Drawing No.	
		JL		-	
		Drawn Date		PBA Drawing No.	
		19.10.18		041.0023.014	
				Revision	
				-	



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KEY

	INDICATIVE HIGHWAY/SITE BOUNDARY
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A	Updated Levels	26-10-2018	CJ	JL
Rev	Description	Date	By	Chkd

Project Name FORTY ACRE FARM, BEDHAMPTON	Title PROPOSED FOOTPATH LINK TO CONNECT INTO EXISTING HARD STANDING AREA	 paulbasham associates Paul Basham Associates Ltd Lancaster Court, 8 Barnes Wallis Road, Fareham, PO15 5TU 01489 668134 info@paulbashamassociates.com www.paulbashamassociates.com	Client BARRATT HOMES	Checked By JL	Checked Date 15.10.18	Scale 1:250	(AT A3 SIZE)		
Project Phase PRELIMINARY				Drawn By EK	Drawn Date 12.10.18	Client Drawing No. -	PBA Drawing No. 041.0023.013	Revision A	

Appendix C

Forty Acre Farm Meeting Minutes

Date & Time: 16th July 2017 13.00

Venue – HCC Offices, Winchester

Attendees

Aaron Wright – Barratt David Wilson Homes (AW)

Stuart Goodwill – Barratt David Wilson Homes (SG)

Patrick Blake – Highways England (PBL)

Glen Strongitharm – Highways England (GS)

Paul Basham – Paul Basham Associates (PBA)

Jess Lloyd – Paul Basham Associates (JL)

Jonathan Mundy – Hampshire County Council (JM)

Holly Drury – Hampshire County Council (HD)

Chris Hirst – Hampshire County Council (CH)

Apologies

Mark Smith – Paul Basham Associates

1.0 Rusty Cutter Roundabout

1.1 PBL started by discussing the modelling for Rusty Cutter Roundabout (RCR), which was provided with the full planning application. With the addition of the crossing at the off-slip the modelled operation of the junction was not considered acceptable. PBL outlined that the identified crossing scheme will potentially lead to delay on the Highways England (HE) network, which would result in an objection from HE. PBL asked why discussions around a crossing point were not held with HE during pre-app.

1.2 JL pointed out the catchment area for the schools from the site has now changed, sending primary school children to Bidbury which generated greater demand for a crossing point across RCR. HD highlighted that throughout pre-app discussions, Hampshire County Council (HCC) have maintained from the start that a crossing point across RCR will be required to support the development, this is even more so now it is required to provide a safe route to school, it is also set out within the policy for this site as a requirement within the emerging Local Plan.

- 1.3 JL presented an improvement scheme to get pedestrians across the A3M on-slip which would not involve signals, instead utilising anti-skid and bollards. HD outlined that this would not be acceptable mitigation and could not be considered to make the crossing of the onslip safe.
- 1.4 PBA noted the need to keep pedestrians on the desire line and referenced a potential improvement scheme that had been previously raised by HD for consideration. This involved bringing pedestrians along the inside of the circulatory under the northern bridge and relocating the existing footway involving increased crossing movements which could be undertaken under signal control. However, JL stated she had significant concerns with realigning RCR. PBA and PBL thought any works alongside the inside of RCR would require significant works to the structure of the A3M. HD noted that there has been no evidence to support this however and no work undertaken to justify these assumptions.
- 1.5 HD countered this point by stating evidence would need to be provided before any options could be ruled out as cost prohibitive. The applicant should explore and detail all possible options to enable pedestrians and cyclists including the increased demand by school children to safely negotiate RCR. Once these are provided further discussions can be had regarding the most suitable and cost effective solution and how this might be brought forward.
- 1.6 SG noted HE would not view the inclusion of additional signals on RCR favourably, but wanted to establish whether any signal scheme would be a non-starter. PBL reiterated that if a signal scheme could be demonstrated with nil-detriment then it would be considered. Both PBL and JL acknowledged the current proposals do not provide nil detriment. It was noted that further work is required to demonstrate that it is achievable.
- 1.7 JM stated his concern with pedestrians having to utilise the intergreen to get across RCR. HD echoed this concern, highlighting that while no accidents were recorded at the existing crossing, demand is suppressed given the lack of what is considered to be a safe crossing facility. While some pedestrians currently utilise the intergreen timings to cross RCR, this is not considered a particularly safe method of crossing the roundabout (especially for children). JL confirmed the proposals were not for a push button and stated a number of intergreen scenarios had been tested. PBL pointed out there was a minimum intergreen time for the Strategic Road Network (SRN) which he believed was 8 seconds.
- 1.8 HD discussed that not all possibilities had been explored within the TA for either crossing at the roundabout or more widely to get pedestrians to Bedhampton and Warblington. Sending pedestrians up Glebe Park Avenue and across Portsdown Hill Road could be looked into, although there are also safety concerns with this route and the gradient is a concern which may prohibit use for some users and make it unattractive to many.
- 1.9 JL raised the idea of sending pedestrians anti-clockwise around RCR along the inside of the circulatory, although this would require pedestrians to get across more crossing points it has the potential to move closer to a nil-detriment impact

with regards to capacity impact on the HE network. This does however increase walking and cycling distance and this would need to be considered in the balance.

- 1.10 PBL wanted an RSA carried out for any scheme being considered, although PBA wanted more direction on which works should be considered further before an RSA was carried out.
- 1.11 Due to the levels difference, it was established that a full footway/cycleway from the site frontage to the RCR could not be achieved.
- 1.12 The need for a strong steer on what works were required at RCR was reiterated by SG who identified that given concerns voiced during the meeting, the crossing scheme presented within the Transport Assessment would be parked. PBA also agreed with this approach, agreeing to looking into a scheme taking pedestrians along the inside of the circulatory.
- 1.13 PBA wanted comments from HCC's Traffic Management (TM) team on the principal of undertaking the work with regards temporary traffic management. HD stated the agreement to TM arrangements for road works would be for our NRSWRA coordinators, but that she would get HCC engineers to assess the viability of this approach.
- 1.14 PBA are to undertake further work on this matter to explore all options and understand the impacts of these and submit to HCC and the HE for further discussion.

PBL and GS left the meeting

2.0 Forty Acres Response

- 2.1 To address the remaining matters, HD started to go through HCC's formal highway response to Havant Borough Council.
- 2.2 PBA was unsure of where the sustainability issue lies. HD pointed out RCR is the main block to sustainable travel towards Bedhampton and Warblington. AW countered this point by stating sustainability isn't affected by county boundaries. In response, HD said facilities in Bedhampton (including the catchment school) should be reachable from this development along with Bedhampton Station and Havant town centre which are all within a reasonable cycling distance.
- 2.3 As discussed during pre-app, HD raised the potential for a signalised crossing across Havant Road to allow pedestrians and cyclists from the site to safely access the existing footway on the northern side of the road. JL to review PVM₂ figures again, taking into account the revised school catchment to see whether this would be viable.
- 2.4 AW and SG sought confirmation on the primary reason for refusal at this stage. HD confirmed that without further information, the Highways refusal was based on sustainable access grounds.
- 2.5 JL wanted confirmation on the pedestrian desire line if a crossing was to be located in the middle of the two accesses to the site. HD pointed out a punch through the site to the shared use facilities would be useful. PBA thought that given the levels difference, a punch through at this location would be unachievable. SG was happy to provide another uncontrolled crossing, although

also stated another punch through would not be possible. HD pointed out DDA compliant steps wouldn't be a problem – both PBA and SG noted a link to the north would be beneficial, following the straight spine of the site. PBA to review this option further and discuss with HCC's agent at Havant Borough Council.

- 2.6 HD noted Portsmouth City Council (PCC) have not commented on the shared use path integration. JL to discuss this point with PCC.

3.0 Shared use path to West Street

- 3.1 HD sought confirmation on why the proposed shared use provision up Bedhampton Hill ended where it did. HD ran through the rationale of providing a shared use path up towards Bedhampton train station, stating it would provide a safe, sustainable method of travel towards Bidbury School, Bedhampton train station and Warblington School which sits outside recognised reasonable walking distances, given the lack of existing provision. HD confirmed she had walked the route with one of the Engineers from HCC who had not identified any show stoppers with the provision of the route.
- 3.2 JL responded to HD's query regarding the extent of the works by stating they ended near the top of the hill where the gradient levels off. The reason the path wasn't extended further was down to gradient issues and proximity to the frontage of houses along the path. While HD acknowledged the solution isn't entirely straightforward, a buffer could be placed between the path and the frontage to properties along the route and that cyclists don't generally cycle directly along the frontage. There is also no evidenced safety issues with providing shared use paths across private frontages with vehicular accesses, although it is noted it is often a concern of residents.
- 3.3 SG didn't believe the extent of the works requested was proportionate to the development. He believed the wishlist was too extensive and would not meet the CIL regulations. HD pointed out HCC are highlighting where we believed it is necessary to connect to with regards key facilities identified and in achieving suitable sustainable access opportunities in order to reduce the reliance on the private car. Without further evidence it is not possible to arrive at a conclusion of non CIL compliance yet in relation to the 3 tests.
- 3.4 SG wanted confirmation that a cycleway would need to be secured from all new developments outside of the recommended CIHT maximum walking distance. HD responded that sustainable travel needed to be secured to school and that each site has to be assessed on its own merit and against the environment in which that development sits.

4.0 Modelling Comments

- 4.1 JL to review comments regarding the modelling and revert back to HD to discuss further.
- 4.2 No conclusions on impact from the development were discussed or concluded at this meeting as there are too many unknowns regarding sustainable travel mitigation to determine if any development impact in terms of congestion requires

further mitigation. There is also no agreed understanding on the cumulative impact of the development.

5.0 Travel Plan

5.1 JL to review and revert back to HD to discuss further if necessary.

6.0 Conclusion

6.1 The main outstanding matters to address relate to the signalised crossing outside the site frontage, provision of an additional refugee crossing, safe crossing facilities across RCR and the shared use path to West Street.

6.2 HE do not consider the vehicular impact of the Forty Acre Farm development at RCR to be significant. The concerns are centred around the proposed pedestrian improvements across the roundabout and the associated safety impact. To satisfy both HCC and HE, a balanced outcome will need to be achieved.

6.3 JL noted JM was going to review the modelling comments from the HE. JM to review HE's comments and go back to JL with some initial feedback.

End of Meeting

Appendix D

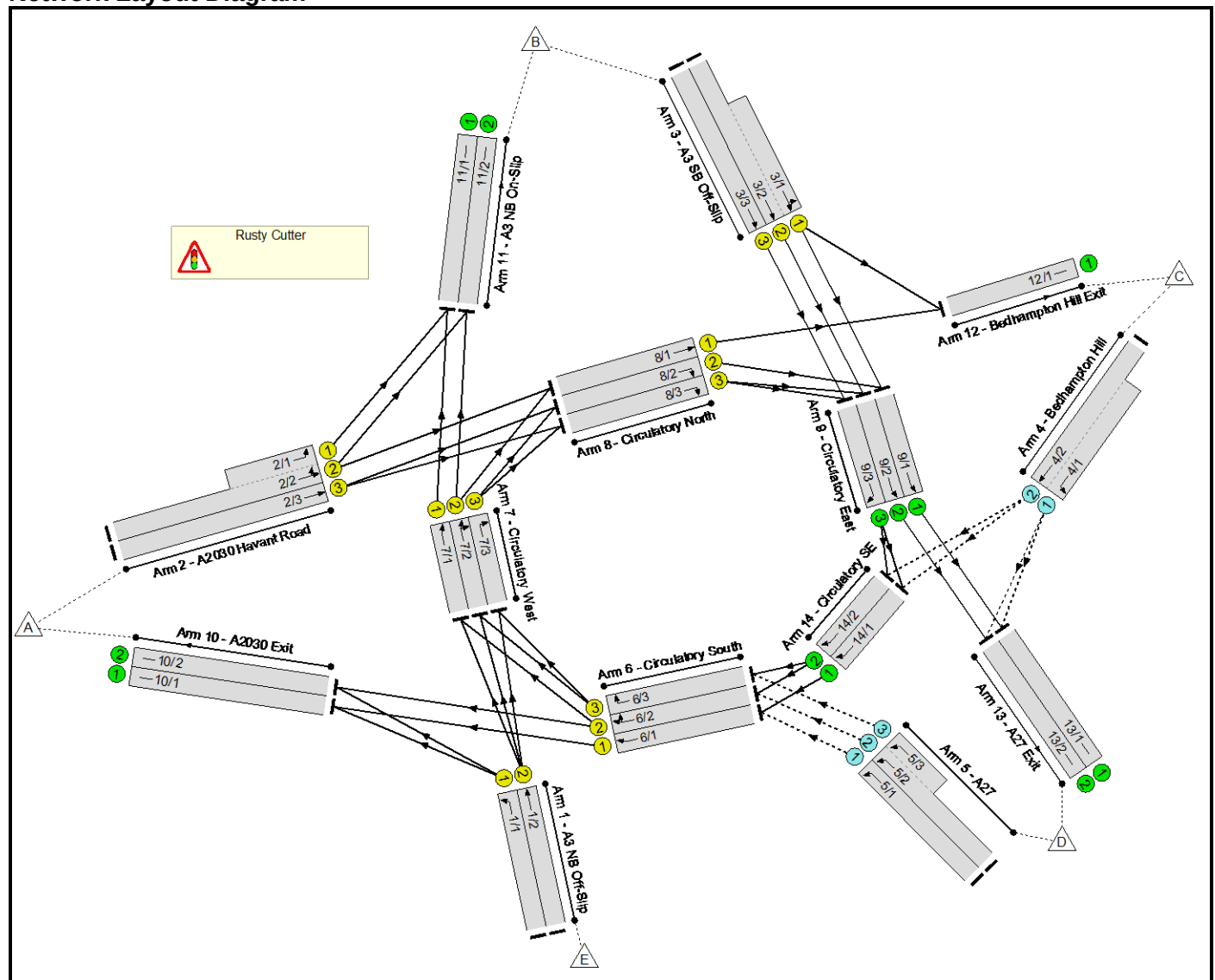
Full Input Data And Results

Full Input Data And Results

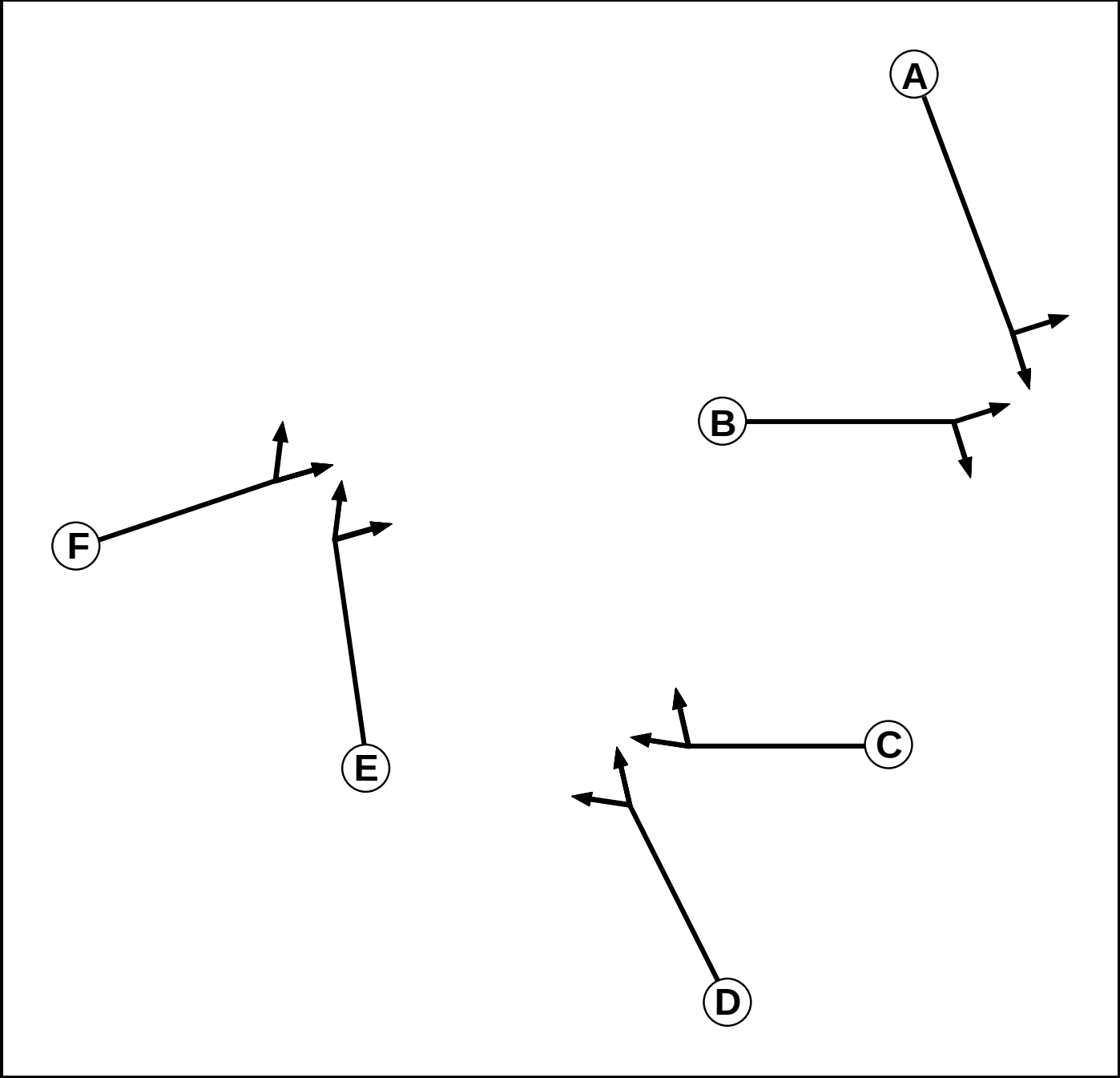
User and Project Details

Project:	Forty Acre Farm, Bedhampton
Title:	Rusty Cutter Modelling (with additional signalised arms) AM Peak
Location:	Bedhampton
Additional detail:	
File name:	Rusty Cutter v10 2016 Base AM - Approved model + imp.lsg3x
Author:	
Company:	Paul Basham 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	2		7	7
D	Traffic	2		7	7
E	Traffic	3		7	7
F	Traffic	3		7	7

Phase Intergreens Matrix

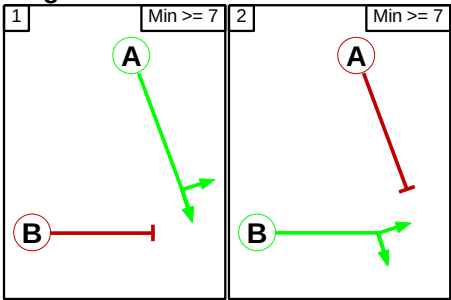
Terminating Phase	Starting Phase						
		A	B	C	D	E	F
	A		7	-	-	-	-
	B	7		-	-	-	-
	C	-	-		7	-	-
	D	-	-	7		-	-
	E	-	-	-	-		8
	F	-	-	-	-	8	

Phases in Stage

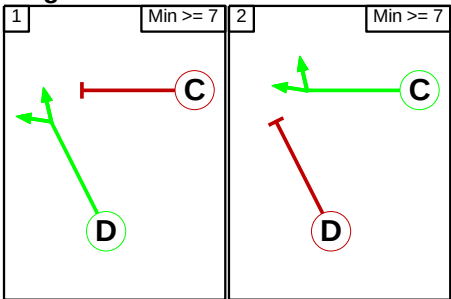
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	D
2	2	C
3	1	F
3	2	E

Stage Diagram

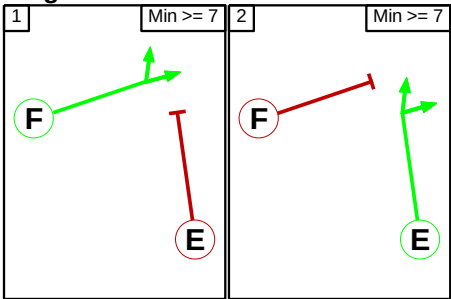
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Stage Stream: 3

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

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		7
	2	7	

Stage Stream: 2

	To Stage		
From Stage		1	2
	1		7
	2	7	

Stage Stream: 3

	To Stage		
From Stage		1	2
	1		8
	2	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Rusty Cutter											
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)
4/1 (Bedhampton Hill)	13/1 (Left)	1448	0	9/1	0.39	All	-	-	-	-	-
				9/2	0.39	All					
	13/2 (Left)	1448	0	9/1	0.39	All					
				9/2	0.39	All					
4/2 (Bedhampton Hill)	14/1 (Ahead)	1448	0	9/1	0.39	All	-	-	-	-	-
				9/2	0.39	All					
				9/3	0.39	All					
	14/2 (Ahead)	1448	0	9/1	0.39	All					
				9/2	0.39	All					
				9/3	0.39	All					
5/1 (A27)	6/1 (Left)	1185	0	14/1	0.39	All	-	-	-	-	-
5/2 (A27)	6/2 (Left)	1185	0	14/1	0.39	All	-	-	-	-	-
				14/2	0.39	To 6/2 (Ahead)					
5/3 (A27)	6/3 (Left)	1185	0	14/1	0.39	All	-	-	-	-	-
				14/2	0.39	All					

Full Input Data And Results

Lane Input Data

Junction: Rusty Cutter												
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 (A3 NB Off-Slip)	U	D	2	3	60.0	User	1950	-	-	-	-	-
1/2 (A3 NB Off-Slip)	U	D	2	3	60.0	User	1950	-	-	-	-	-
2/1 (A2030 Havant Road)	U	F	2	3	7.0	User	1950	-	-	-	-	-
2/2 (A2030 Havant Road)	U	F	2	3	60.0	User	1950	-	-	-	-	-
2/3 (A2030 Havant Road)	U	F	2	3	60.0	User	1950	-	-	-	-	-
3/1 (A3 SB Off-Slip)	U	A	2	3	9.6	User	1950	-	-	-	-	-
3/2 (A3 SB Off-Slip)	U	A	2	3	76.5	User	1950	-	-	-	-	-
3/3 (A3 SB Off-Slip)	U	A	2	3	76.5	User	1950	-	-	-	-	-
4/1 (Bedhampton Hill)	O		2	3	12.5	User	1950	-	-	-	-	-
4/2 (Bedhampton Hill)	O		2	3	60.0	User	1950	-	-	-	-	-
5/1 (A27)	O		2	3	42.6	User	1950	-	-	-	-	-
5/2 (A27)	O		2	3	7.0	User	1950	-	-	-	-	-
5/3 (A27)	O		2	3	5.2	User	1950	-	-	-	-	-
6/1 (Circulatory South)	U	C	2	3	15.7	User	1950	-	-	-	-	-
6/2 (Circulatory South)	U	C	2	3	15.7	User	1950	-	-	-	-	-
6/3 (Circulatory South)	U	C	2	3	15.7	User	1950	-	-	-	-	-
7/1 (Circulatory West)	U	E	2	3	17.4	User	1950	-	-	-	-	-
7/2 (Circulatory West)	U	E	2	3	17.4	User	1950	-	-	-	-	-
7/3 (Circulatory West)	U	E	2	3	17.4	User	1950	-	-	-	-	-

Full Input Data And Results

8/1 (Circulatory North)	U	B	2	3	26.1	User	1950	-	-	-	-	-
8/2 (Circulatory North)	U	B	2	3	26.1	User	1950	-	-	-	-	-
8/3 (Circulatory North)	U	B	2	3	26.1	User	1950	-	-	-	-	-
9/1 (Circulatory East)	U		2	3	14.8	User	1950	-	-	-	-	-
9/2 (Circulatory East)	U		2	3	14.8	User	1950	-	-	-	-	-
9/3 (Circulatory East)	U		2	3	14.8	User	1950	-	-	-	-	-
10/1 (A2030 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (A2030 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (A3 NB On-Slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (A3 NB On-Slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (Bedhampton Hill Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (A27 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (A27 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1 (Circulatory SE)	U		2	3	19.1	User	1950	-	-	-	-	-
14/2 (Circulatory SE)	U		2	3	19.1	User	1950	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2016 AM Peak'	07:30	08:30	01:00	
2: '2023 AM Peak'	07:30	08:30	01:00	
3: '2023 AM Peak Plus Com Dev'	07:30	08:30	01:00	
4: '2023 AM Peak Plus Com Dev Plus 50% Prop Dev'	07:30	08:30	01:00	
5: '2028 AM Peak'	07:30	08:30	01:00	
6: '2028 AM Peak Plus Com Dev'	07:30	08:30	01:00	
7: '2028 AM Peak Plus Com Dev Plus Prop Dev'	07:30	08:30	01:00	
8: '2028 AM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test'	07:30	08:30	01:00	

Full Input Data And Results

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

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	311	233	319	0	863
	B	342	0	56	1027	0	1425
	C	215	51	0	353	0	619
	D	240	773	35	0	0	1048
	E	39	2	171	489	0	701
	Tot.	836	1137	495	2188	0	4656

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2016 AM Peak
Junction: Rusty Cutter	
1/1	39
1/2	662
2/1 (short)	272
2/2 (with short)	544(In) 272(Out)
2/3	319
3/1 (short)	541
3/2 (with short)	1083(In) 542(Out)
3/3	342
4/1 (short)	353
4/2 (with short)	619(In) 266(Out)
5/1	240
5/2 (with short)	808(In) 404(Out)
5/3 (short)	404
6/1	518
6/2	709
6/3	429
7/1	431
7/2	601
7/3	489
8/1	439
8/2	405
8/3	403
9/1	890
9/2	945
9/3	342
10/1	538
10/2	298
11/1	703
11/2	434
12/1	495
13/1	1066
13/2	1122
14/1	278
14/2	330

Full Input Data And Results

Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

Full Input Data And Results

9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 2: '2023 AM Peak' (FG2: '2023 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	348	261	357	0	966
	B	383	0	63	1150	0	1596
	C	241	57	0	395	0	693
	D	269	865	39	0	0	1173
	E	44	2	191	547	0	784
	Tot.	937	1272	554	2449	0	5212

Traffic Lane Flows

Lane	Scenario 2: 2023 AM Peak
Junction: Rusty Cutter	
1/1	44
1/2	740
2/1 (short)	304
2/2 (with short)	609(In) 305(Out)
2/3	357
3/1 (short)	607
3/2 (with short)	1213(In) 606(Out)
3/3	383
4/1 (short)	395
4/2 (with short)	693(In) 298(Out)
5/1	269
5/2 (with short)	904(In) 452(Out)
5/3 (short)	452
6/1	580
6/2	794
6/3	480
7/1	482
7/2	672
7/3	547
8/1	491
8/2	453
8/3	451
9/1	997
9/2	1057
9/3	383
10/1	602
10/2	335
11/1	786
11/2	486
12/1	554
13/1	1194
13/2	1255
14/1	311
14/2	370

Full Input Data And Results

Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

Full Input Data And Results

9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 3: '2023 AM Peak Plus Com Dev' (FG3: '2023 AM Peak Plus Com Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	351	261	361	0	973
	B	384	0	63	1150	0	1597
	C	241	57	0	395	0	693
	D	269	866	39	0	0	1174
	E	45	2	191	547	0	785
	Tot.	939	1276	554	2453	0	5222

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2023 AM Peak Plus Com Dev
Junction: Rusty Cutter	
1/1	45
1/2	740
2/1 (short)	306
2/2 (with short)	612(In) 306(Out)
2/3	361
3/1 (short)	607
3/2 (with short)	1213(In) 606(Out)
3/3	384
4/1 (short)	395
4/2 (with short)	693(In) 298(Out)
5/1	269
5/2 (with short)	905(In) 452(Out)
5/3 (short)	453
6/1	581
6/2	794
6/3	481
7/1	482
7/2	673
7/3	547
8/1	491
8/2	455
8/3	453
9/1	999
9/2	1059
9/3	384
10/1	604
10/2	335
11/1	788
11/2	488
12/1	554
13/1	1196
13/2	1257
14/1	312
14/2	370

Full Input Data And Results

Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

Full Input Data And Results

9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 4: '2023 AM Peak Plus Com Dev Plus 50% Prop Dev' (FG4: '2023 AM Peak Plus Com Dev Plus 50% Prop Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	367	264	396	0	1027
	B	390	0	63	1150	0	1603
	C	243	57	0	395	0	695
	D	273	866	39	0	0	1178
	E	53	2	191	547	0	793
	Tot.	959	1292	557	2488	0	5296

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2023 AM Peak Plus Com Dev Plus 50% Prop Dev
Junction: Rusty Cutter	
1/1	53
1/2	740
2/1 (short)	315
2/2 (with short)	631(In) 316(Out)
2/3	396
3/1 (short)	607
3/2 (with short)	1213(In) 606(Out)
3/3	390
4/1 (short)	395
4/2 (with short)	695(In) 300(Out)
5/1	273
5/2 (with short)	905(In) 453(Out)
5/3 (short)	452
6/1	589
6/2	799
6/3	480
7/1	483
7/2	672
7/3	547
8/1	494
8/2	472
8/3	471
9/1	1016
9/2	1077
9/3	390
10/1	616
10/2	343
11/1	798
11/2	494
12/1	557
13/1	1213
13/2	1275
14/1	316

Full Input Data And Results

14/2	374
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Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

Full Input Data And Results

9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 5: '2028 AM Peak' (FG5: '2028 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	366	274	375	0	1015
	B	402	0	66	1208	0	1676
	C	253	60	0	415	0	728
	D	282	909	41	0	0	1232
	E	46	2	201	575	0	824
	Tot.	983	1337	582	2573	0	5475

Traffic Lane Flows

Lane	Scenario 5: 2028 AM Peak
Junction: Rusty Cutter	
1/1	46
1/2	778
2/1 (short)	320
2/2 (with short)	640(In) 320(Out)
2/3	375
3/1 (short)	637
3/2 (with short)	1274(In) 637(Out)
3/3	402
4/1 (short)	415
4/2 (with short)	728(In) 313(Out)
5/1	282
5/2 (with short)	950(In) 475(Out)
5/3 (short)	475
6/1	609
6/2	833
6/3	505
7/1	506
7/2	707
7/3	575
8/1	516
8/2	476
8/3	474
9/1	1047
9/2	1111
9/3	402
10/1	632
10/2	351
11/1	826
11/2	511
12/1	582
13/1	1254
13/2	1319
14/1	327
14/2	388

Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

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9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 6: '2028 AM Peak Plus Com Dev' (FG6: '2028 AM Peak Plus Com Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	369	274	379	0	1022
	B	403	0	66	1208	0	1677
	C	253	60	0	415	0	728
	D	282	910	41	0	0	1233
	E	47	2	201	575	0	825
	Tot.	985	1341	582	2577	0	5485

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2028 AM Peak Plus Com Dev
Junction: Rusty Cutter	
1/1	47
1/2	778
2/1 (short)	321
2/2 (with short)	643(In) 322(Out)
2/3	379
3/1 (short)	637
3/2 (with short)	1274(In) 637(Out)
3/3	403
4/1 (short)	415
4/2 (with short)	728(In) 313(Out)
5/1	282
5/2 (with short)	951(In) 476(Out)
5/3 (short)	475
6/1	610
6/2	834
6/3	505
7/1	507
7/2	707
7/3	575
8/1	516
8/2	478
8/3	476
9/1	1049
9/2	1113
9/3	403
10/1	634
10/2	351
11/1	828
11/2	513
12/1	582
13/1	1256
13/2	1321
14/1	328
14/2	388

Full Input Data And Results

Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

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9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 7: '2028 AM Peak Plus Com Dev Plus Prop Dev' (FG7: '2028 AM Peak Plus Com Dev Plus Prop Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	400	281	448	0	1129
	B	415	0	66	1208	0	1689
	C	257	60	0	415	0	732
	D	292	910	41	0	0	1243
	E	63	2	201	575	0	841
	Tot.	1027	1372	589	2646	0	5634

Traffic Lane Flows

Lane	Scenario 7: 2028 AM Peak Plus Com Dev Plus Prop Dev
Junction: Rusty Cutter	
1/1	63
1/2	778
2/1 (short)	340
2/2 (with short)	681(In) 341(Out)
2/3	448
3/1 (short)	637
3/2 (with short)	1274(In) 637(Out)
3/3	415
4/1 (short)	415
4/2 (with short)	732(In) 317(Out)
5/1	292
5/2 (with short)	951(In) 475(Out)
5/3 (short)	476
6/1	627
6/2	842
6/3	506
7/1	506
7/2	708
7/3	575
8/1	523
8/2	512
8/3	511
9/1	1083
9/2	1148
9/3	415
10/1	658
10/2	369
11/1	846
11/2	526
12/1	589
13/1	1290
13/2	1356
14/1	335

Full Input Data And Results

14/2	397
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Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

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9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 8: '2028 AM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test' (FG8: '2028 AM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	400	281	448	0	1129
	B	415	0	66	1228	0	1709
	C	257	60	0	415	0	732
	D	292	917	41	0	0	1250
	E	63	2	201	575	0	841
	Tot.	1027	1379	589	2666	0	5661

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2028 AM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test
Junction: Rusty Cutter	
1/1	63
1/2	778
2/1 (short)	340
2/2 (with short)	681(In) 341(Out)
2/3	448
3/1 (short)	647
3/2 (with short)	1294(In) 647(Out)
3/3	415
4/1 (short)	415
4/2 (with short)	732(In) 317(Out)
5/1	292
5/2 (with short)	958(In) 479(Out)
5/3 (short)	479
6/1	627
6/2	846
6/3	509
7/1	510
7/2	711
7/3	575
8/1	523
8/2	512
8/3	511
9/1	1093
9/2	1158
9/3	415
10/1	658
10/2	369
11/1	850
11/2	529
12/1	589
13/1	1300
13/2	1366

Full Input Data And Results

14/1	335
14/2	397

Full Input Data And Results

Lane Saturation Flows

Junction: Rusty Cutter								
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 (A3 NB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
1/2 (A3 NB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/1 (A2030 Havant Road Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
2/2 (A2030 Havant Road Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
2/3 (A2030 Havant Road Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
3/1 (A3 SB Off-Slip Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
3/2 (A3 SB Off-Slip Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
3/3 (A3 SB Off-Slip Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
4/1 (Bedhampton Hill Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
4/2 (Bedhampton Hill Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/1 (A27 Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
5/2 (A27 Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
5/3 (A27 Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
6/1 (Circulatory South Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
6/2 (Circulatory South Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
6/3 (Circulatory South Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
7/1 (Circulatory West Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
7/2 (Circulatory West Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
7/3 (Circulatory West Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
8/1 (Circulatory North Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950
8/2 (Circulatory North Lane 2)	This lane uses a directly entered Saturation Flow						1950	1950
8/3 (Circulatory North Lane 3)	This lane uses a directly entered Saturation Flow						1950	1950
9/1 (Circulatory East Lane 1)	This lane uses a directly entered Saturation Flow						1950	1950

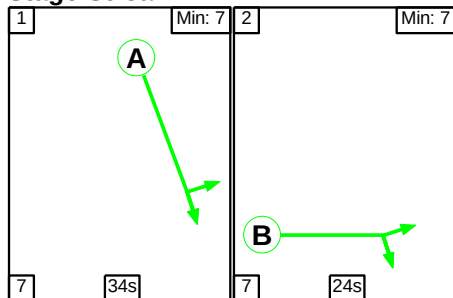
Full Input Data And Results

9/2 (Circulatory East Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950
9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

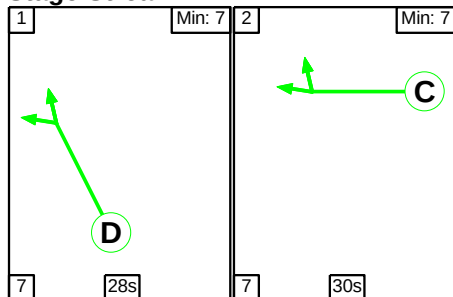
Scenario 1: '2016 AM Peak' (FG1: '2016 AM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

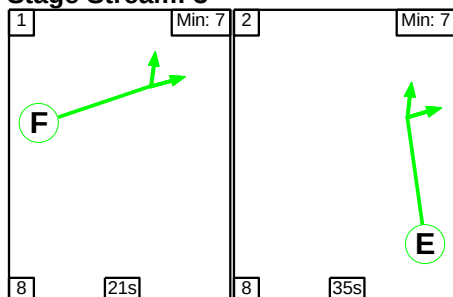
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	34	24
Change Point	13	54

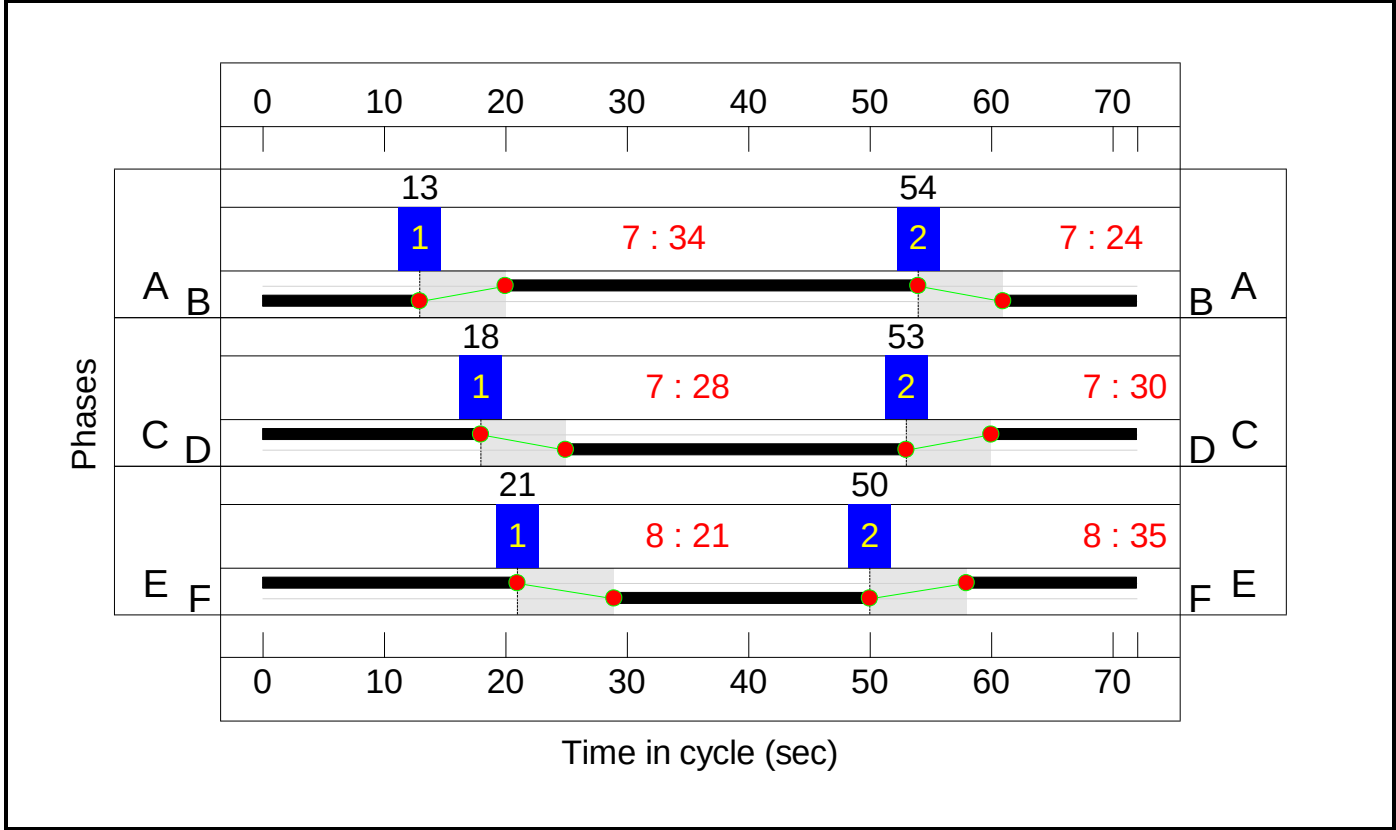
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	18	53

Stage Stream: 3

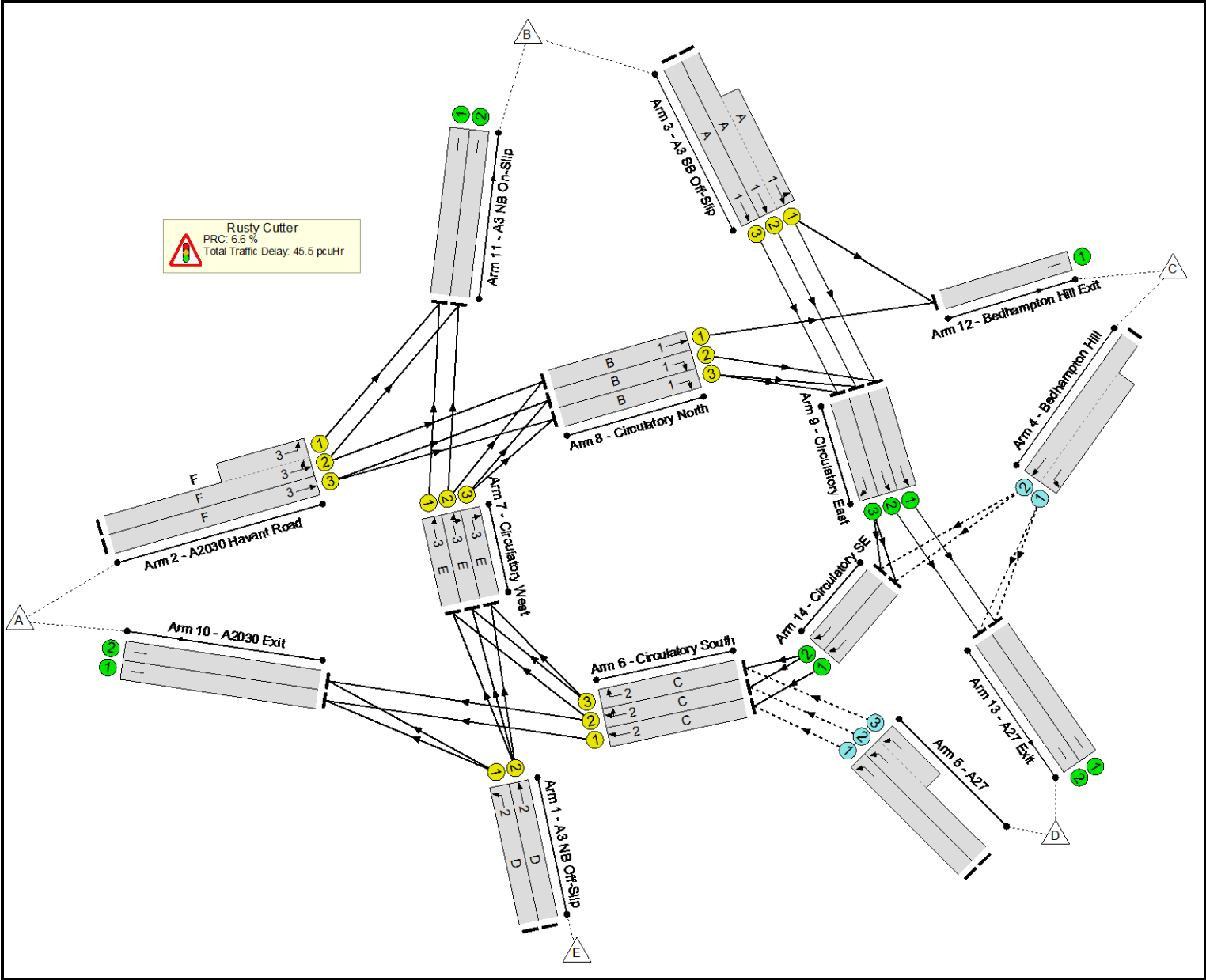
Stage	1	2
Duration	21	35
Change Point	21	50

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	39	1950	785	5.0%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	662	1950	785	84.3%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	21	-	544	1950:1950	472+472	57.6 : 57.6%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	21	-	319	1950	596	53.5%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	34	-	1083	1950:1950	716+715	75.7 : 75.7%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	34	-	342	1950	948	36.1%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	619	1950:1950	659+732	40.3 : 48.2%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	240	1950	1076	22.3%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	808	1950:1950	957+948	42.2 : 42.6%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	518	1950	840	61.7%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	709	1950	840	84.4%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	429	1950	840	51.1%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	431	1950	975	44.2%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	601	1950	975	61.6%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	489	1950	975	50.2%

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8/1	Circulatory North Ahead	U	1	N/A	B		1	24	-	439	1950	677	64.8%
8/2	Circulatory North Right	U	1	N/A	B		1	24	-	405	1950	677	59.8%
8/3	Circulatory North Right	U	1	N/A	B		1	24	-	403	1950	677	59.5%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	890	1950	1950	45.6%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	945	1950	1950	48.5%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	342	1950	1950	17.5%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	538	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	298	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	703	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	495	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1066	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1122	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	278	1950	1950	14.3%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	330	1950	1950	16.9%

Full Input Data And Results

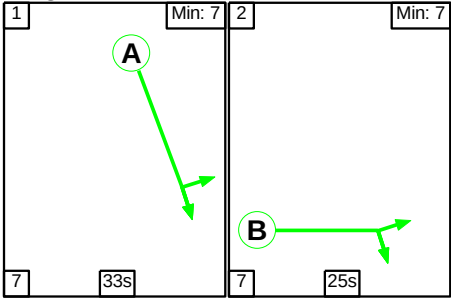
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	3094	0	0	29.7	15.8	0.0	45.5	-	-	-	-
Rusty Cutter	-	-	3094	0	0	29.7	15.8	0.0	45.5	-	-	-	-
1/1	39	39	-	-	-	0.1	0.0	-	0.2	15.6	0.5	0.0	0.5
1/2	662	662	-	-	-	3.6	2.6	-	6.1	33.4	12.0	2.6	14.5
2/2+2/1	544	544	-	-	-	3.0	0.7	-	3.7	24.7	4.4	0.7	5.1
2/3	319	319	-	-	-	1.8	0.6	-	2.4	27.2	5.2	0.6	5.8
3/2+3/1	1083	1083	-	-	-	4.0	1.5	-	5.5	18.3	7.7	1.5	9.2
3/3	342	342	-	-	-	1.1	0.3	-	1.4	14.5	4.2	0.3	4.5
4/2+4/1	619	619	1238	0	0	0.3	0.4	-	0.7	4.0	1.8	0.4	2.2
5/1	240	240	240	0	0	0.0	0.1	-	0.1	2.2	0.0	0.1	0.1
5/2+5/3	808	808	1616	0	0	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
6/1	518	518	-	-	-	2.4	0.8	-	3.2	22.4	8.9	0.8	9.7
6/2	709	709	-	-	-	3.8	2.6	-	6.4	32.5	13.1	2.6	15.7
6/3	429	429	-	-	-	1.8	0.5	-	2.3	19.2	6.2	0.5	6.7
7/1	431	431	-	-	-	0.2	0.4	-	0.5	4.6	0.3	0.4	0.7
7/2	601	601	-	-	-	0.9	0.8	-	1.7	10.3	3.9	0.8	4.7
7/3	489	489	-	-	-	2.9	0.5	-	3.4	25.2	9.8	0.5	10.3
8/1	439	439	-	-	-	1.6	0.9	-	2.6	21.0	8.5	0.9	9.4
8/2	405	405	-	-	-	1.1	0.7	-	1.8	16.1	3.8	0.7	4.5
8/3	403	403	-	-	-	1.1	0.7	-	1.8	16.0	3.7	0.7	4.4
9/1	890	890	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
9/2	945	945	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
9/3	342	342	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	538	538	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	703	703	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

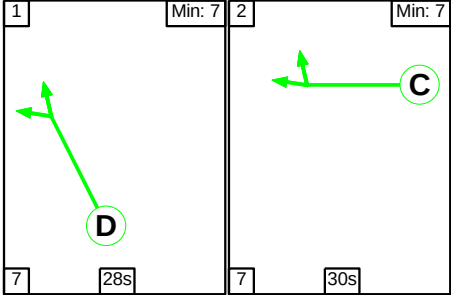
11/2	434	434	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	495	495	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1066	1066	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	1122	1122	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	278	278	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	330	330	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 18.9 Total Delay for Signalled Lanes (pcuHr): 13.03 Cycle Time (s): 72 C1 Stream: 2 PRC for Signalled Lanes (%): 6.6 Total Delay for Signalled Lanes (pcuHr): 18.24 Cycle Time (s): 72 C1 Stream: 3 PRC for Signalled Lanes (%): 46.0 Total Delay for Signalled Lanes (pcuHr): 11.82 Cycle Time (s): 72 PRC Over All Lanes (%): 6.6 Total Delay Over All Lanes(pcuHr): 45.47													

Stage Sequence Diagram

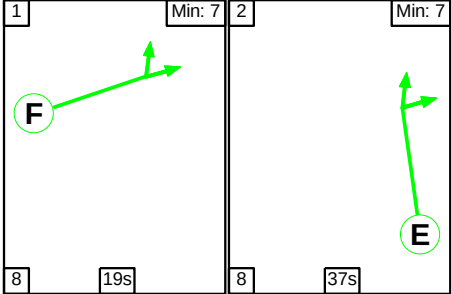
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	33	25
Change Point	13	53

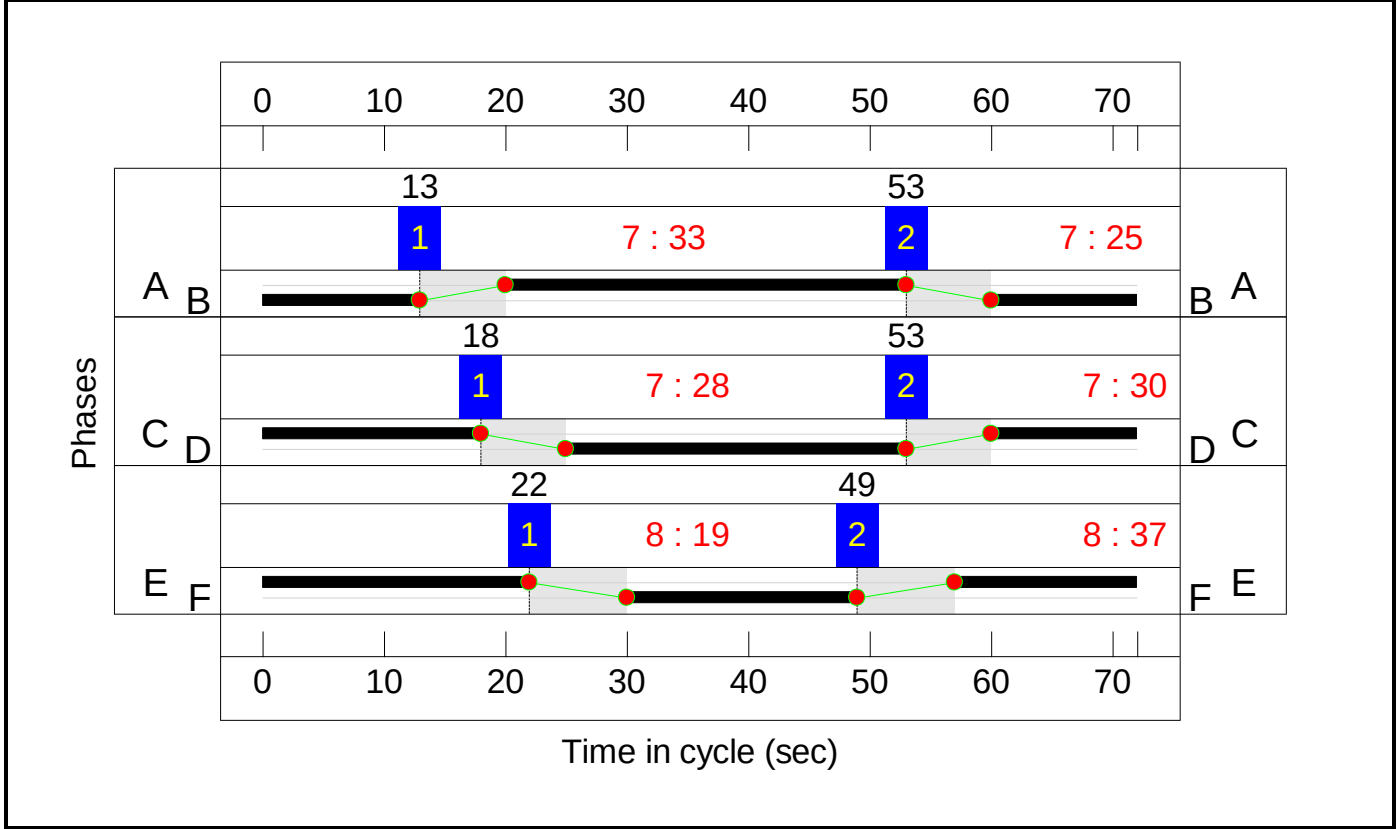
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	18	53

Stage Stream: 3

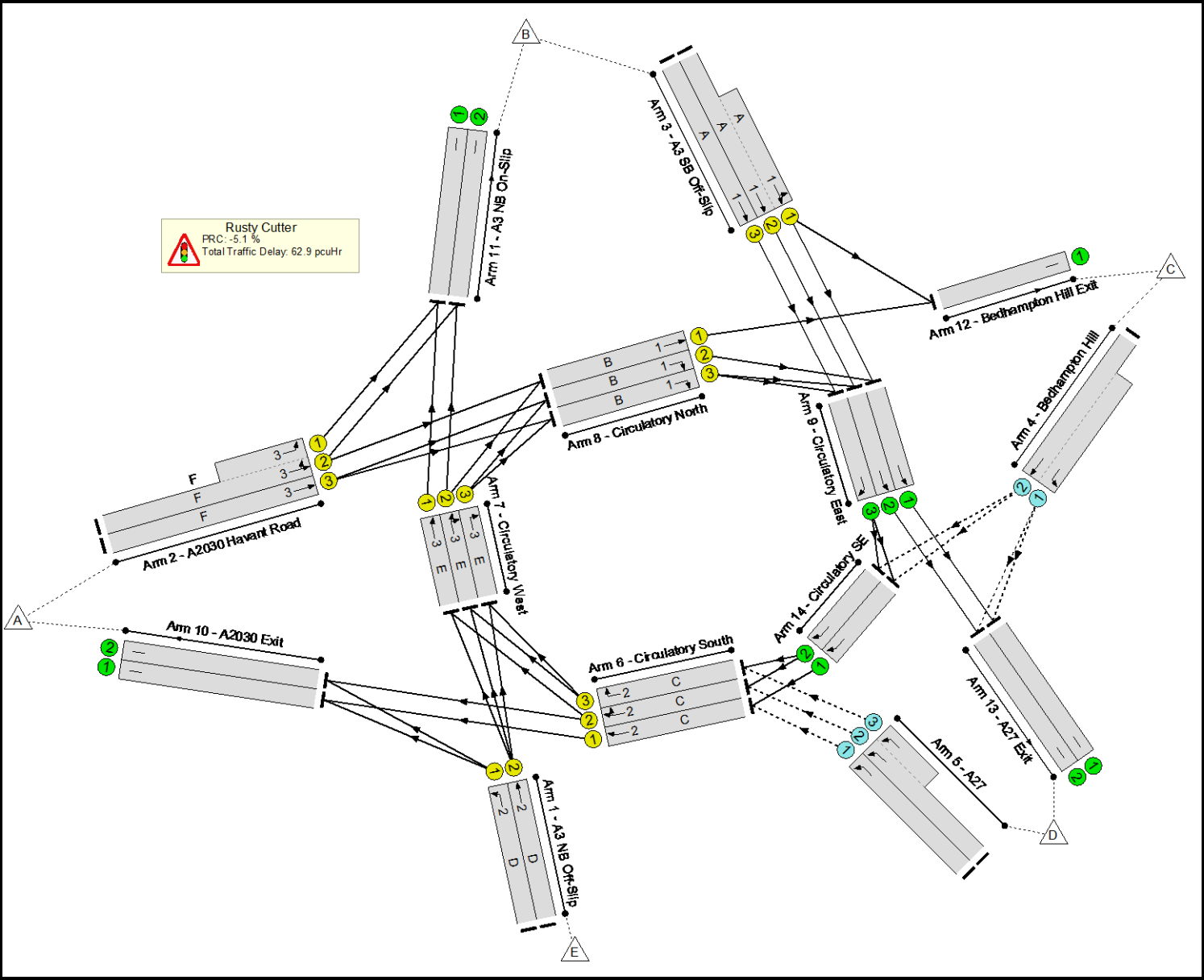
Stage	1	2
Duration	19	37
Change Point	22	49

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	94.6%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	94.6%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	44	1950	785	5.6%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	740	1950	785	94.2%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	19	-	609	1950:1950	445+443	68.5 : 68.5%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	19	-	357	1950	542	65.9%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	33	-	1213	1950:1950	701+703	86.4 : 86.4%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	33	-	383	1950	921	41.6%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	693	1950:1950	578+647	51.6 : 61.1%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	269	1950	1063	25.3%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	904	1950:1950	930+919	48.6 : 49.2%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	580	1950	840	69.1%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	794	1950	840	94.6%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	480	1950	840	57.2%
7/1	Circulatory West Ahead	U	3	N/A	E		1	37	-	482	1950	1029	46.8%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	37	-	672	1950	1029	65.3%
7/3	Circulatory West Right	U	3	N/A	E		1	37	-	547	1950	1029	53.1%

Full Input Data And Results

8/1	Circulatory North Ahead	U	1	N/A	B		1	25	-	491	1950	704	69.7%
8/2	Circulatory North Right	U	1	N/A	B		1	25	-	453	1950	704	64.3%
8/3	Circulatory North Right	U	1	N/A	B		1	25	-	451	1950	704	64.0%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	997	1950	1950	51.1%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1057	1950	1950	54.2%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	383	1950	1950	19.6%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	602	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	786	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	486	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	554	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1194	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1255	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	311	1950	1950	15.9%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	370	1950	1950	19.0%

Full Input Data And Results

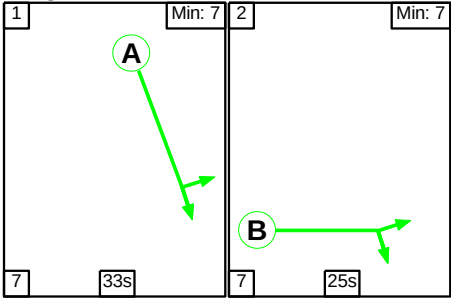
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	3463	0	0	35.0	28.0	0.0	62.9	-	-	-	-
Rusty Cutter	-	-	3463	0	0	35.0	28.0	0.0	62.9	-	-	-	-
1/1	44	44	-	-	-	0.2	0.0	-	0.2	15.6	0.5	0.0	0.6
1/2	740	740	-	-	-	4.3	6.4	-	10.6	51.7	14.2	6.4	20.5
2/2+2/1	609	609	-	-	-	3.8	1.1	-	4.8	28.7	5.2	1.1	6.2
2/3	357	357	-	-	-	2.3	1.0	-	3.2	32.6	6.2	1.0	7.2
3/2+3/1	1213	1213	-	-	-	4.9	3.1	-	8.0	23.7	9.3	3.1	12.4
3/3	383	383	-	-	-	1.3	0.4	-	1.7	15.8	5.0	0.4	5.4
4/2+4/1	693	693	1386	0	0	0.6	0.7	-	1.2	6.4	2.7	0.7	3.4
5/1	269	269	269	0	0	0.0	0.2	-	0.2	2.3	0.0	0.2	0.2
5/2+5/3	904	904	1808	0	0	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
6/1	580	580	-	-	-	2.8	1.1	-	4.0	24.5	10.3	1.1	11.4
6/2	794	794	-	-	-	4.6	6.7	-	11.3	51.1	15.3	6.7	22.0
6/3	480	480	-	-	-	2.0	0.7	-	2.7	20.3	7.2	0.7	7.9
7/1	482	482	-	-	-	0.1	0.4	-	0.6	4.3	0.3	0.4	0.8
7/2	672	672	-	-	-	0.8	0.9	-	1.8	9.5	4.0	0.9	4.9
7/3	547	547	-	-	-	3.1	0.6	-	3.7	24.0	10.9	0.6	11.5
8/1	491	491	-	-	-	1.8	1.1	-	2.9	21.6	9.5	1.1	10.6
8/2	453	453	-	-	-	1.2	0.9	-	2.1	16.6	4.5	0.9	5.4
8/3	451	451	-	-	-	1.2	0.9	-	2.1	16.5	4.5	0.9	5.4
9/1	997	997	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
9/2	1057	1057	-	-	-	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
9/3	383	383	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	602	602	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	786	786	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

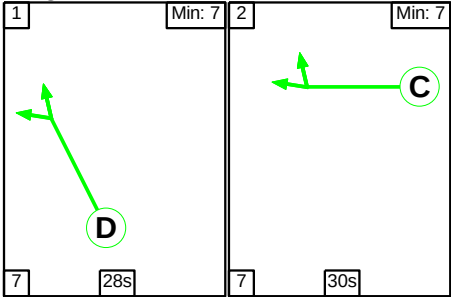
11/2	486	486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	554	554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1194	1194	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	1255	1255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	311	311	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	370	370	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 4.2 C1 Stream: 2 PRC for Signalled Lanes (%): -5.1 C1 Stream: 3 PRC for Signalled Lanes (%): 31.3 PRC Over All Lanes (%): -5.1 Total Delay for Signalled Lanes (pcuHr): 16.77 Total Delay for Signalled Lanes (pcuHr): 28.75 Total Delay for Signalled Lanes (pcuHr): 14.09 Total Delay Over All Lanes(pcuHr): 62.94 Cycle Time (s): 72 Cycle Time (s): 72 Cycle Time (s): 72													

Stage Sequence Diagram

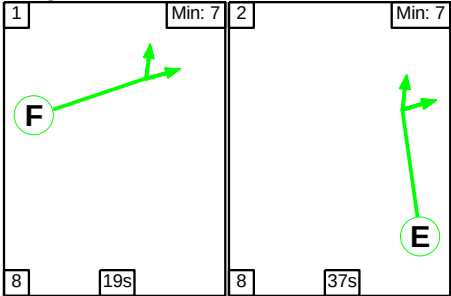
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	33	25
Change Point	13	53

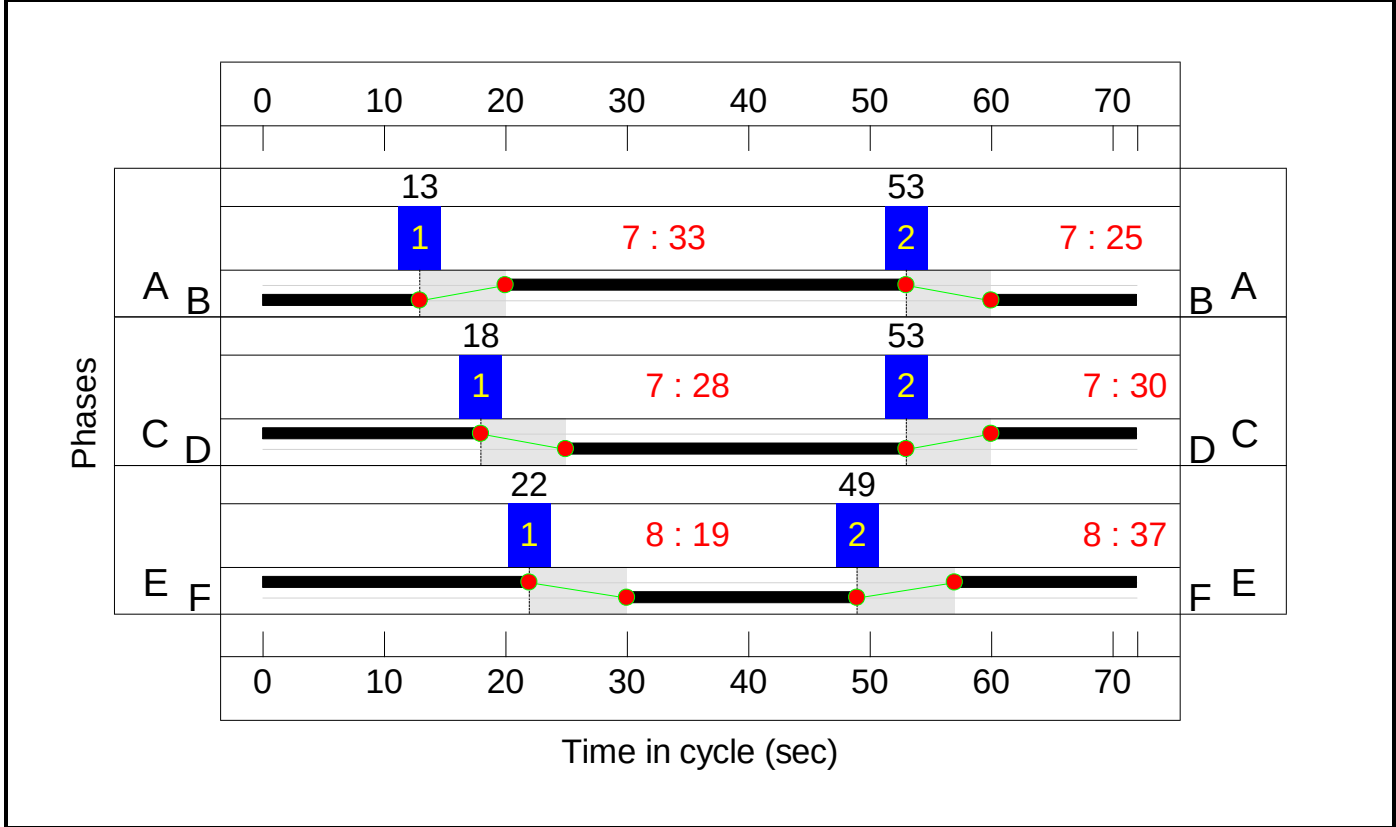
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	18	53

Stage Stream: 3

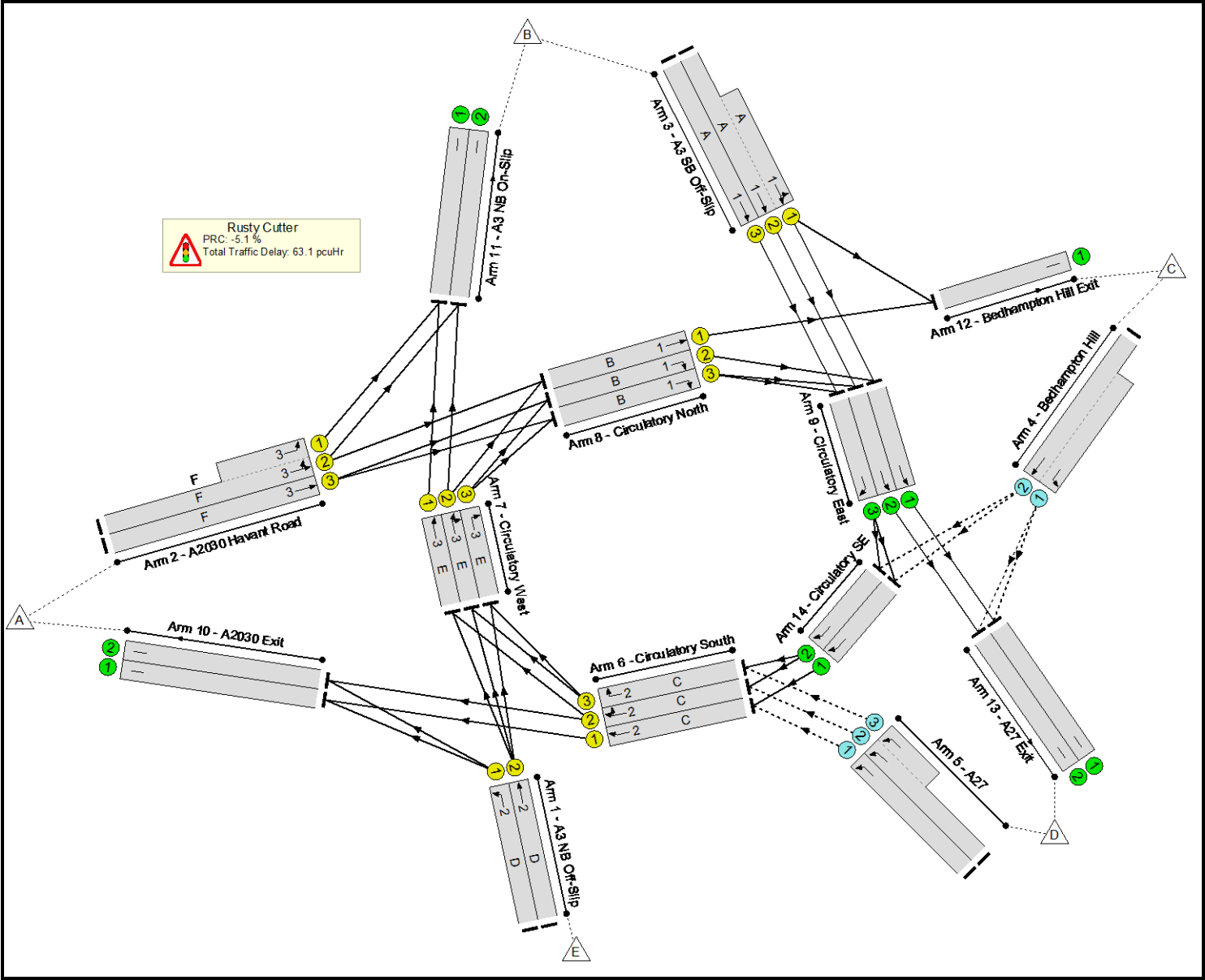
Stage	1	2
Duration	19	37
Change Point	22	49

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	94.6%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	94.6%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	45	1950	785	5.7%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	740	1950	785	94.2%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	19	-	612	1950:1950	445+445	68.8 : 68.8%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	19	-	361	1950	542	66.6%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	33	-	1213	1950:1950	701+703	86.4 : 86.4%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	33	-	384	1950	921	41.7%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	693	1950:1950	576+645	51.7 : 61.2%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	269	1950	1063	25.3%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	905	1950:1950	930+919	48.6 : 49.3%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	581	1950	840	69.2%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	794	1950	840	94.6%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	481	1950	840	57.3%
7/1	Circulatory West Ahead	U	3	N/A	E		1	37	-	482	1950	1029	46.8%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	37	-	673	1950	1029	65.4%
7/3	Circulatory West Right	U	3	N/A	E		1	37	-	547	1950	1029	53.1%

Full Input Data And Results

8/1	Circulatory North Ahead	U	1	N/A	B		1	25	-	491	1950	704	69.7%
8/2	Circulatory North Right	U	1	N/A	B		1	25	-	455	1950	704	64.6%
8/3	Circulatory North Right	U	1	N/A	B		1	25	-	453	1950	704	64.3%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	999	1950	1950	51.2%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1059	1950	1950	54.3%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	384	1950	1950	19.7%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	788	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	488	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	554	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1196	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1257	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	312	1950	1950	16.0%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	370	1950	1950	19.0%

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	-	-	3465	0	0	35.1	28.1	0.0	63.1	-	-	-	-
Rusty Cutter	-	-	3465	0	0	35.1	28.1	0.0	63.1	-	-	-	-
1/1	45	45	-	-	-	0.2	0.0	-	0.2	15.6	0.6	0.0	0.6
1/2	740	740	-	-	-	4.3	6.4	-	10.6	51.7	14.2	6.4	20.5
2/2+2/1	612	612	-	-	-	3.8	1.1	-	4.9	28.7	5.2	1.1	6.3
2/3	361	361	-	-	-	2.3	1.0	-	3.3	32.9	6.3	1.0	7.3
3/2+3/1	1213	1213	-	-	-	4.9	3.1	-	8.0	23.7	9.3	3.1	12.4
3/3	384	384	-	-	-	1.3	0.4	-	1.7	15.8	5.0	0.4	5.4
4/2+4/1	693	693	1386	0	0	0.6	0.7	-	1.2	6.5	2.7	0.7	3.4
5/1	269	269	269	0	0	0.0	0.2	-	0.2	2.3	0.0	0.2	0.2
5/2+5/3	905	905	1810	0	0	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
6/1	581	581	-	-	-	2.9	1.1	-	4.0	24.6	10.4	1.1	11.5
6/2	794	794	-	-	-	4.6	6.7	-	11.3	51.2	15.3	6.7	22.0
6/3	481	481	-	-	-	2.1	0.7	-	2.7	20.4	7.2	0.7	7.9
7/1	482	482	-	-	-	0.1	0.4	-	0.6	4.3	0.3	0.4	0.8
7/2	673	673	-	-	-	0.8	0.9	-	1.8	9.5	4.0	0.9	4.9
7/3	547	547	-	-	-	3.1	0.6	-	3.7	24.0	10.9	0.6	11.5
8/1	491	491	-	-	-	1.8	1.1	-	2.9	21.6	9.5	1.1	10.6
8/2	455	455	-	-	-	1.2	0.9	-	2.1	16.7	4.6	0.9	5.5
8/3	453	453	-	-	-	1.2	0.9	-	2.1	16.6	4.5	0.9	5.4
9/1	999	999	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
9/2	1059	1059	-	-	-	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
9/3	384	384	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	788	788	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

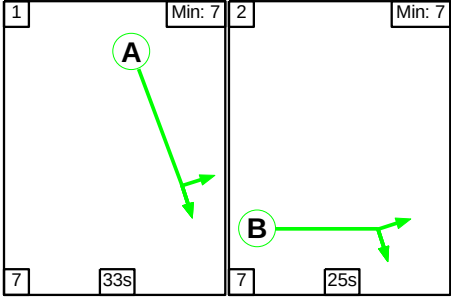
Full Input Data And Results

[illegible]

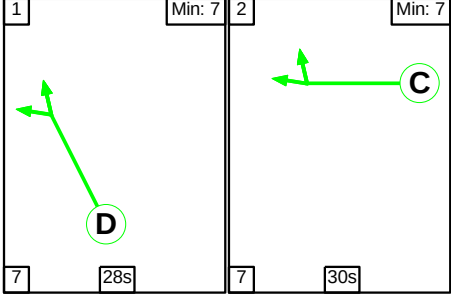
Full Input Data And Results
Scenario 4: '2023 AM Peak Plus Com Dev Plus 50% Prop Dev' (FG4: '2023 AM Peak Plus Com Dev Plus 50% Prop Dev', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

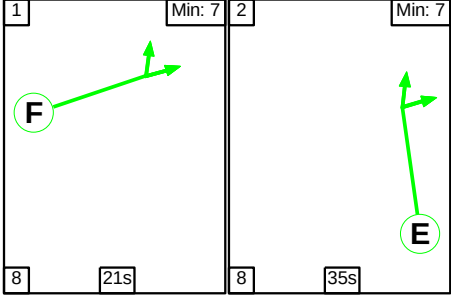
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	33	25
Change Point	13	53

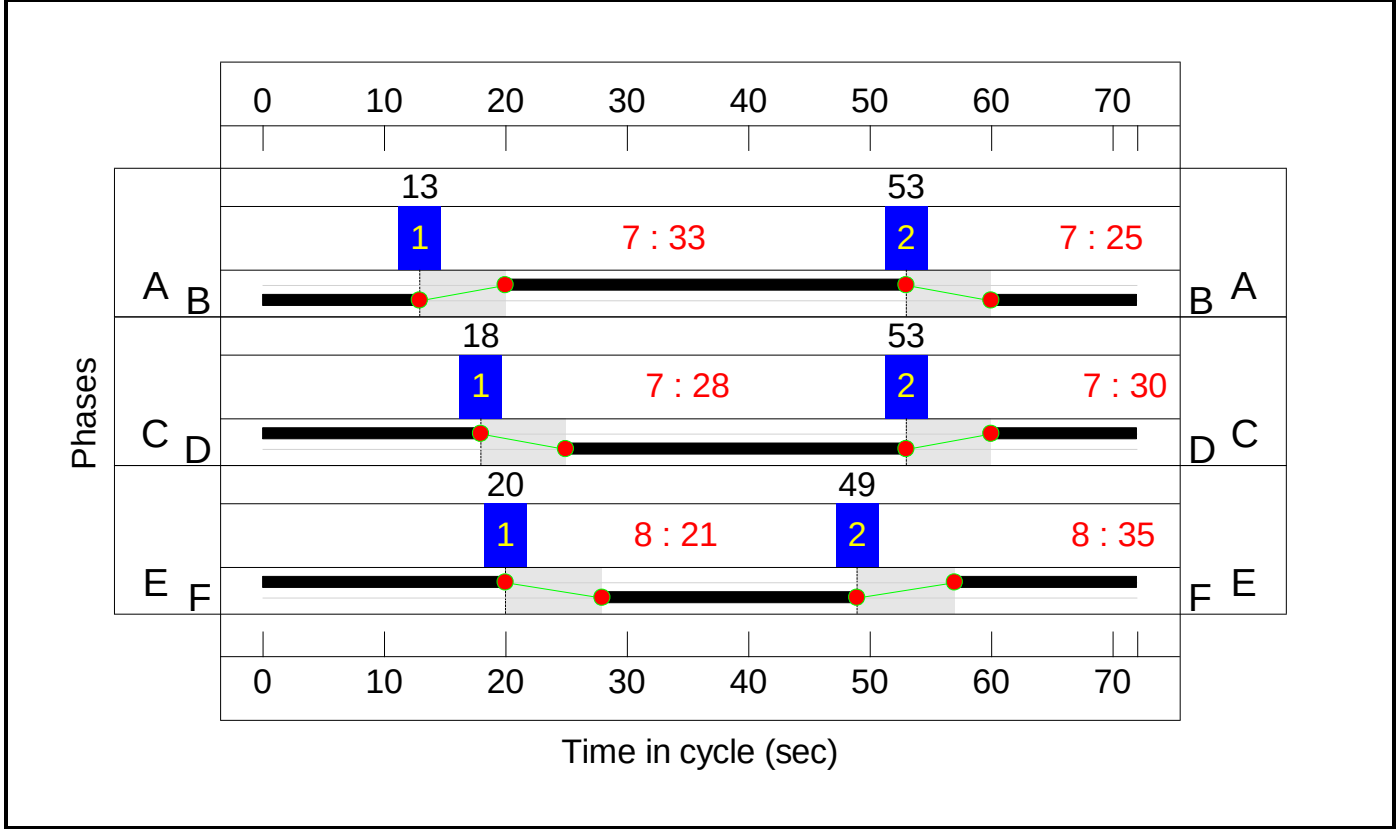
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	18	53

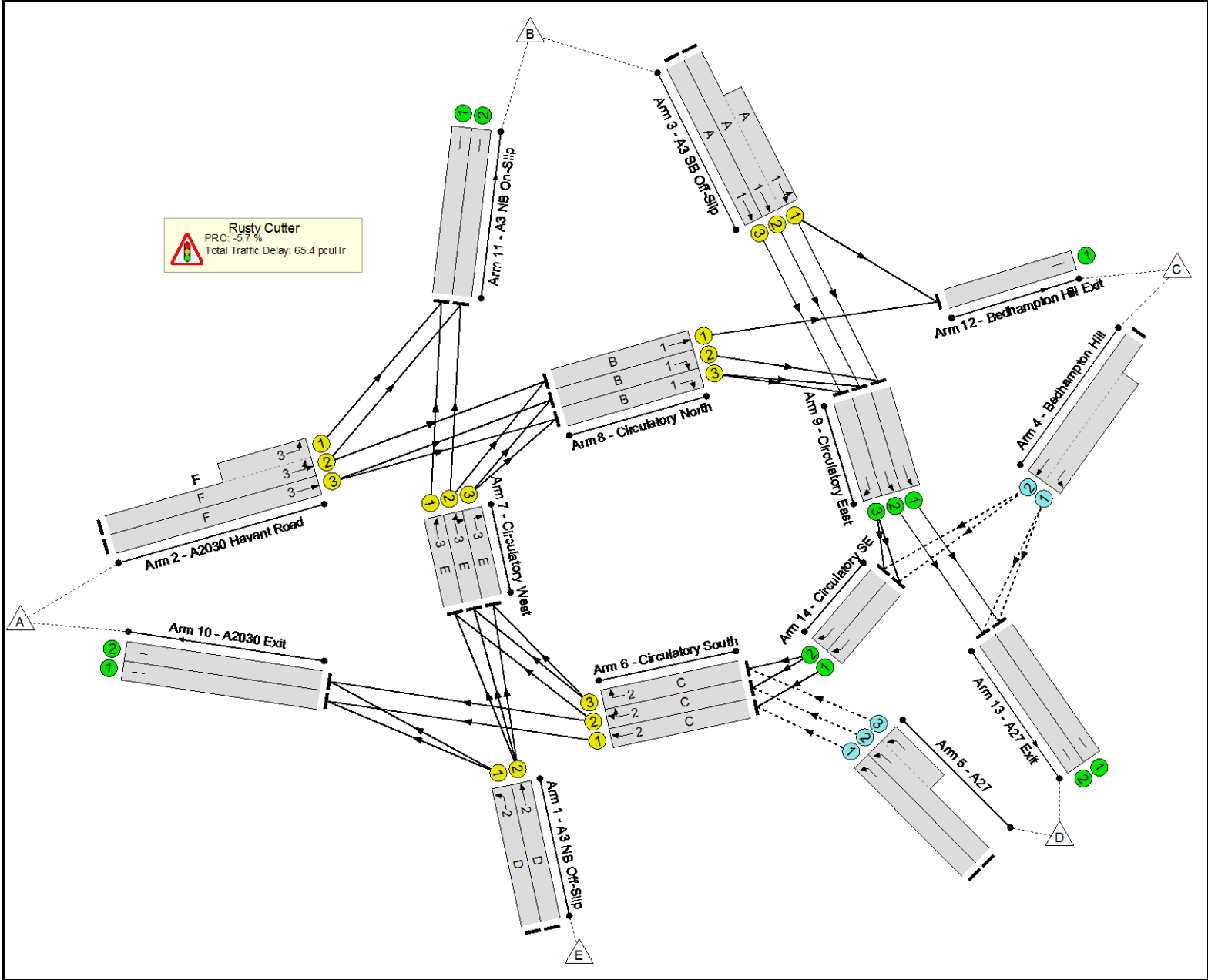
Stage Stream: 3

Stage	1	2
Duration	21	35
Change Point	20	49

Signal Timings Diagram



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	-	-		-	-	-	-	-	-	95.2%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	95.2%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	53	1950	785	6.7%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	740	1950	785	94.2%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	21	-	631	1950:1950	472+471	66.9 : 66.9%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	21	-	396	1950	596	66.5%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	33	-	1213	1950:1950	701+703	86.4 : 86.4%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	33	-	390	1950	921	42.4%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	695	1950:1950	562+632	53.4 : 62.5%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	273	1950	1062	25.7%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	905	1950:1950	927+916	48.9 : 49.4%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	589	1950	840	70.2%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	799	1950	840	95.2%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	480	1950	840	57.2%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	483	1950	975	49.5%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	672	1950	975	68.9%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	547	1950	975	56.1%

Full Input Data And Results

8/1	Circulatory North Ahead	U	1	N/A	B		1	25	-	494	1950	704	70.2%
8/2	Circulatory North Right	U	1	N/A	B		1	25	-	472	1950	704	67.0%
8/3	Circulatory North Right	U	1	N/A	B		1	25	-	471	1950	704	66.9%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1016	1950	1950	52.1%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1077	1950	1950	55.2%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	390	1950	1950	20.0%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	616	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	343	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	798	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	494	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	557	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1213	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1275	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	316	1950	1950	16.2%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	374	1950	1950	19.2%

Full Input Data And Results

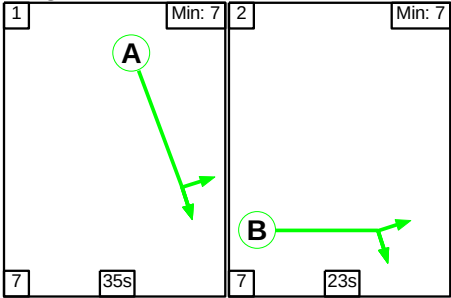
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	3473	0	0	36.2	29.2	0.0	65.4	-	-	-	-
Rusty Cutter	-	-	3473	0	0	36.2	29.2	0.0	65.4	-	-	-	-
1/1	53	53	-	-	-	0.2	0.0	-	0.2	15.7	0.6	0.0	0.7
1/2	740	740	-	-	-	4.3	6.4	-	10.6	51.7	14.2	6.4	20.5
2/2+2/1	631	631	-	-	-	3.6	1.0	-	4.6	26.5	5.2	1.0	6.2
2/3	396	396	-	-	-	2.4	1.0	-	3.4	30.7	6.8	1.0	7.8
3/2+3/1	1213	1213	-	-	-	4.9	3.1	-	8.0	23.7	9.3	3.1	12.4
3/3	390	390	-	-	-	1.4	0.4	-	1.7	15.9	5.1	0.4	5.5
4/2+4/1	695	695	1390	0	0	0.6	0.7	-	1.3	6.9	2.7	0.7	3.4
5/1	273	273	273	0	0	0.0	0.2	-	0.2	2.3	0.0	0.2	0.2
5/2+5/3	905	905	1810	0	0	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
6/1	589	589	-	-	-	3.0	1.2	-	4.1	25.2	10.6	1.2	11.7
6/2	799	799	-	-	-	4.7	7.3	-	11.9	53.8	15.5	7.3	22.7
6/3	480	480	-	-	-	2.1	0.7	-	2.7	20.4	7.2	0.7	7.9
7/1	483	483	-	-	-	0.4	0.5	-	0.9	6.8	0.9	0.5	1.4
7/2	672	672	-	-	-	1.0	1.1	-	2.1	11.2	4.5	1.1	5.6
7/3	547	547	-	-	-	3.1	0.6	-	3.7	24.5	10.9	0.6	11.6
8/1	494	494	-	-	-	1.9	1.2	-	3.1	22.3	9.6	1.2	10.7
8/2	472	472	-	-	-	1.4	1.0	-	2.4	18.1	5.1	1.0	6.1
8/3	471	471	-	-	-	1.4	1.0	-	2.4	18.1	5.1	1.0	6.1
9/1	1016	1016	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
9/2	1077	1077	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.6
9/3	390	390	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
10/1	616	616	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	343	343	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	798	798	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

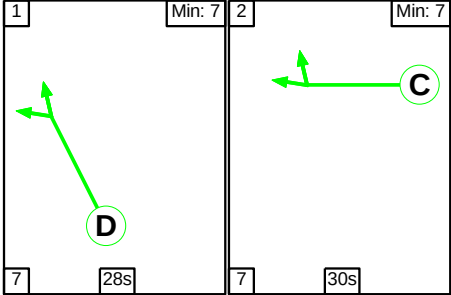
11/2	494	494	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	557	557	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1213	1213	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	1275	1275	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	316	316	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	374	374	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 4.2 Total Delay for Signalled Lanes (pcuHr): 17.52 Cycle Time (s): 72 C1 Stream: 2 PRC for Signalled Lanes (%): -5.7 Total Delay for Signalled Lanes (pcuHr): 29.63 Cycle Time (s): 72 C1 Stream: 3 PRC for Signalled Lanes (%): 30.6 Total Delay for Signalled Lanes (pcuHr): 14.75 Cycle Time (s): 72 PRC Over All Lanes (%): -5.7 Total Delay Over All Lanes(pcuHr): 65.40													

Stage Sequence Diagram

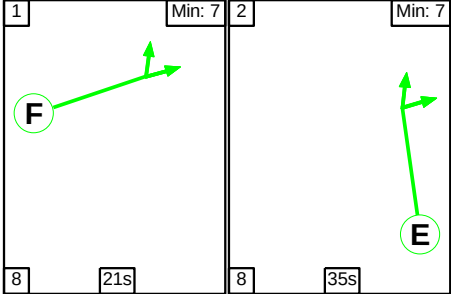
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	35	23
Change Point	13	55

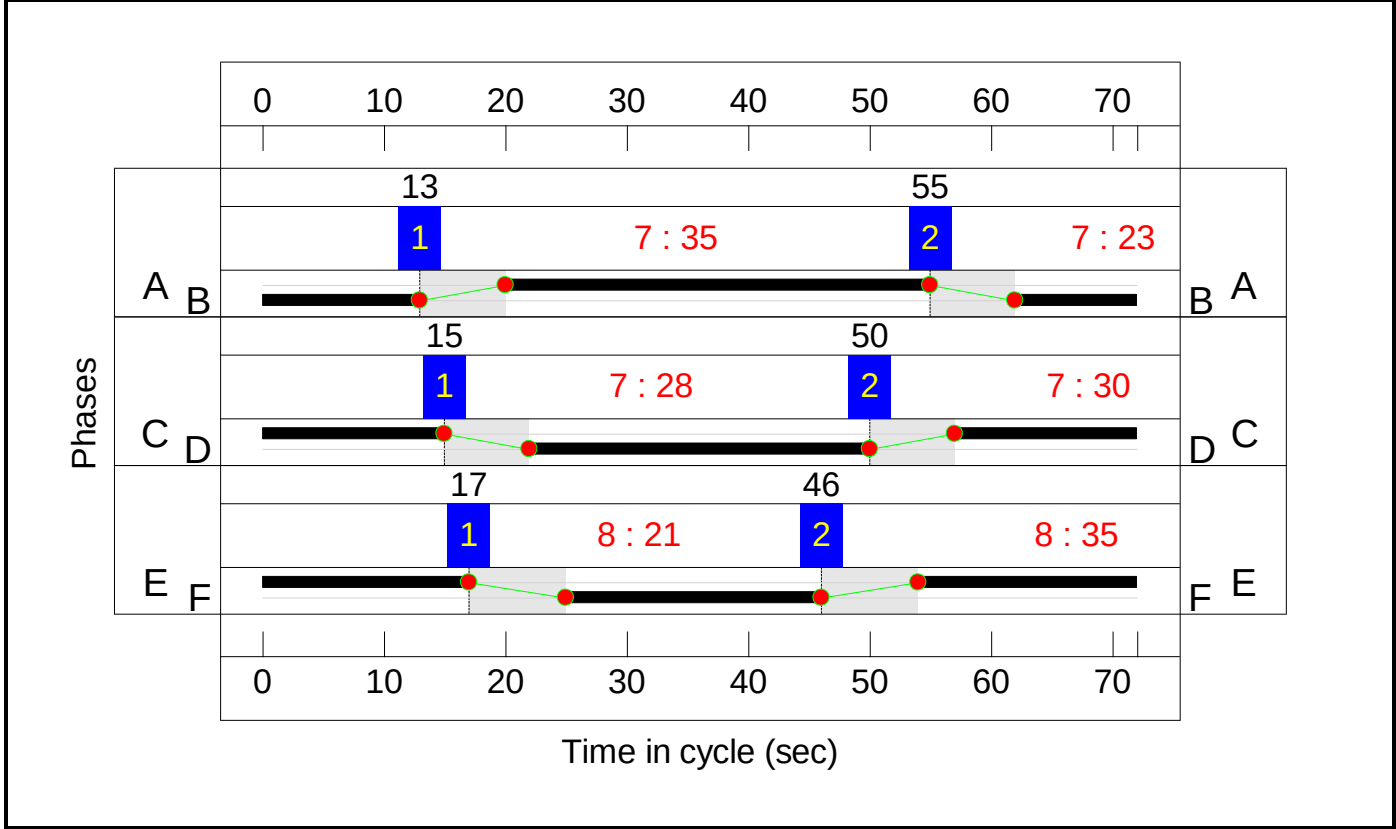
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	15	50

Stage Stream: 3

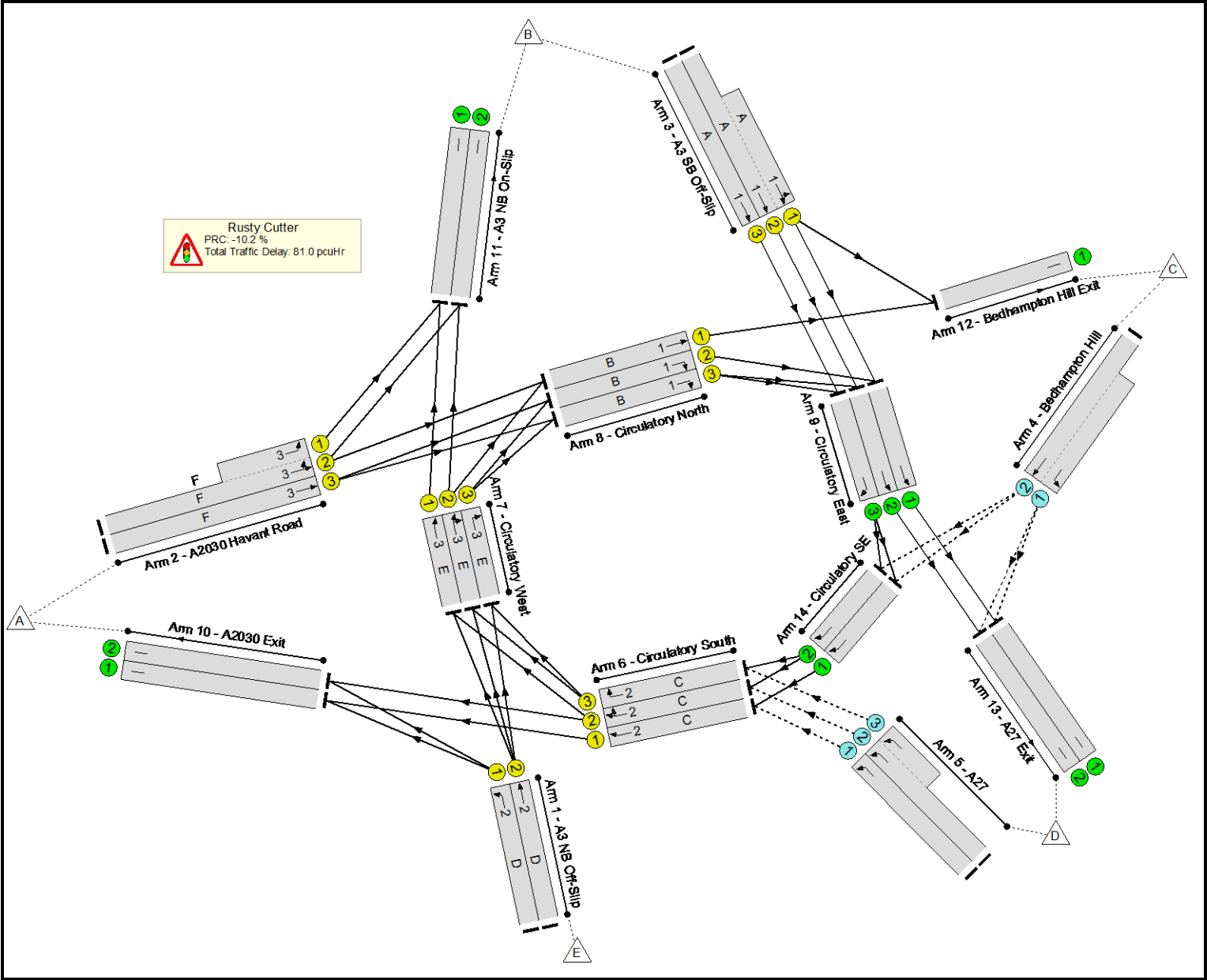
Stage	1	2
Duration	21	35
Change Point	17	46

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	-	-		-	-	-	-	-	-	99.2%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	99.2%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	46	1950	785	5.9%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	778	1950	785	99.1%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	21	-	640	1950:1950	472+472	67.8 : 67.8%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	21	-	375	1950	596	62.9%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	35	-	1274	1950:1950	729+729	87.4 : 87.4%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	35	-	402	1950	975	41.2%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	728	1950:1950	533+609	58.7 : 68.1%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	282	1950	1057	26.7%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	950	1950:1950	918+906	51.8 : 52.4%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	609	1950	840	72.5%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	833	1950	840	99.2%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	505	1950	840	60.1%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	506	1950	975	51.9%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	707	1950	975	72.5%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	575	1950	975	59.0%

Full Input Data And Results

8/1	Circulatory North Ahead	U	1	N/A	B		1	23	-	516	1950	650	79.4%
8/2	Circulatory North Right	U	1	N/A	B		1	23	-	476	1950	650	73.2%
8/3	Circulatory North Right	U	1	N/A	B		1	23	-	474	1950	650	72.9%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1047	1950	1950	53.7%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1111	1950	1950	57.0%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	402	1950	1950	20.6%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	632	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	351	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	826	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	511	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1254	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1319	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	327	1950	1950	16.8%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	388	1950	1950	19.9%

Full Input Data And Results

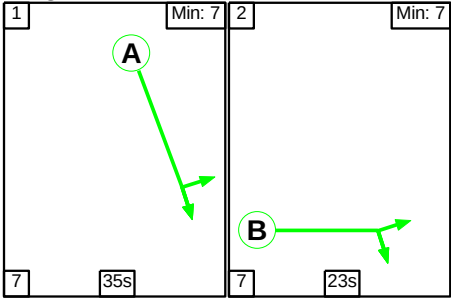
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	3638	0	0	38.0	43.1	0.0	81.0	-	-	-	-
Rusty Cutter	-	-	3638	0	0	38.0	43.1	0.0	81.0	-	-	-	-
1/1	46	46	-	-	-	0.2	0.0	-	0.2	15.6	0.6	0.0	0.6
1/2	778	778	-	-	-	4.6	12.2	-	16.8	77.9	15.3	12.2	27.6
2/2+2/1	640	640	-	-	-	3.7	1.0	-	4.7	26.7	5.2	1.0	6.3
2/3	375	375	-	-	-	2.2	0.8	-	3.1	29.6	6.4	0.8	7.2
3/2+3/1	1274	1274	-	-	-	4.7	3.3	-	8.1	22.8	9.4	3.3	12.7
3/3	402	402	-	-	-	1.3	0.4	-	1.6	14.5	5.0	0.4	5.4
4/2+4/1	728	728	1456	0	0	0.9	0.9	-	1.8	8.8	3.0	0.9	3.9
5/1	282	282	282	0	0	0.0	0.2	-	0.2	2.3	0.0	0.2	0.2
5/2+5/3	950	950	1900	0	0	0.0	0.5	-	0.5	2.1	0.1	0.5	0.7
6/1	609	609	-	-	-	2.8	1.3	-	4.2	24.5	11.0	1.3	12.3
6/2	833	833	-	-	-	4.7	12.9	-	17.6	76.1	16.5	12.9	29.4
6/3	505	505	-	-	-	2.2	0.8	-	2.9	21.0	7.7	0.8	8.5
7/1	506	506	-	-	-	0.7	0.5	-	1.2	8.6	1.4	0.5	1.9
7/2	707	707	-	-	-	1.0	1.3	-	2.3	11.8	6.0	1.3	7.3
7/3	575	575	-	-	-	3.2	0.7	-	3.9	24.6	11.5	0.7	12.2
8/1	516	516	-	-	-	2.7	1.9	-	4.6	31.8	10.2	1.9	12.1
8/2	476	476	-	-	-	1.5	1.3	-	2.8	21.5	6.6	1.3	8.0
8/3	474	474	-	-	-	1.5	1.3	-	2.8	21.4	6.6	1.3	7.9
9/1	1047	1047	-	-	-	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
9/2	1111	1111	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
9/3	402	402	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
10/1	632	632	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	351	351	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	826	826	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

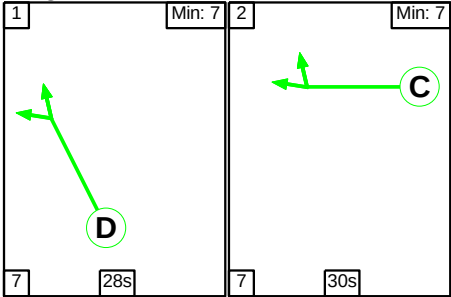
11/2	511	511	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1254	1254	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	1319	1319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	327	327	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	388	388	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 3.0 Total Delay for Signalled Lanes (pcuHr): 19.90 Cycle Time (s): 72 C1 Stream: 2 PRC for Signalled Lanes (%): -10.2 Total Delay for Signalled Lanes (pcuHr): 41.74 Cycle Time (s): 72 C1 Stream: 3 PRC for Signalled Lanes (%): 24.1 Total Delay for Signalled Lanes (pcuHr): 15.30 Cycle Time (s): 72 PRC Over All Lanes (%): -10.2 Total Delay Over All Lanes(pcuHr): 81.03													

Stage Sequence Diagram

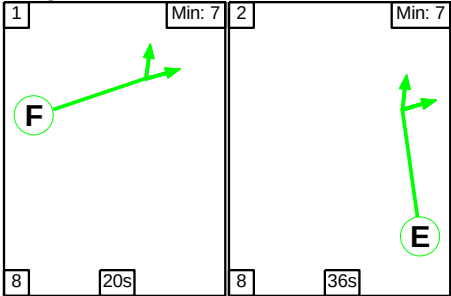
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	35	23
Change Point	13	55

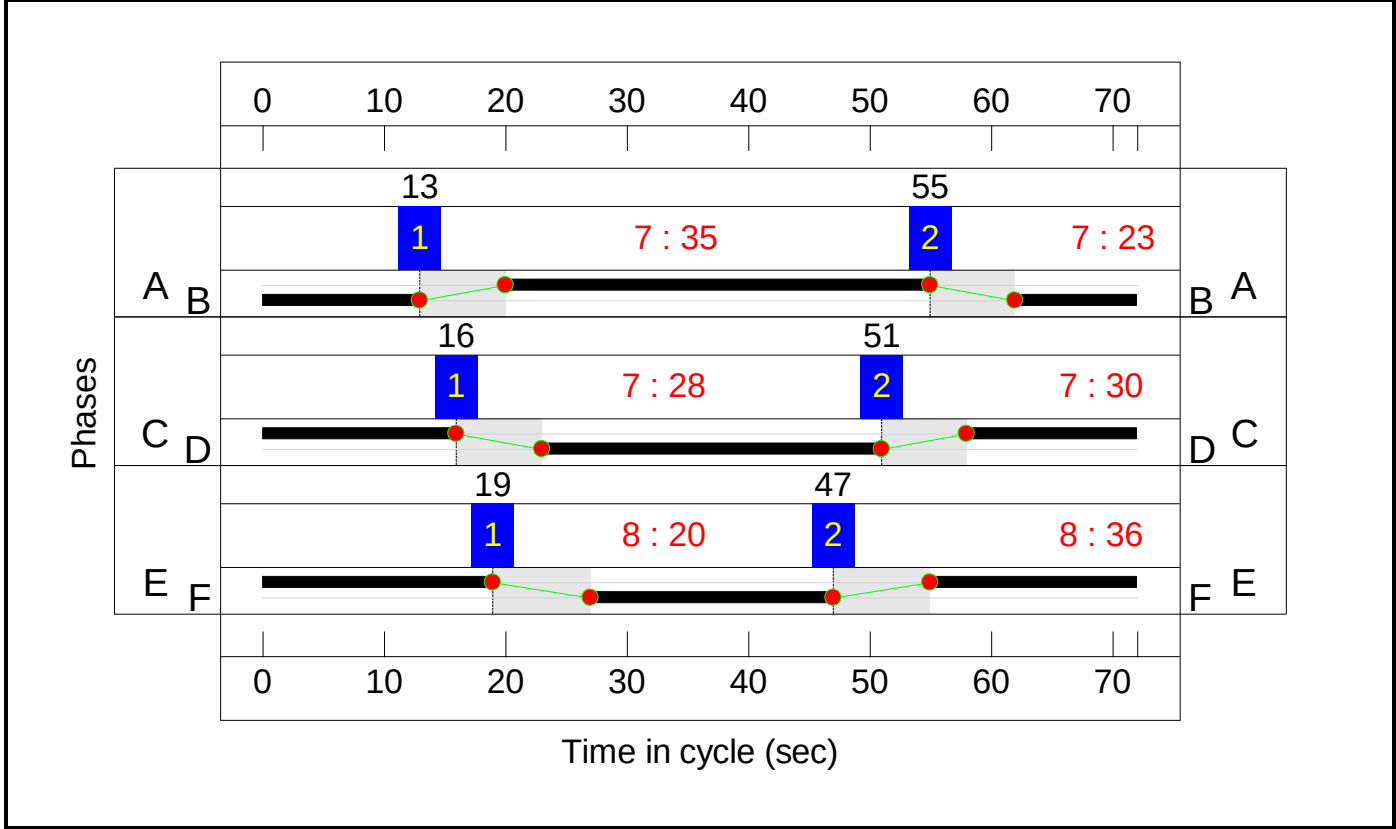
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	16	51

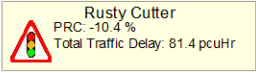
Stage Stream: 3

Stage	1	2
Duration	20	36
Change Point	19	47

Signal Timings Diagram



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	-	-		-	-	-	-	-	-	99.3%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	99.3%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	47	1950	785	6.0%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	778	1950	785	99.1%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	20	-	643	1950:1950	459+457	70.2 : 70.2%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	20	-	379	1950	569	66.6%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	35	-	1274	1950:1950	729+729	87.4 : 87.4%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	35	-	403	1950	975	41.3%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	728	1950:1950	532+607	58.9 : 68.4%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	282	1950	1057	26.7%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	951	1950:1950	917+906	51.9 : 52.5%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	610	1950	840	72.7%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	834	1950	840	99.3%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	505	1950	840	60.1%
7/1	Circulatory West Ahead	U	3	N/A	E		1	36	-	507	1950	1002	50.6%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	36	-	707	1950	1002	70.6%
7/3	Circulatory West Right	U	3	N/A	E		1	36	-	575	1950	1002	57.4%

Full Input Data And Results

8/1	Circulatory North Ahead	U	1	N/A	B		1	23	-	516	1950	650	79.4%
8/2	Circulatory North Right	U	1	N/A	B		1	23	-	478	1950	650	73.5%
8/3	Circulatory North Right	U	1	N/A	B		1	23	-	476	1950	650	73.2%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1049	1950	1950	53.8%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1113	1950	1950	57.1%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	403	1950	1950	20.7%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	634	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	351	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	828	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	513	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1256	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1321	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	328	1950	1950	16.8%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	388	1950	1950	19.9%

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	-	-	3640	0	0	37.9	43.4	0.0	81.4	-	-	-	-
Rusty Cutter	-	-	3640	0	0	37.9	43.4	0.0	81.4	-	-	-	-
1/1	47	47	-	-	-	0.2	0.0	-	0.2	15.6	0.6	0.0	0.6
1/2	778	778	-	-	-	4.6	12.2	-	16.8	77.9	15.3	12.2	27.6
2/2+2/1	643	643	-	-	-	3.9	1.2	-	5.0	28.2	5.5	1.2	6.6
2/3	379	379	-	-	-	2.4	1.0	-	3.3	31.8	6.6	1.0	7.6
3/2+3/1	1274	1274	-	-	-	4.7	3.3	-	8.1	22.8	9.4	3.3	12.7
3/3	403	403	-	-	-	1.3	0.4	-	1.6	14.5	5.0	0.4	5.4
4/2+4/1	728	728	1456	0	0	0.9	0.9	-	1.8	8.7	3.1	0.9	4.0
5/1	282	282	282	0	0	0.0	0.2	-	0.2	2.3	0.0	0.2	0.2
5/2+5/3	951	951	1902	0	0	0.0	0.5	-	0.5	2.1	0.1	0.5	0.7
6/1	610	610	-	-	-	2.9	1.3	-	4.3	25.1	11.1	1.3	12.4
6/2	834	834	-	-	-	4.8	13.1	-	18.0	77.5	16.5	13.1	29.7
6/3	505	505	-	-	-	2.2	0.8	-	2.9	21.0	7.7	0.8	8.5
7/1	507	507	-	-	-	0.5	0.5	-	1.0	7.0	1.0	0.5	1.5
7/2	707	707	-	-	-	0.9	1.2	-	2.1	10.8	4.9	1.2	6.1
7/3	575	575	-	-	-	3.2	0.7	-	3.9	24.4	11.5	0.7	12.2
8/1	516	516	-	-	-	2.5	1.9	-	4.4	30.6	10.2	1.9	12.0
8/2	478	478	-	-	-	1.5	1.4	-	2.8	21.4	6.2	1.4	7.6
8/3	476	476	-	-	-	1.5	1.3	-	2.8	21.3	6.2	1.3	7.6
9/1	1049	1049	-	-	-	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
9/2	1113	1113	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
9/3	403	403	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
10/1	634	634	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	351	351	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	828	828	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

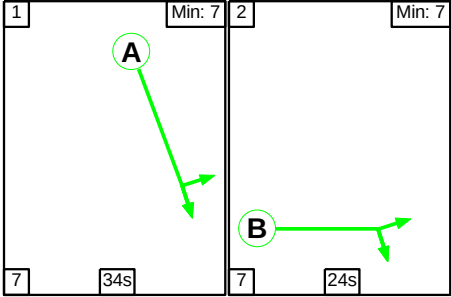
Full Input Data And Results

11/2	513	513	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1256	1256	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	1321	1321	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	328	328	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	388	388	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
			C1 Stream: 1 PRC for Signalled Lanes (%):	3.0				Total Delay for Signalled Lanes (pcuHr):	19.72			Cycle Time (s):	72
			C1 Stream: 2 PRC for Signalled Lanes (%):	-10.4				Total Delay for Signalled Lanes (pcuHr):	42.19			Cycle Time (s):	72
			C1 Stream: 3 PRC for Signalled Lanes (%):	27.6				Total Delay for Signalled Lanes (pcuHr):	15.38			Cycle Time (s):	72
			PRC Over All Lanes (%):	-10.4				Total Delay Over All Lanes(pcuHr):	81.38				

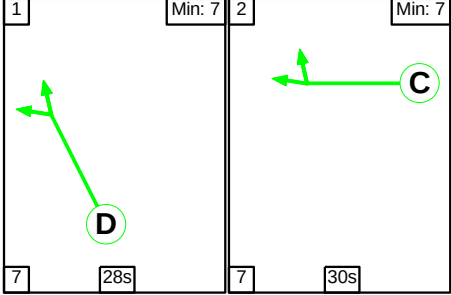
Full Input Data And Results
Scenario 7: '2028 AM Peak Plus Com Dev Plus Prop Dev' (FG7: '2028 AM Peak Plus Com Dev Plus Prop Dev',
Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

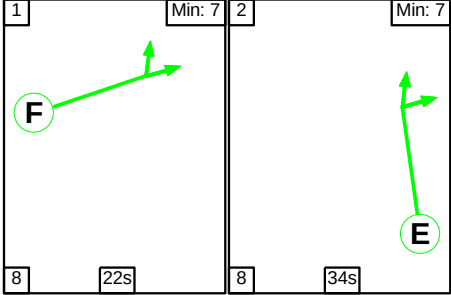
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	34	24
Change Point	13	54

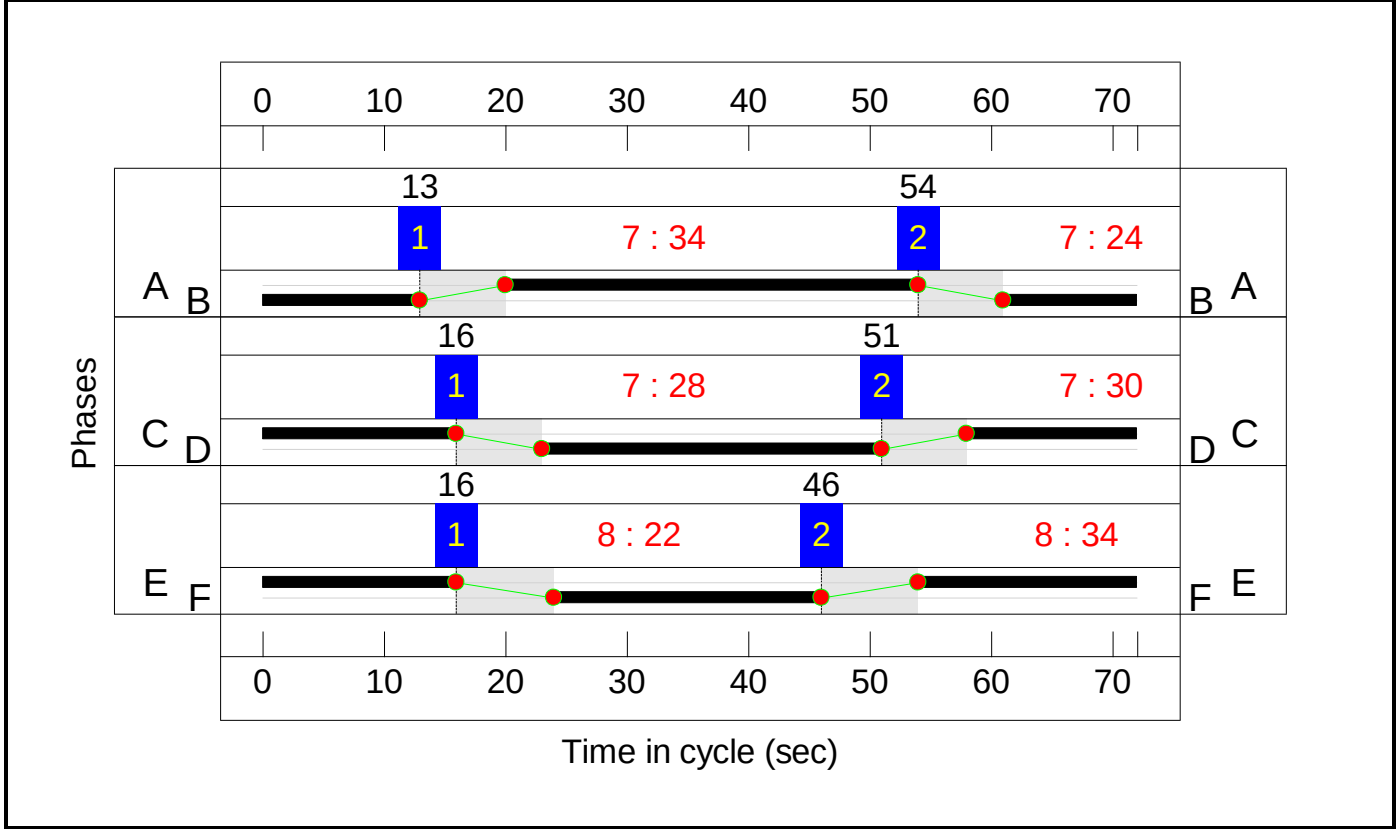
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	16	51

Stage Stream: 3

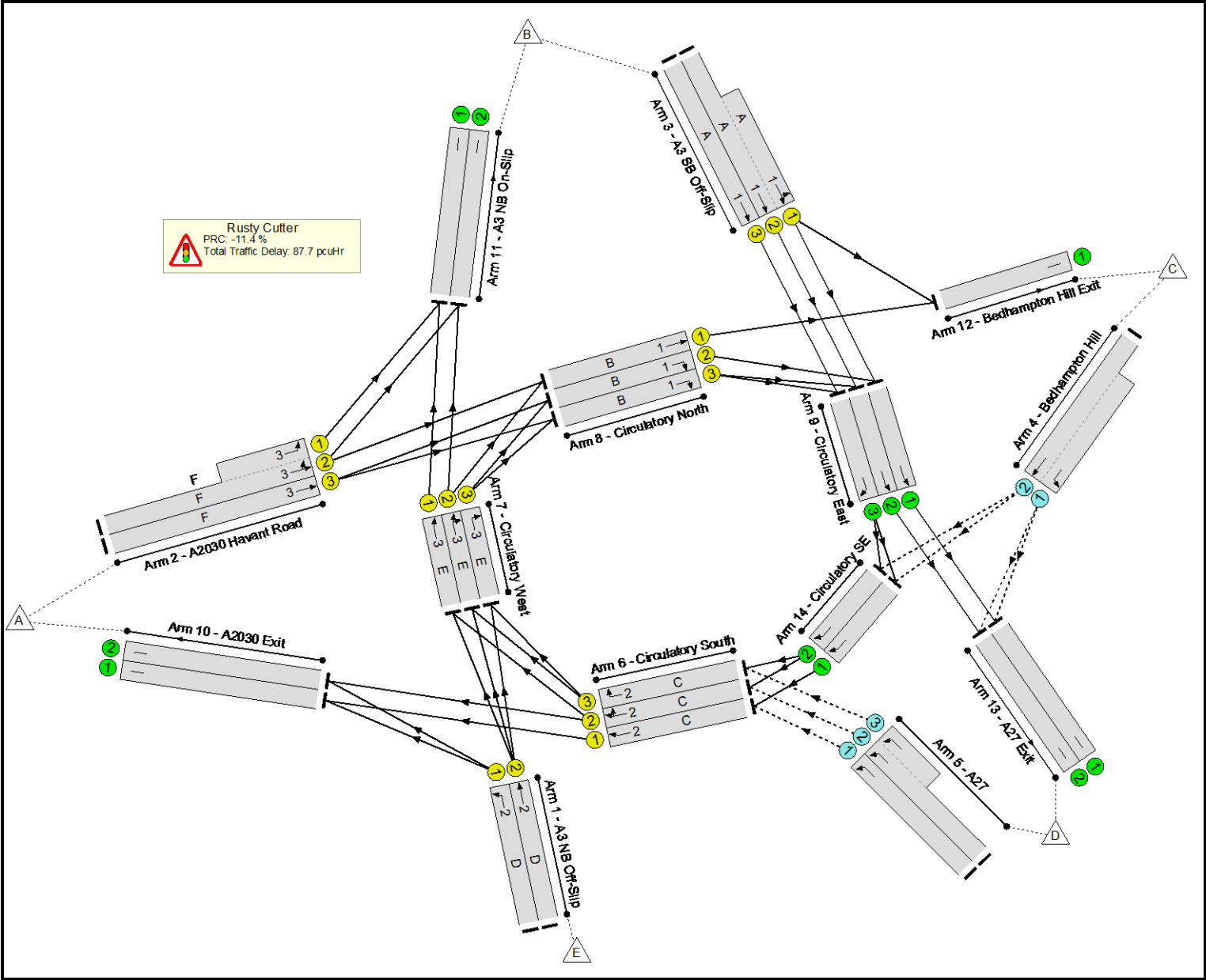
Stage	1	2
Duration	22	34
Change Point	16	46

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	-	-		-	-	-	-	-	-	100.3%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	100.3%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	63	1950	785	8.0%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	778	1950	785	99.1%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	22	-	681	1950:1950	486+484	70.2 : 70.2%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	22	-	448	1950	623	71.9%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	34	-	1274	1950:1950	716+716	89.0 : 89.0%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	34	-	415	1950	948	43.8%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	732	1950:1950	509+582	62.3 : 71.3%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	292	1950	1054	27.7%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	951	1950:1950	911+899	52.1 : 52.9%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	627	1950	840	74.7%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	842	1950	840	100.3%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	506	1950	840	60.3%
7/1	Circulatory West Ahead	U	3	N/A	E		1	34	-	506	1950	948	53.3%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	34	-	708	1950	948	74.7%
7/3	Circulatory West Right	U	3	N/A	E		1	34	-	575	1950	948	60.7%

Full Input Data And Results

8/1	Circulatory North Ahead	U	1	N/A	B		1	24	-	523	1950	677	77.2%
8/2	Circulatory North Right	U	1	N/A	B		1	24	-	512	1950	677	75.6%
8/3	Circulatory North Right	U	1	N/A	B		1	24	-	511	1950	677	75.5%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1083	1950	1950	55.5%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1148	1950	1950	58.9%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	415	1950	1950	21.3%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	658	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	369	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	846	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	526	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1290	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1356	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	335	1950	1950	17.2%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	397	1950	1950	20.4%

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	-	-	3658	0	0	40.5	47.2	0.0	87.7	-	-	-	-
Rusty Cutter	-	-	3658	0	0	40.5	47.2	0.0	87.7	-	-	-	-
1/1	63	63	-	-	-	0.2	0.0	-	0.3	15.8	0.8	0.0	0.8
1/2	778	778	-	-	-	4.6	12.2	-	16.8	77.9	15.3	12.2	27.6
2/2+2/1	681	681	-	-	-	3.8	1.2	-	5.0	26.4	5.6	1.2	6.8
2/3	448	448	-	-	-	2.7	1.3	-	4.0	31.8	7.8	1.3	9.1
3/2+3/1	1274	1274	-	-	-	5.0	3.9	-	8.9	25.0	10.3	3.9	14.2
3/3	415	415	-	-	-	1.4	0.4	-	1.8	15.5	5.4	0.4	5.8
4/2+4/1	732	732	1464	0	0	1.0	1.0	-	2.1	10.1	3.1	1.0	4.1
5/1	292	292	292	0	0	0.0	0.2	-	0.2	2.4	0.0	0.2	0.2
5/2+5/3	951	951	1902	0	0	0.0	0.6	-	0.6	2.1	0.3	0.6	0.8
6/1	627	627	-	-	-	3.1	1.5	-	4.5	26.1	11.5	1.5	13.0
6/2	842	840	-	-	-	5.0	15.1	-	20.2	86.2	16.9	15.1	32.0
6/3	506	506	-	-	-	2.2	0.8	-	3.0	21.0	7.8	0.8	8.5
7/1	505	505	-	-	-	1.1	0.6	-	1.7	12.1	2.3	0.6	2.8
7/2	708	708	-	-	-	1.1	1.5	-	2.6	13.1	5.0	1.5	6.4
7/3	575	575	-	-	-	3.1	0.8	-	3.8	24.0	11.5	0.8	12.3
8/1	523	523	-	-	-	2.6	1.7	-	4.3	29.5	10.3	1.7	12.0
8/2	512	512	-	-	-	1.7	1.5	-	3.2	22.7	7.6	1.5	9.1
8/3	511	511	-	-	-	1.7	1.5	-	3.2	22.6	7.3	1.5	8.8
9/1	1083	1083	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.6
9/2	1148	1148	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
9/3	415	415	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
10/1	658	658	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	367	367	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	845	845	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

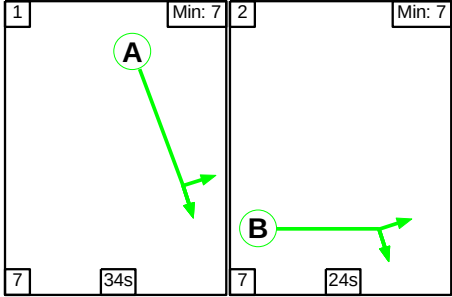
Full Input Data And Results

[illegible]

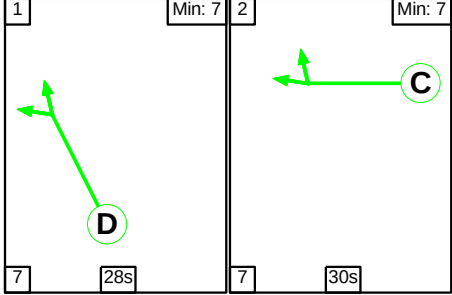
Full Input Data And Results
Scenario 8: '2028 AM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test' (FG8: '2028 AM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

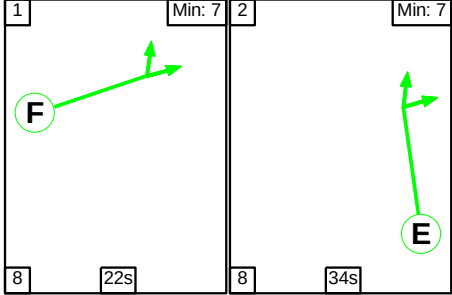
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	34	24
Change Point	13	54

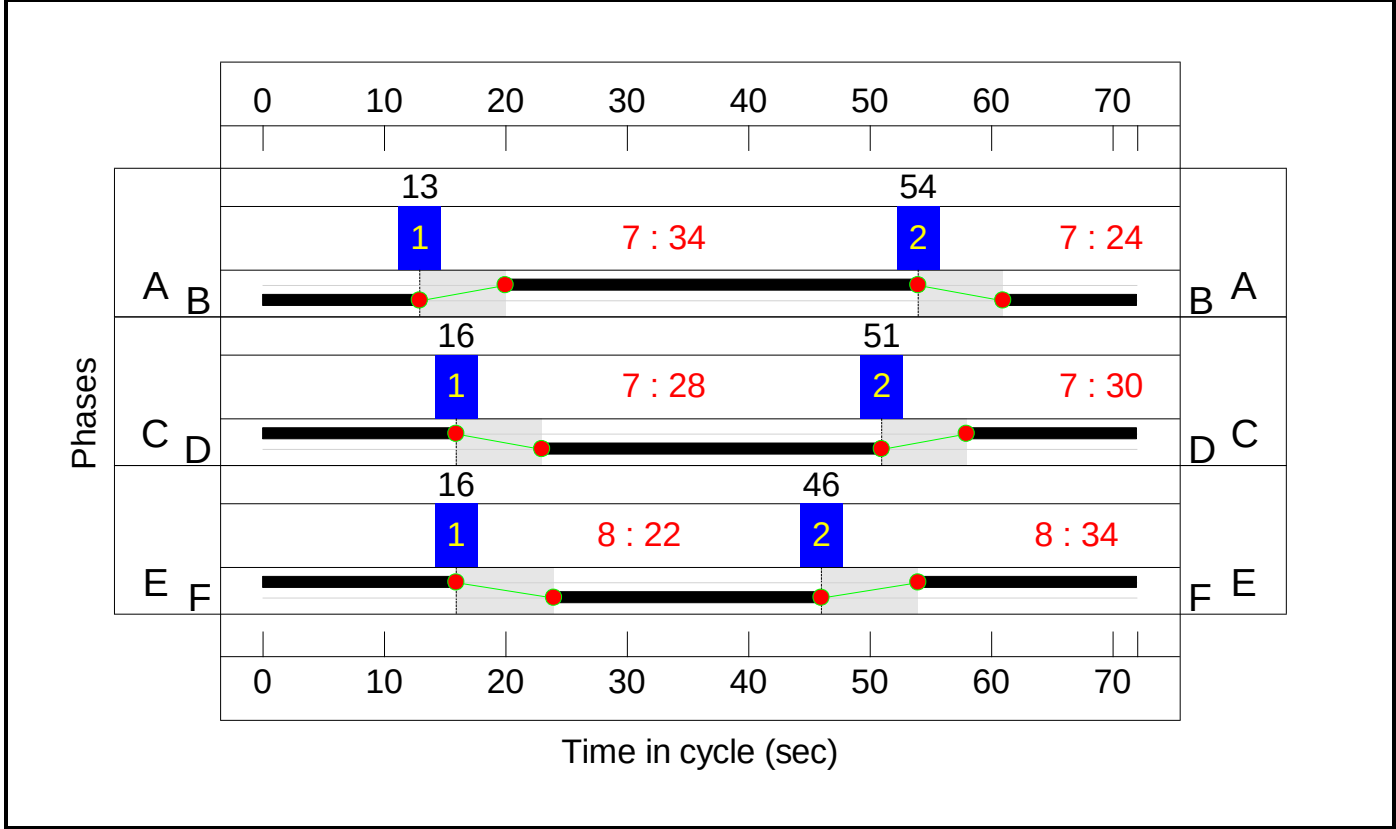
Stage Stream: 2

Stage	1	2
Duration	28	30
Change Point	16	51

Stage Stream: 3

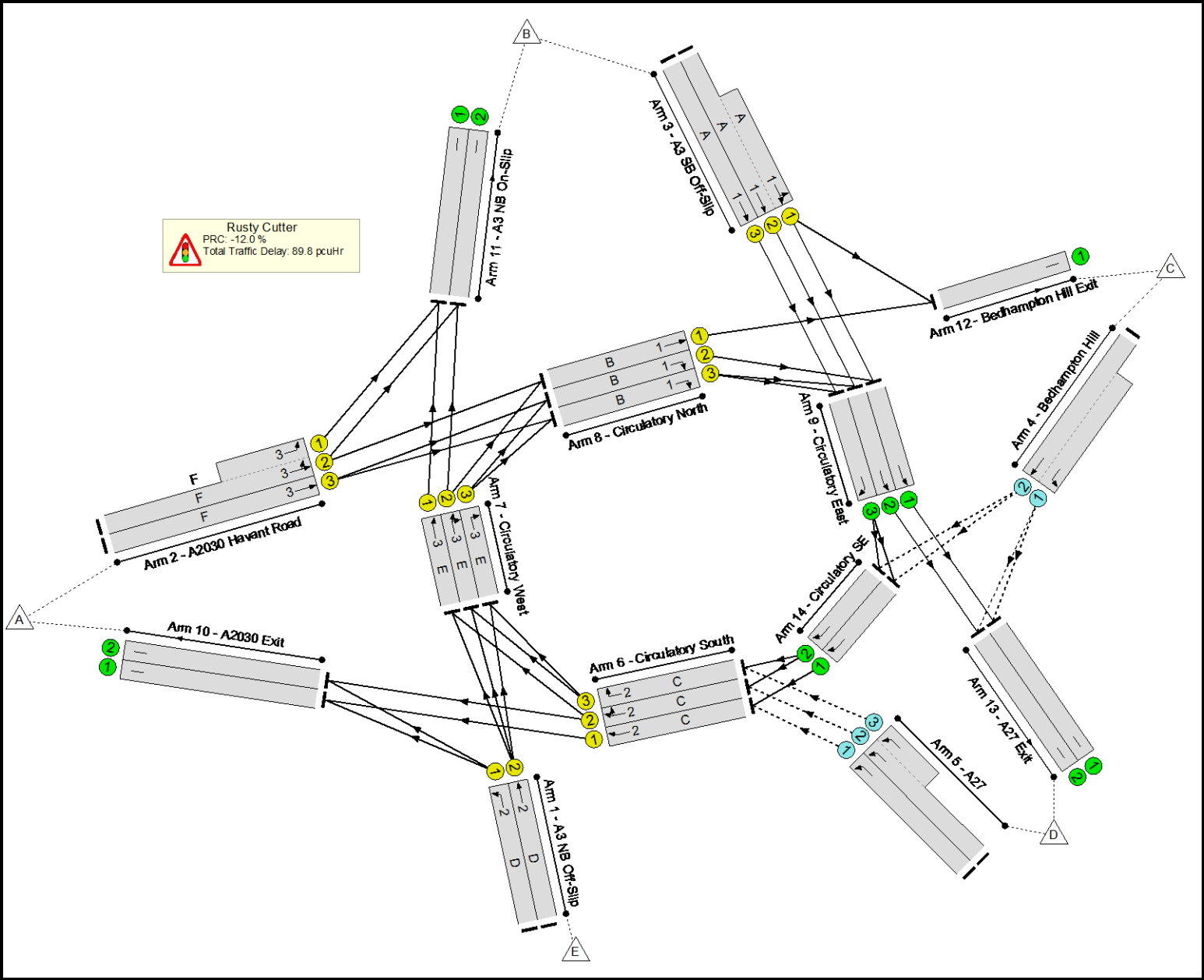
Stage	1	2
Duration	22	34
Change Point	16	46

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	-	-		-	-	-	-	-	-	100.8%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	100.8%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	28	-	63	1950	785	8.0%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	28	-	778	1950	785	99.1%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	22	-	681	1950:1950	486+484	70.2 : 70.2%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	22	-	448	1950	623	71.9%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	34	-	1294	1950:1950	716+716	90.4 : 90.4%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	34	-	415	1950	948	43.8%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	732	1950:1950	502+574	63.2 : 72.2%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	292	1950	1054	27.7%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	958	1950:1950	911+899	52.6 : 53.3%
6/1	Circulatory South Ahead	U	2	N/A	C		1	30	-	627	1950	840	74.7%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	30	-	846	1950	840	100.8%
6/3	Circulatory South Right	U	2	N/A	C		1	30	-	509	1950	840	60.6%
7/1	Circulatory West Ahead	U	3	N/A	E		1	34	-	510	1950	948	53.6%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	34	-	711	1950	948	75.0%
7/3	Circulatory West Right	U	3	N/A	E		1	34	-	575	1950	948	60.7%

Full Input Data And Results

8/1	Circulatory North Ahead	U	1	N/A	B		1	24	-	523	1950	677	77.2%
8/2	Circulatory North Right	U	1	N/A	B		1	24	-	512	1950	677	75.6%
8/3	Circulatory North Right	U	1	N/A	B		1	24	-	511	1950	677	75.5%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1093	1950	1950	56.1%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	1158	1950	1950	59.4%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	415	1950	1950	21.3%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	658	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	369	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	850	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	529	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	1300	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	1366	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	335	1950	1950	17.2%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	397	1950	1950	20.4%

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	-	-	3672	0	0	40.8	49.0	0.0	89.8	-	-	-	-
Rusty Cutter	-	-	3672	0	0	40.8	49.0	0.0	89.8	-	-	-	-
1/1	63	63	-	-	-	0.2	0.0	-	0.3	15.8	0.8	0.0	0.8
1/2	778	778	-	-	-	4.6	12.2	-	16.8	77.9	15.3	12.2	27.6
2/2+2/1	681	681	-	-	-	3.8	1.2	-	5.0	26.4	5.6	1.2	6.8
2/3	448	448	-	-	-	2.7	1.3	-	4.0	31.8	7.8	1.3	9.1
3/2+3/1	1294	1294	-	-	-	5.1	4.4	-	9.5	26.6	11.4	4.4	15.8
3/3	415	415	-	-	-	1.4	0.4	-	1.8	15.5	5.4	0.4	5.8
4/2+4/1	732	732	1464	0	0	1.1	1.1	-	2.1	10.5	3.2	1.1	4.3
5/1	292	292	292	0	0	0.0	0.2	-	0.2	2.4	0.0	0.2	0.2
5/2+5/3	958	958	1916	0	0	0.0	0.6	-	0.6	2.1	0.3	0.6	0.8
6/1	627	627	-	-	-	3.1	1.5	-	4.5	26.0	11.5	1.5	13.0
6/2	846	840	-	-	-	5.2	16.2	-	21.4	91.2	17.0	16.2	33.3
6/3	509	509	-	-	-	2.2	0.8	-	3.0	21.1	7.8	0.8	8.6
7/1	508	508	-	-	-	1.1	0.6	-	1.7	11.9	2.2	0.6	2.8
7/2	711	711	-	-	-	1.1	1.5	-	2.6	13.2	5.0	1.5	6.4
7/3	575	575	-	-	-	3.1	0.8	-	3.8	24.0	11.5	0.8	12.3
8/1	523	523	-	-	-	2.6	1.7	-	4.3	29.5	10.3	1.7	12.0
8/2	512	512	-	-	-	1.7	1.5	-	3.2	22.7	7.6	1.5	9.1
8/3	511	511	-	-	-	1.7	1.5	-	3.2	22.6	7.3	1.5	8.8
9/1	1093	1093	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.6
9/2	1158	1158	-	-	-	0.0	0.7	-	0.7	2.3	0.0	0.7	0.7
9/3	415	415	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
10/1	658	658	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	365	365	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	848	848	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

[illegible]

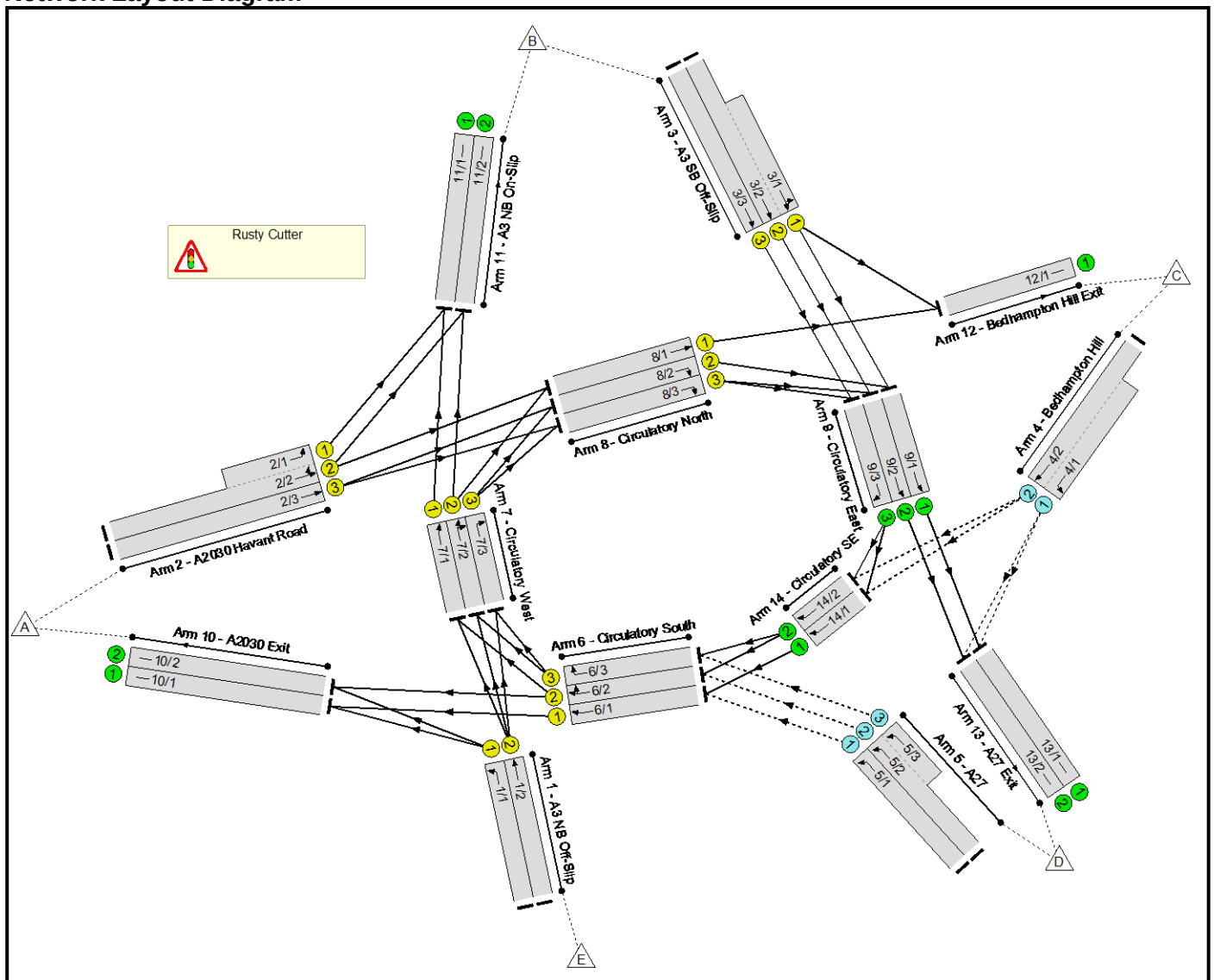
Full Input Data And Results

Full Input Data And Results

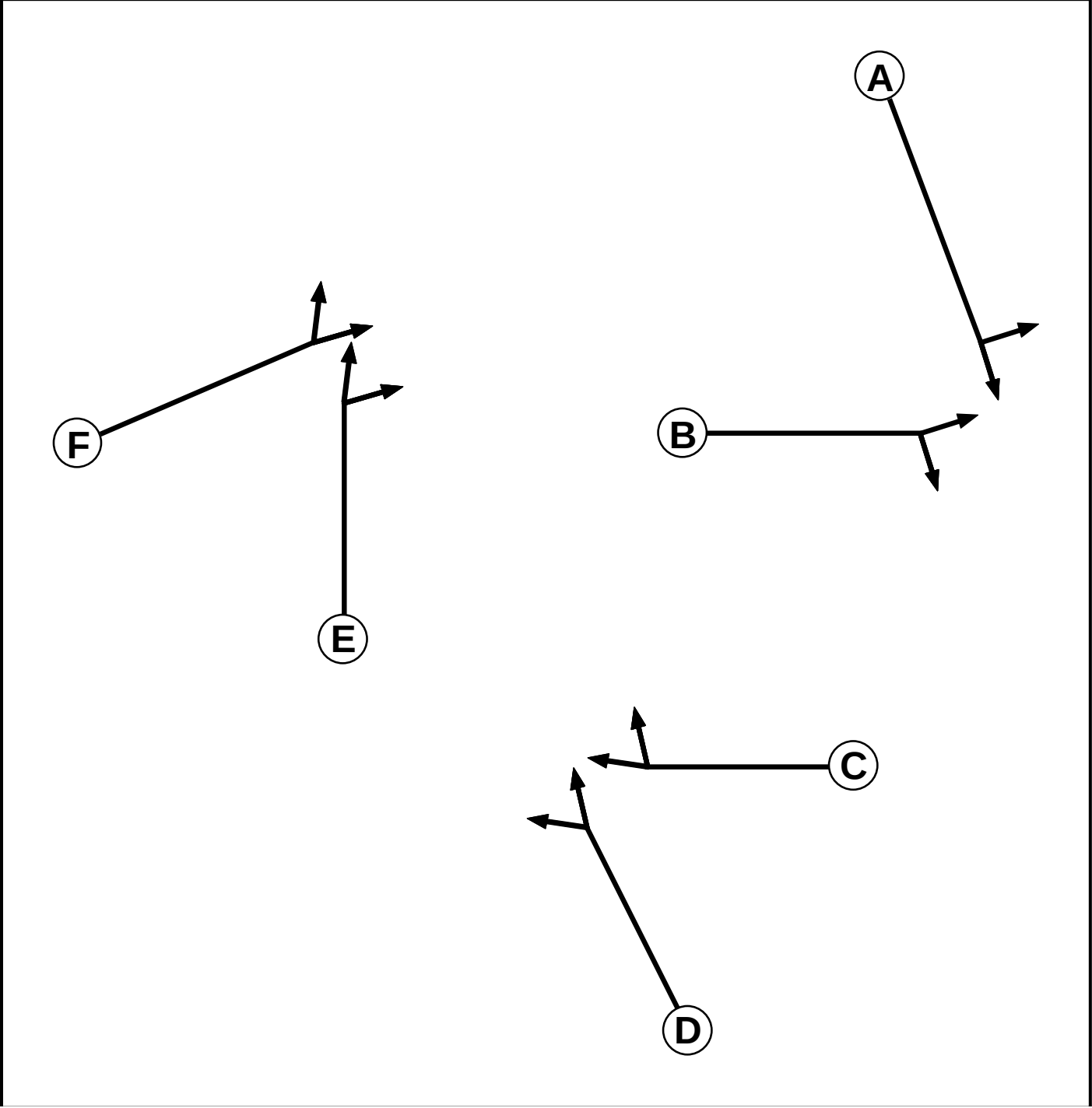
User and Project Details

Project:	Forty Acre Farm, Bedhampton
Title:	Rusty Cutter Modelling (with additional signalised arms) PM Peak
Location:	Bedhampton
Additional detail:	
File name:	Rusty Cutter v10 2016 Base PM - Approved model + imp.lsg3x
Author:	
Company:	Paul Basham 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	2		7	7
D	Traffic	2		7	7
E	Traffic	3		7	7
F	Traffic	3		7	7

Phase Intergreens Matrix

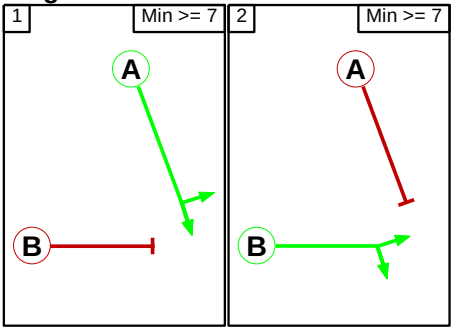
Terminating Phase	Starting Phase						
		A	B	C	D	E	F
	A		7	-	-	-	-
	B	7		-	-	-	-
	C	-	-		7	-	-
	D	-	-	7		-	-
	E	-	-	-	-		8
	F	-	-	-	-	8	

Phases in Stage

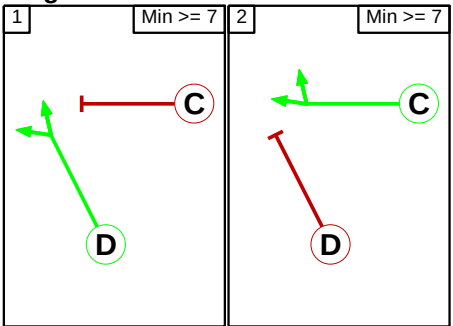
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	D
2	2	C
3	1	F
3	2	E

Stage Diagram

Stage Stream: 1

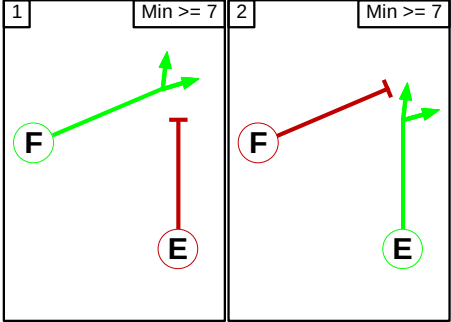


Stage Stream: 2



Full Input Data And Results

Stage Stream: 3



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Stage Stream: 3

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

Prohibited Stage Change

Stage Stream: 1

		To Stage		
From Stage		1	2	
	1			7
	2	7		

Stage Stream: 2

		To Stage		
From Stage		1	2	
	1			7
	2	7		

Stage Stream: 3

		To Stage		
From Stage		1	2	
	1			8
	2	8		

Full Input Data And Results

Give-Way Lane Input Data

Junction: Rusty Cutter											
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)
4/1 (Bedhampton Hill)	13/1 (Left)	1531	0	9/1	0.47	All	-	-	-	-	-
				9/2	0.47	All					
	13/2 (Left)	1531	0	9/1	0.47	All					
				9/2	0.47	All					
4/2 (Bedhampton Hill)	14/1 (Ahead)	1531	0	9/1	0.47	All	-	-	-	-	-
				9/2	0.47	All					
				9/3	0.47	All					
	14/2 (Ahead)	1531	0	9/1	0.47	All					
				9/2	0.47	All					
				9/3	0.47	All					
5/1 (A27)	6/1 (Left)	1184	0	14/1	0.39	All	-	-	-	-	-
5/2 (A27)	6/2 (Left)	1184	0	14/1	0.39	All	-	-	-	-	-
				14/2	0.39	To 6/2 (Ahead)					
5/3 (A27)	6/3 (Left)	1184	0	14/1	0.39	All	-	-	-	-	-
				14/2	0.39	All					

Full Input Data And Results

Junction: Rusty Cutter												
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 (A3 NB Off-Slip)	U	D	2	3	60.0	User	1950	-	-	-	-	-
1/2 (A3 NB Off-Slip)	U	D	2	3	60.0	User	1950	-	-	-	-	-
2/1 (A2030 Havant Road)	U	F	2	3	7.0	User	1950	-	-	-	-	-
2/2 (A2030 Havant Road)	U	F	2	3	60.0	User	1950	-	-	-	-	-
2/3 (A2030 Havant Road)	U	F	2	3	60.0	User	1950	-	-	-	-	-
3/1 (A3 SB Off-Slip)	U	A	2	3	9.6	User	1950	-	-	-	-	-
3/2 (A3 SB Off-Slip)	U	A	2	3	60.0	User	1950	-	-	-	-	-
3/3 (A3 SB Off-Slip)	U	A	2	3	60.0	User	1950	-	-	-	-	-
4/1 (Bedhampton Hill)	O		2	3	12.5	User	1950	-	-	-	-	-
4/2 (Bedhampton Hill)	O		2	3	60.0	User	1950	-	-	-	-	-
5/1 (A27)	O		2	3	60.0	User	1950	-	-	-	-	-
5/2 (A27)	O		2	3	7.0	User	1950	-	-	-	-	-
5/3 (A27)	O		2	3	5.2	User	1950	-	-	-	-	-
6/1 (Circulatory South)	U	C	2	3	15.7	User	1950	-	-	-	-	-
6/2 (Circulatory South)	U	C	2	3	15.7	User	1950	-	-	-	-	-
6/3 (Circulatory South)	U	C	2	3	15.7	User	1950	-	-	-	-	-
7/1 (Circulatory West)	U	E	2	3	17.4	User	1950	-	-	-	-	-
7/2 (Circulatory West)	U	E	2	3	17.4	User	1950	-	-	-	-	-

Full Input Data And Results

7/3 (Circulatory West)	U	E	2	3	17.4	User	1950	-	-	-	-	-
8/1 (Circulatory North)	U	B	2	3	26.1	User	1950	-	-	-	-	-
8/2 (Circulatory North)	U	B	2	3	26.1	User	1950	-	-	-	-	-
8/3 (Circulatory North)	U	B	2	3	26.1	User	1950	-	-	-	-	-
9/1 (Circulatory East)	U		2	3	14.8	User	1950	-	-	-	-	-
9/2 (Circulatory East)	U		2	3	14.8	User	1950	-	-	-	-	-
9/3 (Circulatory East)	U		2	3	14.8	User	1950	-	-	-	-	-
10/1 (A2030 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (A2030 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (A3 NB On-Slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (A3 NB On-Slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (Bedhampton Hill Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (A27 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (A27 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1 (Circulatory SE)	U		2	3	19.1	User	1950	-	-	-	-	-
14/2 (Circulatory SE)	U		2	3	19.1	User	1950	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2016 PM Peak'	16:00	17:00	01:00	
2: '2023 PM Peak'	16:00	17:00	01:00	
3: '2023 PM Peak Plus Com Dev'	16:00	17:00	01:00	
4: '2023 PM Peak Plus Com Dev Plus 50% Prop Dev'	16:00	17:00	01:00	
5: '2028 PM Peak'	16:00	17:00	01:00	
6: '2028 PM Peak Plus Com Dev'	16:00	17:00	01:00	
7: '2028 PM Peak Plus Com Dev Plus Prop Dev'	16:00	17:00	01:00	
8: '2028 PM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test'	16:00	17:00	01:00	

Scenario 1: '2016 PM Peak' (FG1: '2016 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	262	335	226	0	823
	B	277	0	82	801	0	1160
	C	275	66	0	368	0	709
	D	302	969	40	0	0	1311
	E	66	4	354	159	0	583
	Tot.	920	1301	811	1554	0	4586

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2016 PM Peak
Junction: Rusty Cutter	
1/1	66
1/2	517
2/1 (short)	262
2/2 (with short)	597(In) 335(Out)
2/3	226
3/1 (short)	442
3/2 (with short)	883(In) 441(Out)
3/3	277
4/1 (short)	368
4/2 (with short)	709(In) 341(Out)
5/1	302
5/2 (with short)	1009(In) 504(Out)
5/3 (short)	505
6/1	578
6/2	813
6/3	538
7/1	539
7/2	894
7/3	159
8/1	729
8/2	193
8/3	192
9/1	553
9/2	633
9/3	277
10/1	611
10/2	309
11/1	801
11/2	500
12/1	811
13/1	737
13/2	817
14/1	276
14/2	342

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 2: '2023 PM Peak' (FG2: '2023 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	292	373	252	0	917
	B	308	0	91	892	0	1291
	C	306	74	0	410	0	790
	D	336	1079	45	0	0	1460
	E	74	4	394	177	0	649
	Tot.	1024	1449	903	1731	0	5107

Traffic Lane Flows

Lane	Scenario 2: 2023 PM Peak
Junction: Rusty Cutter	
1/1	74
1/2	575
2/1 (short)	292
2/2 (with short)	665(In) 373(Out)
2/3	252
3/1 (short)	491
3/2 (with short)	983(In) 492(Out)
3/3	308
4/1 (short)	410
4/2 (with short)	790(In) 380(Out)
5/1	336
5/2 (with short)	1124(In) 562(Out)
5/3 (short)	562
6/1	643
6/2	906
6/3	599
7/1	601
7/2	995
7/3	177
8/1	812
8/2	215
8/3	214
9/1	615
9/2	706
9/3	308
10/1	680
10/2	344
11/1	893
11/2	556
12/1	903
13/1	820
13/2	911
14/1	307
14/2	381

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 3: '2023 PM Peak Plus Com Dev' (FG3: '2023 PM Peak Plus Com Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	294	373	255	0	922
	B	311	0	91	895	0	1297
	C	306	74	0	411	0	791
	D	338	1083	45	0	0	1466
	E	76	4	394	177	0	651
	Tot.	1031	1455	903	1738	0	5127

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2023 PM Peak Plus Com Dev
Junction: Rusty Cutter	
1/1	76
1/2	575
2/1 (short)	294
2/2 (with short)	667(In) 373(Out)
2/3	255
3/1 (short)	493
3/2 (with short)	986(In) 493(Out)
3/3	311
4/1 (short)	411
4/2 (with short)	791(In) 380(Out)
5/1	338
5/2 (with short)	1128(In) 564(Out)
5/3 (short)	564
6/1	647
6/2	909
6/3	601
7/1	603
7/2	997
7/3	177
8/1	812
8/2	217
8/3	215
9/1	619
9/2	708
9/3	311
10/1	685
10/2	346
11/1	897
11/2	558
12/1	903
13/1	824
13/2	914
14/1	309
14/2	382

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 4: '2023 PM Peak Plus Com Dev Plus 50% Prop Dev' (FG4: '2023 PM Peak Plus Com Dev Plus 50% Prop Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	302	376	274	0	952
	B	325	0	91	895	0	1311
	C	309	74	0	411	0	794
	D	349	1083	45	0	0	1477
	E	94	4	394	177	0	669
	Tot.	1077	1463	906	1757	0	5203

Full Input Data And Results

Traffic Lane Flows

Full Input Data And Results

Lane	Scenario 4: 2023 PM Peak Plus Com Dev Plus 50% Prop Dev
Junction: Rusty Cutter	
1/1	94
1/2	575
2/1 (short)	302
2/2 (with short)	678(In) 376(Out)
2/3	274
3/1 (short)	493
3/2 (with short)	986(In) 493(Out)
3/3	325
4/1 (short)	411
4/2 (with short)	794(In) 383(Out)
5/1	349
5/2 (with short)	1128(In) 564(Out)
5/3 (short)	564
6/1	666
6/2	918
6/3	601
7/1	603
7/2	997
7/3	177
8/1	815
8/2	226
8/3	225
9/1	628
9/2	718
9/3	325
10/1	713
10/2	364
11/1	905
11/2	558
12/1	906
13/1	833
13/2	924
14/1	317
14/2	391

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 5: '2028 PM Peak' (FG5: '2028 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	306	392	264	0	962
	B	324	0	96	937	0	1357
	C	322	77	0	430	0	829
	D	353	1133	47	0	0	1533
	E	77	5	414	186	0	682
	Tot.	1076	1521	949	1817	0	5363

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2028 PM Peak
Junction: Rusty Cutter	
1/1	77
1/2	605
2/1 (short)	306
2/2 (with short)	698(In) 392(Out)
2/3	264
3/1 (short)	516
3/2 (with short)	1033(In) 517(Out)
3/3	324
4/1 (short)	430
4/2 (with short)	829(In) 399(Out)
5/1	353
5/2 (with short)	1180(In) 590(Out)
5/3 (short)	590
6/1	676
6/2	952
6/3	628
7/1	632
7/2	1044
7/3	186
8/1	853
8/2	225
8/3	225
9/1	645
9/2	742
9/3	324
10/1	715
10/2	361
11/1	938
11/2	583
12/1	949
13/1	860
13/2	957
14/1	323
14/2	400

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 6: '2028 PM Peak Plus Com Dev' (FG6: '2028 PM Peak Plus Com Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	308	392	268	0	968
	B	327	0	96	939	0	1362
	C	322	77	0	432	0	831
	D	355	1137	47	0	0	1539
	E	79	5	414	186	0	684
	Tot.	1083	1527	949	1825	0	5384

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2028 PM Peak Plus Com Dev
Junction: Rusty Cutter	
1/1	79
1/2	605
2/1 (short)	308
2/2 (with short)	700(In) 392(Out)
2/3	268
3/1 (short)	517
3/2 (with short)	1035(In) 518(Out)
3/3	327
4/1 (short)	432
4/2 (with short)	831(In) 399(Out)
5/1	355
5/2 (with short)	1184(In) 592(Out)
5/3 (short)	592
6/1	680
6/2	955
6/3	630
7/1	634
7/2	1046
7/3	186
8/1	853
8/2	227
8/3	227
9/1	648
9/2	745
9/3	327
10/1	720
10/2	363
11/1	942
11/2	585
12/1	949
13/1	864
13/2	961
14/1	325
14/2	401

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 7: '2028 PM Peak Plus Com Dev Plus Prop Dev' (FG7: '2028 PM Peak Plus Com Dev Plus Prop Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	325	397	305	0	1027
	B	354	0	96	939	0	1389
	C	327	77	0	432	0	836
	D	377	1137	47	0	0	1561
	E	117	5	414	186	0	722
	Tot.	1175	1544	954	1862	0	5535

Full Input Data And Results

Traffic Lane Flows

Full Input Data And Results

Lane	Scenario 7: 2028 PM Peak Plus Com Dev Plus Prop Dev
Junction: Rusty Cutter	
1/1	117
1/2	605
2/1 (short)	325
2/2 (with short)	722(In) 397(Out)
2/3	305
3/1 (short)	518
3/2 (with short)	1035(In) 517(Out)
3/3	354
4/1 (short)	432
4/2 (with short)	836(In) 404(Out)
5/1	377
5/2 (with short)	1184(In) 592(Out)
5/3 (short)	592
6/1	717
6/2	972
6/3	630
7/1	634
7/2	1046
7/3	186
8/1	858
8/2	246
8/3	245
9/1	668
9/2	762
9/3	354
10/1	776
10/2	399
11/1	959
11/2	585
12/1	954
13/1	884
13/2	978
14/1	340
14/2	418

Full Input Data And Results

Lane Saturation Flows

Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

Scenario 8: '2028 PM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test' (FG8: '2028 PM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	325	397	305	0	1027
	B	354	0	96	949	0	1399
	C	327	77	0	432	0	836
	D	377	1154	47	0	0	1578
	E	117	5	414	186	0	722
	Tot.	1175	1561	954	1872	0	5562

Full Input Data And Results

Traffic Lane Flows

Full Input Data And Results

Lane	Scenario 8: 2028 PM Peak Plus Com Dev Plus Prop Dev Plus Sensitivity Test
Junction: Rusty Cutter	
1/1	117
1/2	605
2/1 (short)	325
2/2 (with short)	722(In) 397(Out)
2/3	305
3/1 (short)	523
3/2 (with short)	1045(In) 522(Out)
3/3	354
4/1 (short)	432
4/2 (with short)	836(In) 404(Out)
5/1	377
5/2 (with short)	1201(In) 600(Out)
5/3 (short)	601
6/1	717
6/2	980
6/3	639
7/1	642
7/2	1055
7/3	186
8/1	858
8/2	246
8/3	245
9/1	673
9/2	767
9/3	354
10/1	776
10/2	399
11/1	967
11/2	594
12/1	954
13/1	889
13/2	983
14/1	340

Full Input Data And Results

14/2	418
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Full Input Data And Results

Lane Saturation Flows

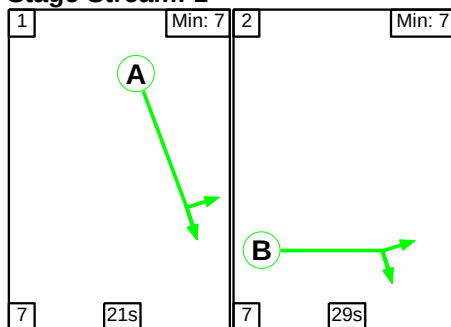
Full Input Data And Results

9/3 (Circulatory East Lane 3)	This lane uses a directly entered Saturation Flow	1950	1950
10/1 (A2030 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A2030 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (A3 NB On-Slip Lane 1)	Infinite Saturation Flow	Inf	Inf
11/2 (A3 NB On-Slip Lane 2)	Infinite Saturation Flow	Inf	Inf
12/1 (Bedhampton Hill Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A27 Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A27 Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
14/1 (Circulatory SE Lane 1)	This lane uses a directly entered Saturation Flow	1950	1950
14/2 (Circulatory SE Lane 2)	This lane uses a directly entered Saturation Flow	1950	1950

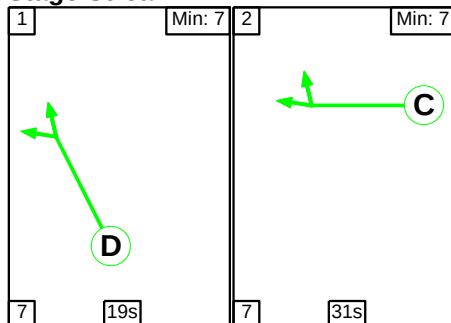
Scenario 1: '2016 PM Peak' (FG1: '2016 PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

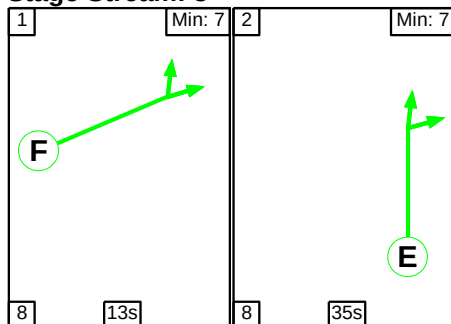
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	21	29
Change Point	13	41

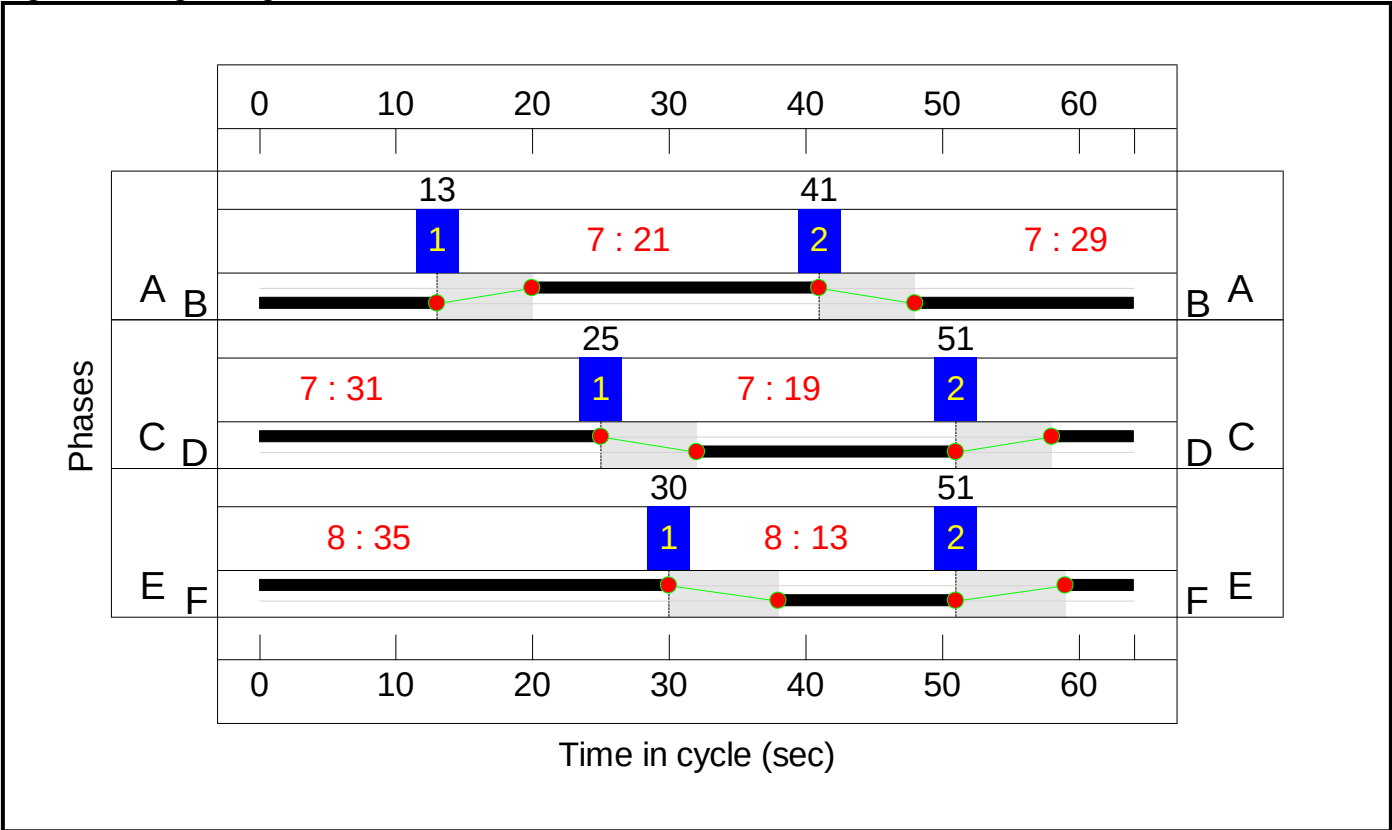
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	25	51

Stage Stream: 3

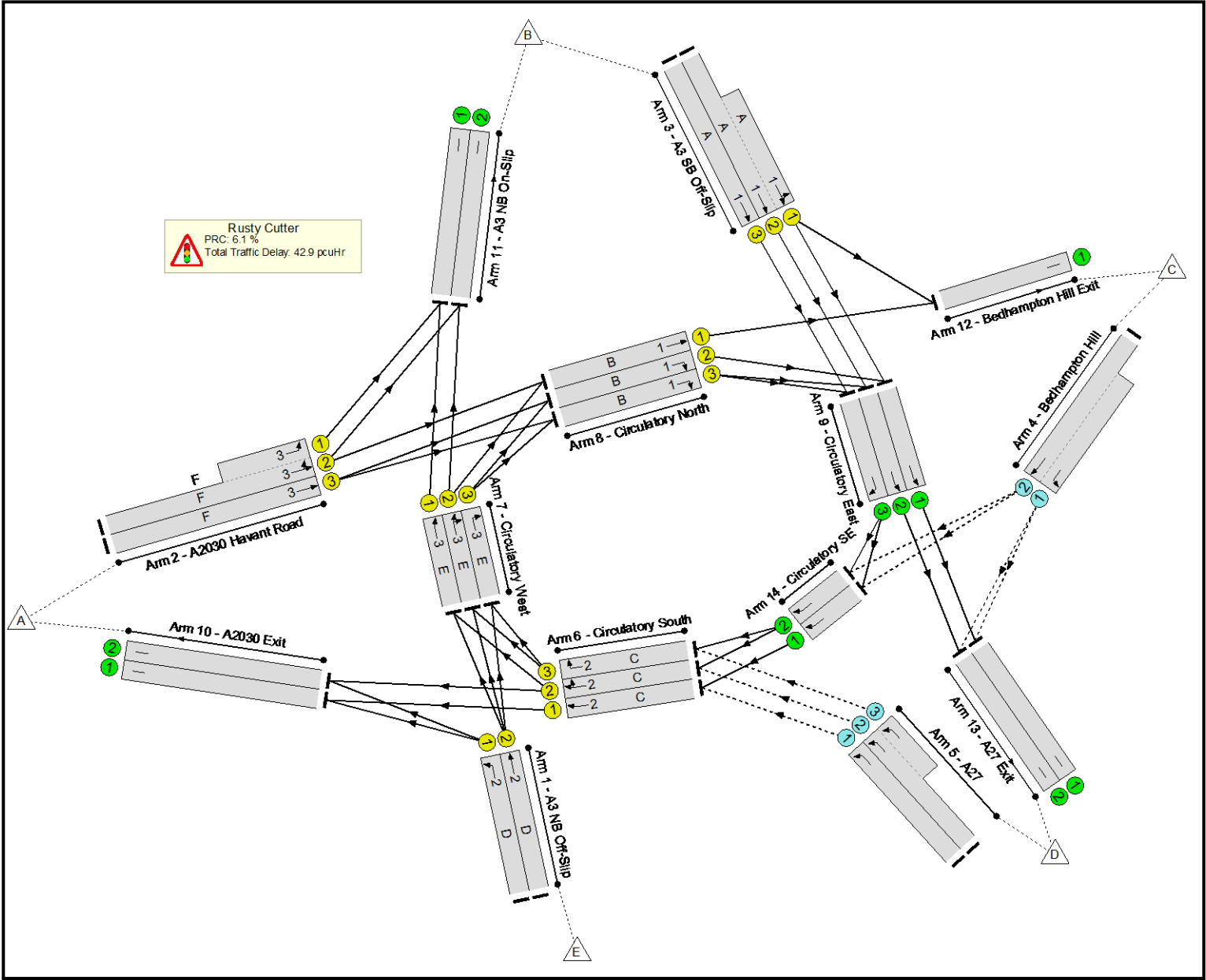
Stage	1	2
Duration	13	35
Change Point	30	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	84.8%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	84.8%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	66	1950	609	10.8%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	517	1950	609	84.8%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	597	1950:1950	411+321	81.5 : 81.5%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	226	1950	427	53.0%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	21	-	883	1950:1950	606+608	72.8 : 72.8%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	21	-	277	1950	670	41.3%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	709	1950:1950	930+981	36.7 : 37.5%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	302	1950	1076	28.1%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1009	1950:1950	956+943	52.7 : 53.6%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	578	1950	975	59.3%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	813	1950	975	83.4%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	538	1950	975	55.2%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	539	1950	1097	49.1%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	894	1950	1097	81.5%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	159	1950	1097	14.5%
8/1	Circulatory North Ahead	U	1	N/A	B		1	29	-	729	1950	914	79.8%

Full Input Data And Results

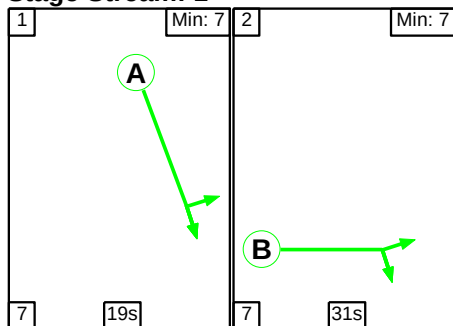
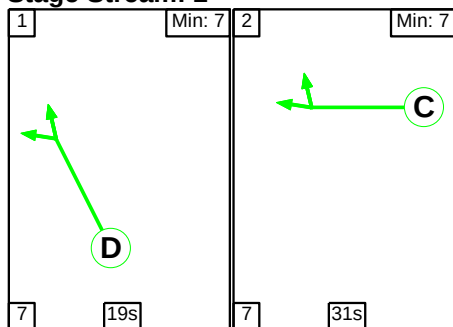
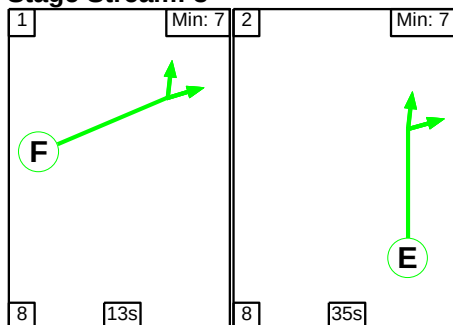
8/2	Circulatory North Right	U	1	N/A	B		1	29	-	193	1950	914	21.1%
8/3	Circulatory North Right	U	1	N/A	B		1	29	-	192	1950	914	21.0%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	553	1950	1950	28.4%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	633	1950	1950	32.5%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	277	1950	1950	14.2%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	611	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	309	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	801	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	500	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	811	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	817	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	276	1950	1950	14.2%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	342	1950	1950	17.5%

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	-	-	3738	0	0	25.4	17.5	0.0	42.9	-	-	-	-
Rusty Cutter	-	-	3738	0	0	25.4	17.5	0.0	42.9	-	-	-	-
1/1	66	66	-	-	-	0.3	0.1	-	0.3	19.0	0.8	0.1	0.9
1/2	517	517	-	-	-	3.0	2.6	-	5.6	39.0	8.5	2.6	11.1
2/2+2/1	597	597	-	-	-	3.8	2.1	-	6.0	36.1	5.6	2.1	7.7
2/3	226	226	-	-	-	1.4	0.6	-	1.9	31.0	3.5	0.6	4.1
3/2+3/1	883	883	-	-	-	4.4	1.3	-	5.7	23.2	6.6	1.3	8.0
3/3	277	277	-	-	-	1.2	0.4	-	1.6	20.6	3.7	0.4	4.0
4/2+4/1	709	709	1418	0	0	0.3	0.3	-	0.6	3.1	1.9	0.3	2.2
5/1	302	302	302	0	0	0.0	0.2	-	0.2	2.3	0.0	0.2	0.2
5/2+5/3	1009	1009	2018	0	0	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
6/1	578	578	-	-	-	2.2	0.7	-	2.9	17.9	8.2	0.7	8.9
6/2	813	813	-	-	-	3.5	2.4	-	5.9	26.2	12.8	2.4	15.2
6/3	538	538	-	-	-	1.6	0.6	-	2.2	15.0	6.6	0.6	7.2
7/1	539	539	-	-	-	0.1	0.5	-	0.5	3.6	0.2	0.5	0.6
7/2	894	894	-	-	-	2.5	2.2	-	4.7	18.9	14.5	2.2	16.6
7/3	159	159	-	-	-	0.6	0.1	-	0.7	14.9	2.8	0.1	2.9
8/1	729	729	-	-	-	0.4	1.9	-	2.4	11.6	5.6	1.9	7.5
8/2	193	193	-	-	-	0.1	0.1	-	0.2	3.5	0.3	0.1	0.4
8/3	192	192	-	-	-	0.1	0.1	-	0.2	3.5	0.3	0.1	0.4
9/1	553	553	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
9/2	633	633	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
9/3	277	277	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	611	611	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	309	309	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	801	801	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

11/2	500	500	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	811	811	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	817	817	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	276	276	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	342	342	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 12.8 Total Delay for Signalled Lanes (pcuHr): 10.02 Cycle Time (s): 64 C1 Stream: 2 PRC for Signalled Lanes (%): 6.1 Total Delay for Signalled Lanes (pcuHr): 16.99 Cycle Time (s): 64 C1 Stream: 3 PRC for Signalled Lanes (%): 10.4 Total Delay for Signalled Lanes (pcuHr): 13.82 Cycle Time (s): 64 PRC Over All Lanes (%): 6.1 Total Delay Over All Lanes(pcuHr): 42.92													

Stage Sequence Diagram**Stage Stream: 1****Stage Stream: 2****Stage Stream: 3****Stage Timings****Stage Stream: 1**

Stage	1	2
Duration	19	31
Change Point	13	39

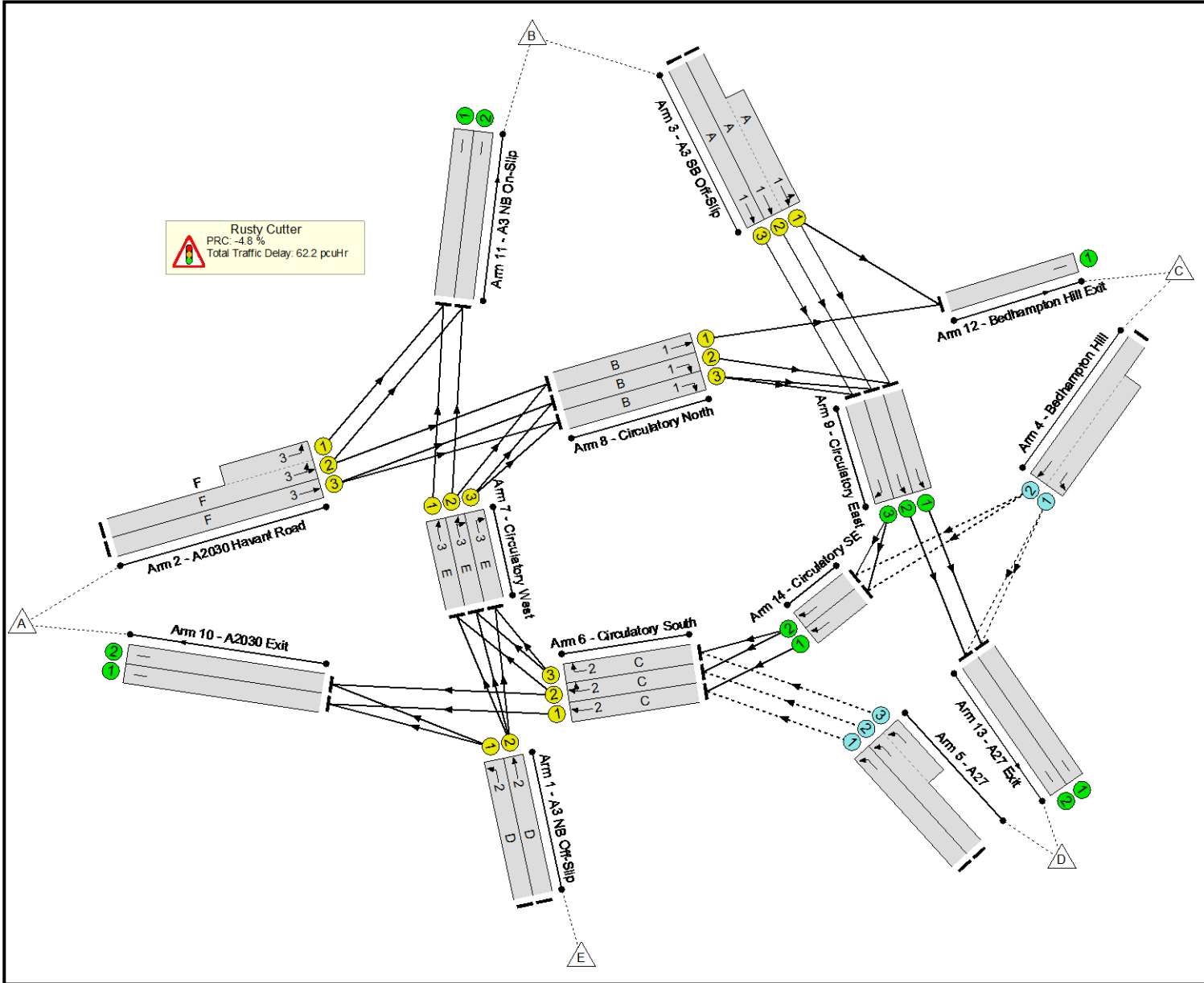
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	27	53

Stage Stream: 3

Stage	1	2
Duration	13	35
Change Point	30	51

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	94.4%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	94.4%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	74	1950	609	12.1%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	575	1950	609	94.4%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	665	1950:1950	411+322	90.8 : 90.8%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	252	1950	427	59.1%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	19	-	983	1950:1950	577+576	85.3 : 85.3%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	19	-	308	1950	609	50.5%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	790	1950:1950	881+922	43.1 : 44.5%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	336	1950	1064	31.6%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1124	1950:1950	930+915	60.4 : 61.4%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	643	1950	975	65.9%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	906	1950	975	92.9%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	599	1950	975	61.4%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	601	1950	1097	54.8%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	995	1950	1097	90.7%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	177	1950	1097	16.1%
8/1	Circulatory North Ahead	U	1	N/A	B		1	31	-	812	1950	975	83.3%

Full Input Data And Results

8/2	Circulatory North Right	U	1	N/A	B		1	31	-	215	1950	975	22.1%
8/3	Circulatory North Right	U	1	N/A	B		1	31	-	214	1950	975	21.9%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	615	1950	1950	31.5%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	706	1950	1950	36.2%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	308	1950	1950	15.8%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	680	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	344	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	893	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	556	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	903	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	820	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	911	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	307	1950	1950	15.7%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	381	1950	1950	19.5%

Full Input Data And Results

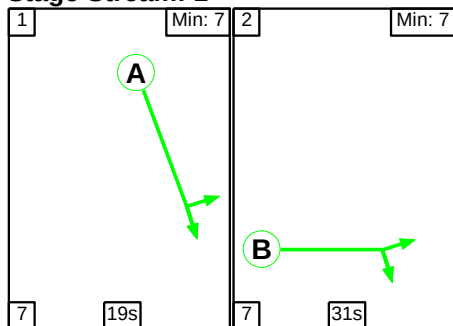
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	4164	0	0	30.1	32.1	0.0	62.2	-	-	-	-
Rusty Cutter	-	-	4164	0	0	30.1	32.1	0.0	62.2	-	-	-	-
1/1	74	74	-	-	-	0.3	0.1	-	0.4	19.1	0.9	0.1	1.0
1/2	575	575	-	-	-	3.4	6.2	-	9.6	60.0	9.9	6.2	16.1
2/2+2/1	665	665	-	-	-	4.4	4.4	-	8.7	47.3	6.3	4.4	10.7
2/3	252	252	-	-	-	1.6	0.7	-	2.3	32.7	4.0	0.7	4.7
3/2+3/1	983	983	-	-	-	5.5	2.8	-	8.3	30.5	7.9	2.8	10.7
3/3	308	308	-	-	-	1.5	0.5	-	2.0	23.9	4.4	0.5	5.0
4/2+4/1	790	790	1580	0	0	0.6	0.4	-	0.9	4.3	2.5	0.4	2.9
5/1	336	336	336	0	0	0.0	0.2	-	0.2	2.5	0.0	0.2	0.2
5/2+5/3	1124	1124	2248	0	0	0.0	0.8	-	0.8	2.5	0.8	0.8	1.6
6/1	643	643	-	-	-	2.6	1.0	-	3.5	19.8	9.4	1.0	10.4
6/2	906	906	-	-	-	4.2	5.6	-	9.9	39.3	15.3	5.6	20.9
6/3	599	599	-	-	-	1.9	0.8	-	2.7	16.1	7.7	0.8	8.4
7/1	601	601	-	-	-	0.2	0.6	-	0.8	4.9	0.5	0.6	1.1
7/2	995	995	-	-	-	2.8	4.5	-	7.3	26.2	16.9	4.5	21.3
7/3	177	177	-	-	-	0.5	0.1	-	0.6	12.4	3.1	0.1	3.2
8/1	812	812	-	-	-	0.5	2.4	-	2.9	12.9	2.3	2.4	4.7
8/2	215	215	-	-	-	0.1	0.1	-	0.2	3.4	0.1	0.1	0.3
8/3	214	214	-	-	-	0.1	0.1	-	0.2	3.4	0.1	0.1	0.3
9/1	615	615	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
9/2	706	706	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
9/3	308	308	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	680	680	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	344	344	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	893	893	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

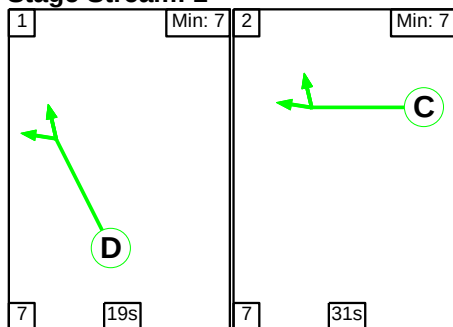
11/2	556	556	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	903	903	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	820	820	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	911	911	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	307	307	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	381	381	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
			C1	Stream: 1 PRC for Signalled Lanes (%):		5.5	Total Delay for Signalled Lanes (pcuHr):		13.69	Cycle Time (s):		64	
			C1	Stream: 2 PRC for Signalled Lanes (%):		-4.8	Total Delay for Signalled Lanes (pcuHr):		26.08	Cycle Time (s):		64	
			C1	Stream: 3 PRC for Signalled Lanes (%):		-0.9	Total Delay for Signalled Lanes (pcuHr):		19.69	Cycle Time (s):		64	
				PRC Over All Lanes (%):		-4.8	Total Delay Over All Lanes(pcuHr):		62.24				

Stage Sequence Diagram

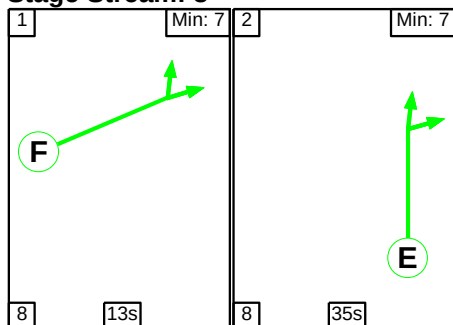
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	19	31
Change Point	13	39

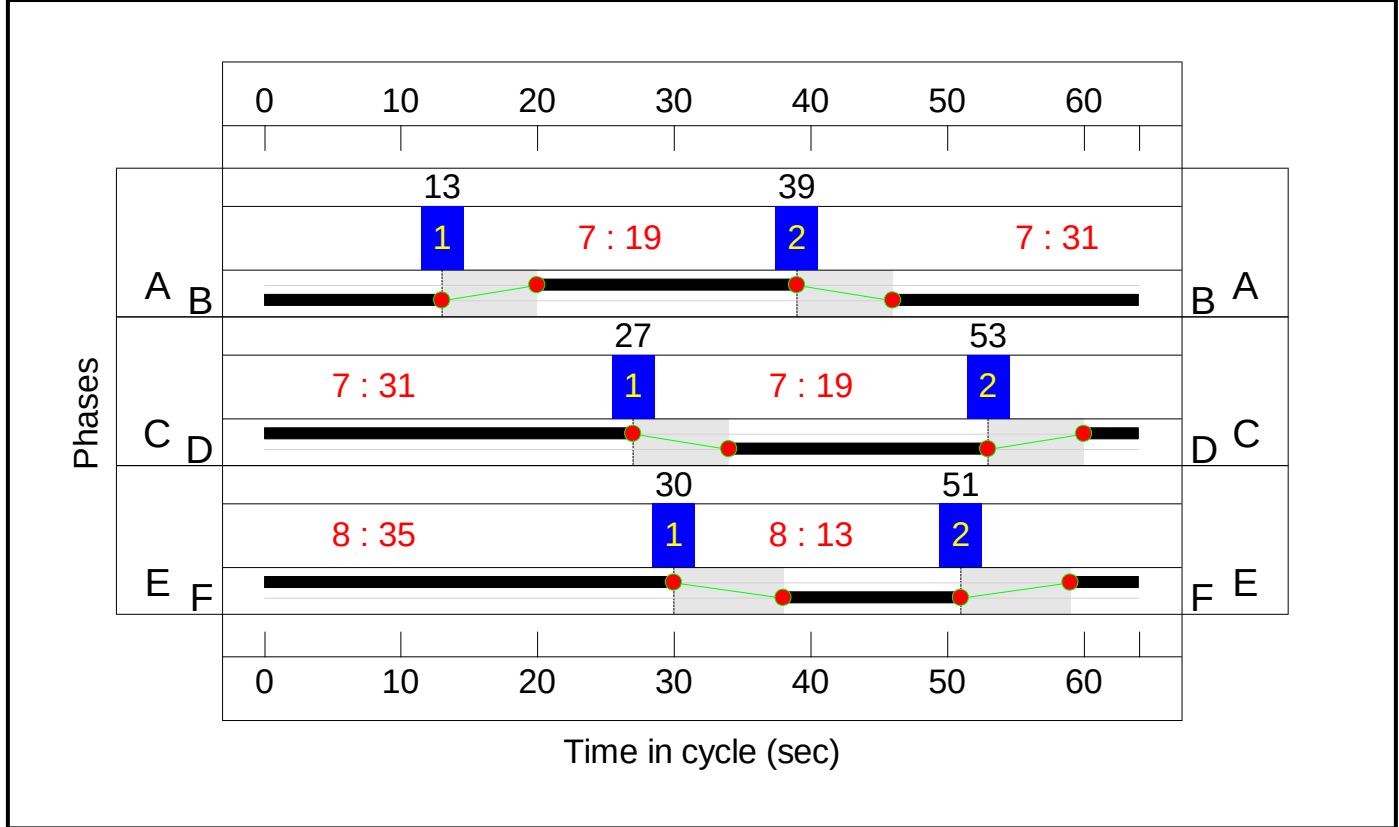
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	27	53

Stage Stream: 3

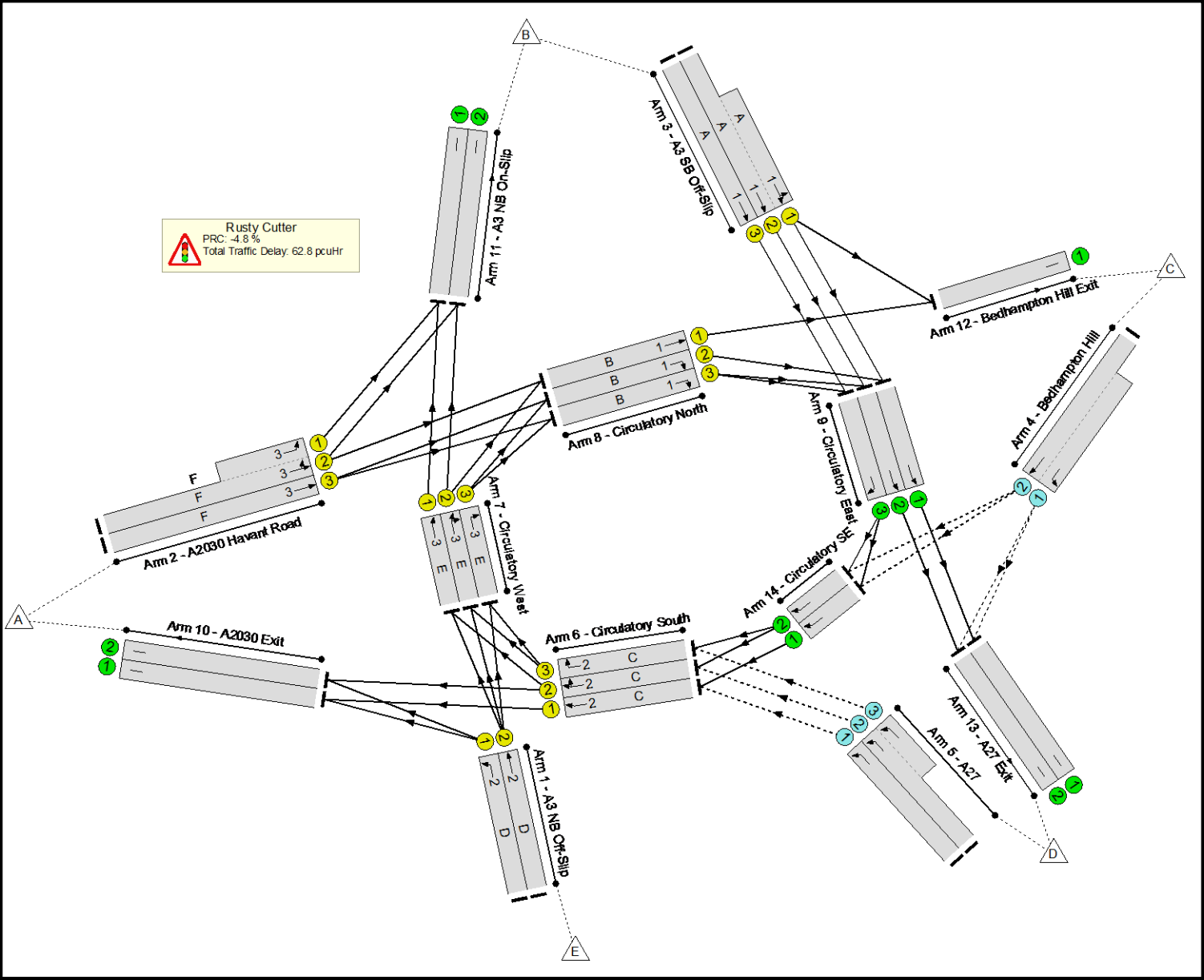
Stage	1	2
Duration	13	35
Change Point	30	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	94.4%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	94.4%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	76	1950	609	12.5%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	575	1950	609	94.4%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	667	1950:1950	411+324	90.8 : 90.8%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	255	1950	427	59.8%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	19	-	986	1950:1950	577+577	85.5 : 85.5%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	19	-	311	1950	609	51.0%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	791	1950:1950	878+920	43.3 : 44.7%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	338	1950	1063	31.8%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1128	1950:1950	929+914	60.7 : 61.7%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	647	1950	975	66.4%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	909	1950	975	93.2%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	601	1950	975	61.6%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	603	1950	1097	55.0%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	997	1950	1097	90.9%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	177	1950	1097	16.1%
8/1	Circulatory North Ahead	U	1	N/A	B		1	31	-	812	1950	975	83.3%

Full Input Data And Results

8/2	Circulatory North Right	U	1	N/A	B		1	31	-	217	1950	975	22.3%
8/3	Circulatory North Right	U	1	N/A	B		1	31	-	215	1950	975	22.1%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	619	1950	1950	31.7%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	708	1950	1950	36.3%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	311	1950	1950	15.9%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	685	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	346	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	897	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	903	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	824	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	914	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	309	1950	1950	15.8%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	382	1950	1950	19.6%

Full Input Data And Results

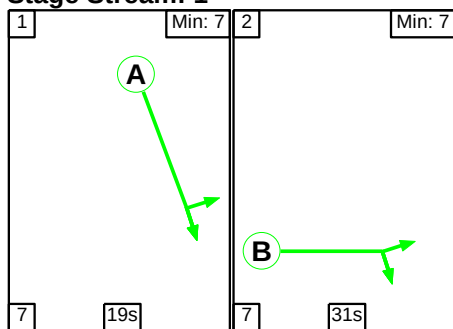
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	4176	0	0	30.3	32.6	0.0	62.8	-	-	-	-
Rusty Cutter	-	-	4176	0	0	30.3	32.6	0.0	62.8	-	-	-	-
1/1	76	76	-	-	-	0.3	0.1	-	0.4	19.1	0.9	0.1	1.0
1/2	575	575	-	-	-	3.4	6.2	-	9.6	60.0	9.9	6.2	16.1
2/2+2/1	667	667	-	-	-	4.4	4.4	-	8.8	47.2	6.3	4.4	10.7
2/3	255	255	-	-	-	1.6	0.7	-	2.3	32.9	4.0	0.7	4.8
3/2+3/1	986	986	-	-	-	5.5	2.9	-	8.4	30.7	7.9	2.9	10.8
3/3	311	311	-	-	-	1.6	0.5	-	2.1	24.0	4.5	0.5	5.0
4/2+4/1	791	791	1582	0	0	0.6	0.4	-	1.0	4.3	2.5	0.4	2.9
5/1	338	338	338	0	0	0.0	0.2	-	0.2	2.5	0.0	0.2	0.2
5/2+5/3	1128	1128	2256	0	0	0.0	0.8	-	0.8	2.5	0.8	0.8	1.6
6/1	647	647	-	-	-	2.6	1.0	-	3.6	19.9	9.5	1.0	10.4
6/2	909	909	-	-	-	4.3	5.8	-	10.1	40.1	15.3	5.8	21.2
6/3	601	601	-	-	-	1.9	0.8	-	2.7	16.2	7.7	0.8	8.5
7/1	603	603	-	-	-	0.2	0.6	-	0.8	4.9	0.5	0.6	1.1
7/2	997	997	-	-	-	2.8	4.6	-	7.3	26.5	16.9	4.6	21.5
7/3	177	177	-	-	-	0.5	0.1	-	0.6	12.4	3.1	0.1	3.2
8/1	812	812	-	-	-	0.5	2.4	-	2.9	12.9	2.3	2.4	4.7
8/2	217	217	-	-	-	0.1	0.1	-	0.2	3.4	0.1	0.1	0.3
8/3	215	215	-	-	-	0.1	0.1	-	0.2	3.4	0.1	0.1	0.3
9/1	619	619	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
9/2	708	708	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
9/3	311	311	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	685	685	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	346	346	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	897	897	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

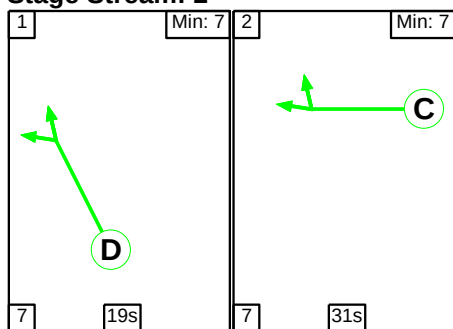
11/2	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	903	903	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	824	824	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	914	914	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	309	309	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	382	382	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 5.3 Total Delay for Signalled Lanes (pcuHr): 13.79 Cycle Time (s): 64													
C1 Stream: 2 PRC for Signalled Lanes (%): -4.8 Total Delay for Signalled Lanes (pcuHr): 26.38 Cycle Time (s): 64													
C1 Stream: 3 PRC for Signalled Lanes (%): -1.0 Total Delay for Signalled Lanes (pcuHr): 19.85 Cycle Time (s): 64													
PRC Over All Lanes (%): -4.8 Total Delay Over All Lanes(pcuHr): 62.83													

Stage Sequence Diagram

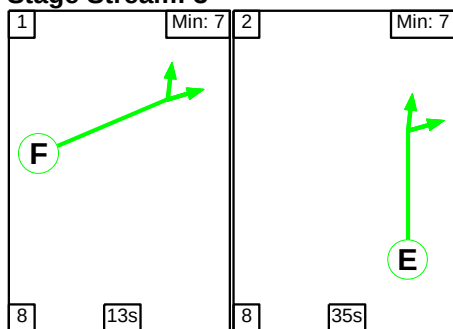
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	19	31
Change Point	13	39

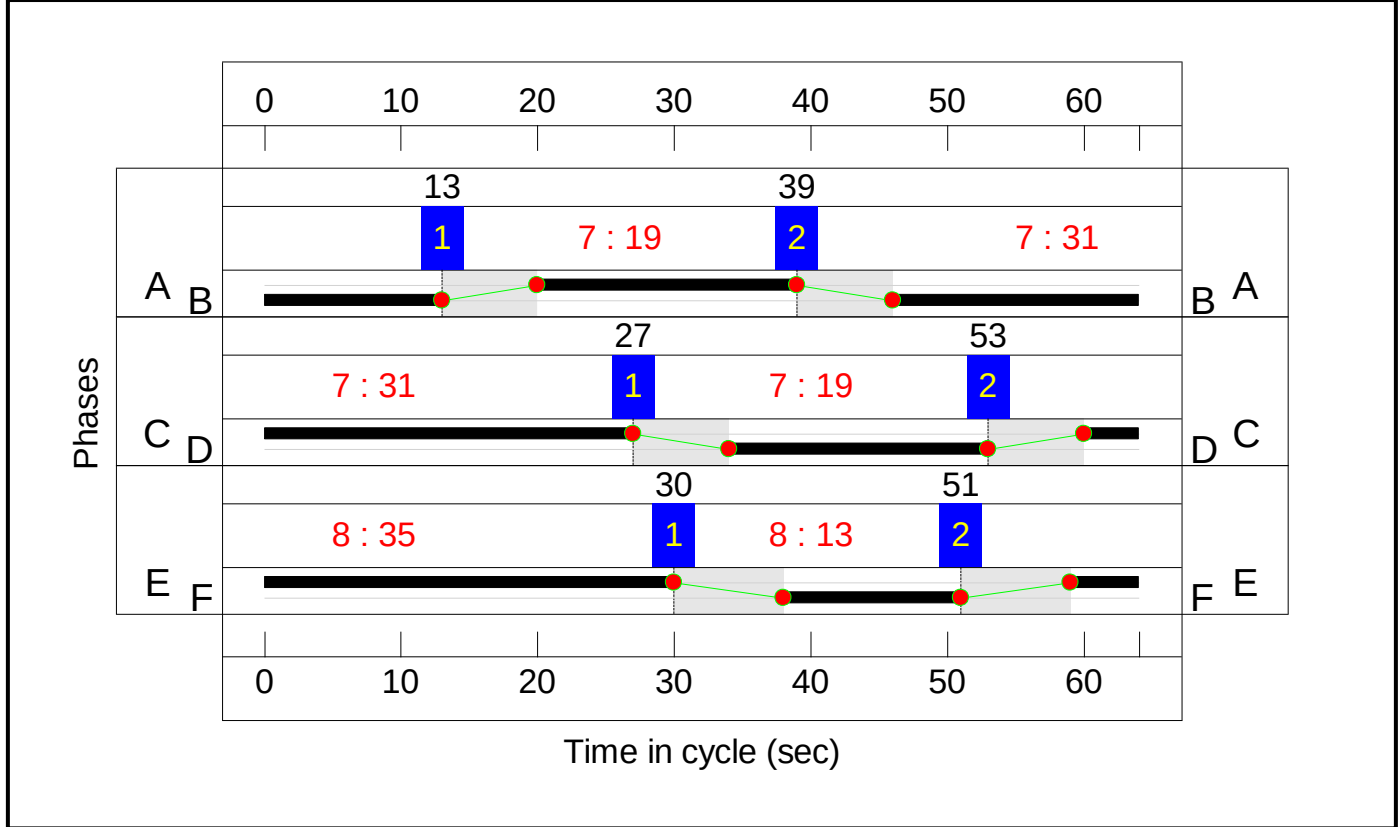
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	27	53

Stage Stream: 3

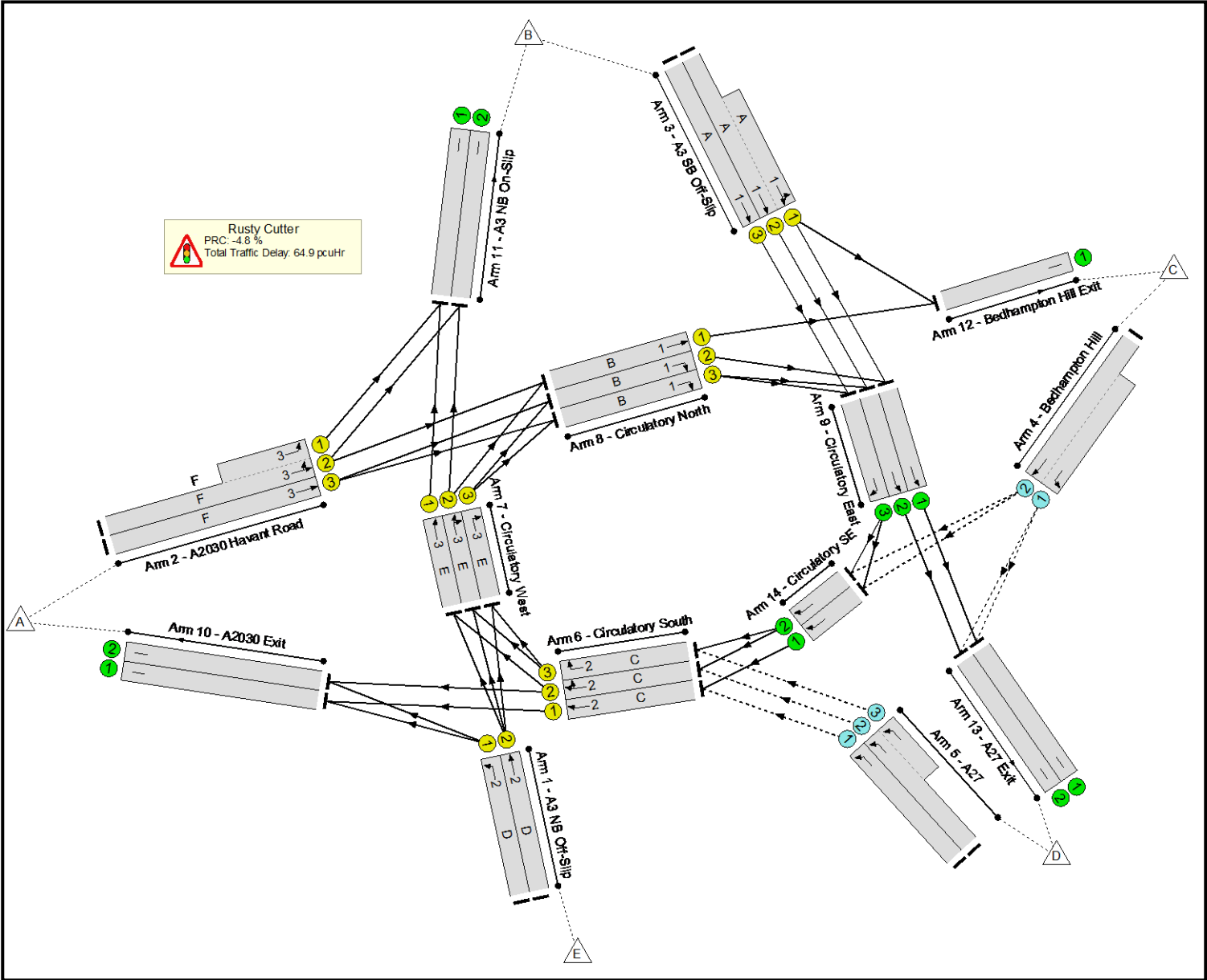
Stage	1	2
Duration	13	35
Change Point	30	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	94.4%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	94.4%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	94	1950	609	15.4%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	575	1950	609	94.4%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	678	1950:1950	411+330	91.6 : 91.6%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	274	1950	427	64.2%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	19	-	986	1950:1950	577+577	85.5 : 85.5%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	19	-	325	1950	609	53.3%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	794	1950:1950	868+911	44.1 : 45.1%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	349	1950	1060	32.9%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1128	1950:1950	922+908	61.2 : 62.1%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	666	1950	975	68.3%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	918	1950	975	94.2%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	601	1950	975	61.6%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	603	1950	1097	55.0%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	997	1950	1097	90.9%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	177	1950	1097	16.1%
8/1	Circulatory North Ahead	U	1	N/A	B		1	31	-	815	1950	975	83.6%

Full Input Data And Results

8/2	Circulatory North Right	U	1	N/A	B		1	31	-	226	1950	975	23.2%
8/3	Circulatory North Right	U	1	N/A	B		1	31	-	225	1950	975	23.1%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	628	1950	1950	32.2%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	718	1950	1950	36.8%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	325	1950	1950	16.7%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	364	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	905	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	906	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	833	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	924	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	317	1950	1950	16.3%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	391	1950	1950	20.1%

Full Input Data And Results

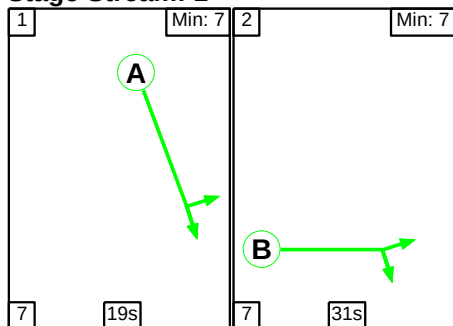
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	4193	0	0	30.9	34.0	0.0	64.9	-	-	-	-
Rusty Cutter	-	-	4193	0	0	30.9	34.0	0.0	64.9	-	-	-	-
1/1	94	94	-	-	-	0.4	0.1	-	0.5	19.4	1.2	0.1	1.3
1/2	575	575	-	-	-	3.4	6.2	-	9.6	60.0	9.9	6.2	16.1
2/2+2/1	678	678	-	-	-	4.5	4.7	-	9.2	48.7	6.4	4.7	11.1
2/3	274	274	-	-	-	1.7	0.9	-	2.6	34.4	4.4	0.9	5.3
3/2+3/1	986	986	-	-	-	5.5	2.9	-	8.4	30.7	7.9	2.9	10.8
3/3	325	325	-	-	-	1.6	0.6	-	2.2	24.5	4.7	0.6	5.3
4/2+4/1	794	794	1588	0	0	0.6	0.4	-	1.0	4.4	2.6	0.4	3.0
5/1	349	349	349	0	0	0.0	0.2	-	0.2	2.5	0.0	0.2	0.2
5/2+5/3	1128	1128	2256	0	0	0.0	0.8	-	0.8	2.6	0.9	0.8	1.7
6/1	666	666	-	-	-	2.7	1.1	-	3.8	20.5	9.9	1.1	11.0
6/2	918	918	-	-	-	4.4	6.5	-	10.9	42.8	15.5	6.5	22.0
6/3	601	601	-	-	-	1.9	0.8	-	2.7	16.2	7.7	0.8	8.5
7/1	603	603	-	-	-	0.2	0.6	-	0.8	5.0	0.6	0.6	1.2
7/2	997	997	-	-	-	2.8	4.6	-	7.3	26.5	16.9	4.6	21.5
7/3	177	177	-	-	-	0.5	0.1	-	0.6	12.4	3.1	0.1	3.2
8/1	815	815	-	-	-	0.5	2.5	-	3.0	13.1	2.3	2.5	4.7
8/2	226	226	-	-	-	0.1	0.2	-	0.2	3.4	0.1	0.2	0.3
8/3	225	225	-	-	-	0.1	0.1	-	0.2	3.4	0.1	0.1	0.3
9/1	628	628	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
9/2	718	718	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/3	325	325	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	364	364	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	905	905	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

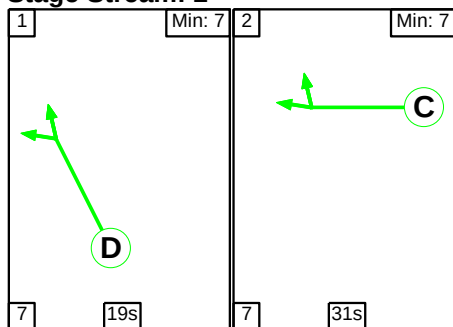
11/2	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	906	906	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	833	833	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	924	924	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	317	317	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	391	391	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
			C1	Stream: 1 PRC for Signalled Lanes (%):	5.3				Total Delay for Signalled Lanes (pcuHr):	13.99	Cycle Time (s):	64	
			C1	Stream: 2 PRC for Signalled Lanes (%):	-4.8				Total Delay for Signalled Lanes (pcuHr):	27.48	Cycle Time (s):	64	
			C1	Stream: 3 PRC for Signalled Lanes (%):	-1.7				Total Delay for Signalled Lanes (pcuHr):	20.58	Cycle Time (s):	64	
				PRC Over All Lanes (%):	-4.8				Total Delay Over All Lanes(pcuHr):	64.93			

Stage Sequence Diagram

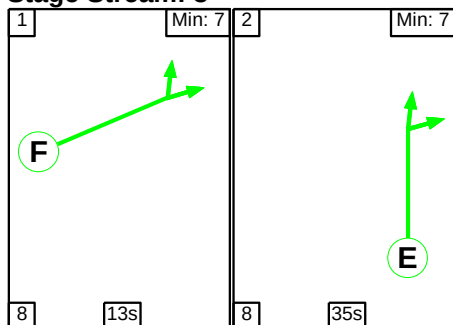
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	19	31
Change Point	13	39

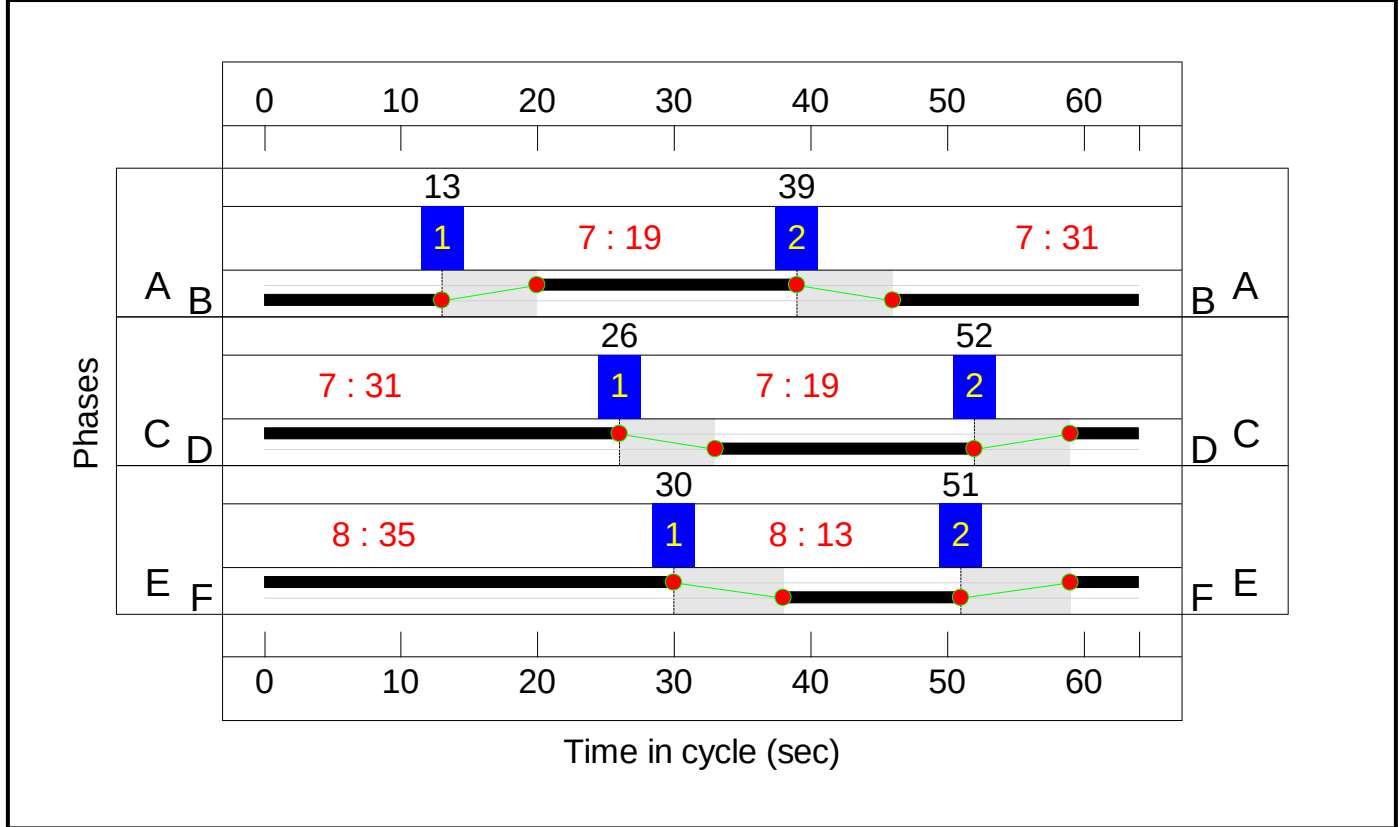
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	26	52

Stage Stream: 3

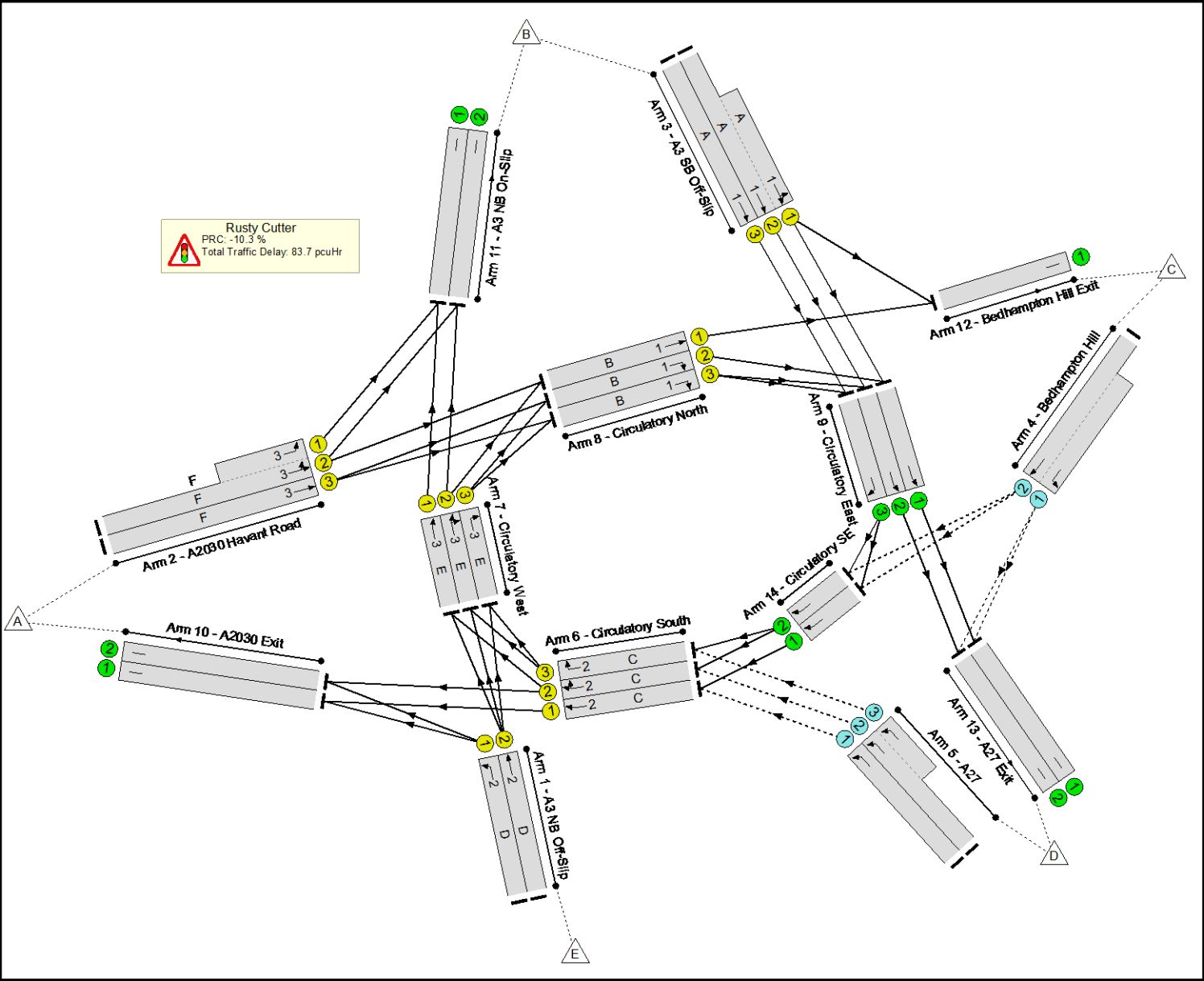
Stage	1	2
Duration	13	35
Change Point	30	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	99.3%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	99.3%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	77	1950	609	12.6%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	605	1950	609	99.3%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	698	1950:1950	411+321	95.4 : 95.4%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	264	1950	427	61.9%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	19	-	1033	1950:1950	577+576	89.6 : 89.6%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	19	-	324	1950	609	53.2%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	829	1950:1950	854+893	46.7 : 48.1%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	353	1950	1058	33.4%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1180	1950:1950	917+902	64.4 : 65.4%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	676	1950	975	69.3%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	952	1950	975	97.6%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	628	1950	975	64.4%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	632	1950	1097	57.6%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	1044	1950	1097	95.2%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	186	1950	1097	17.0%
8/1	Circulatory North Ahead	U	1	N/A	B		1	31	-	853	1950	975	87.5%

Full Input Data And Results

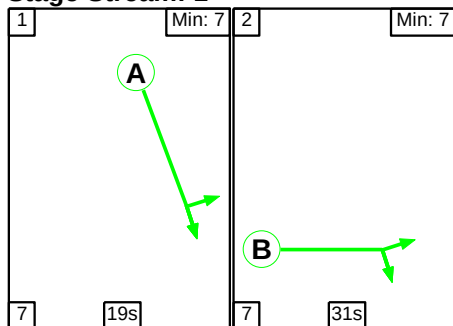
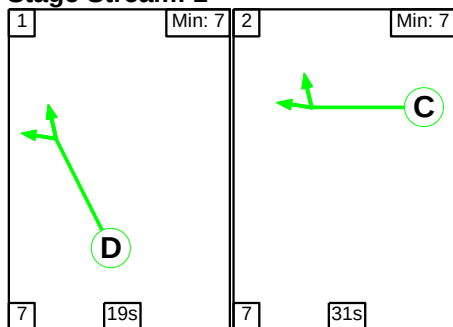
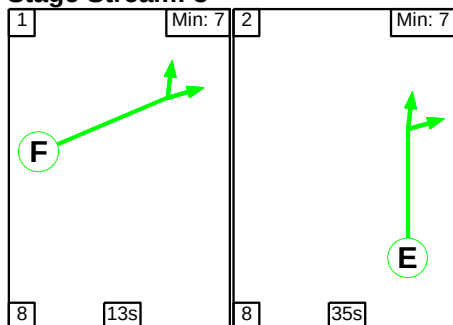
8/2	Circulatory North Right	U	1	N/A	B		1	31	-	225	1950	975	23.1%
8/3	Circulatory North Right	U	1	N/A	B		1	31	-	225	1950	975	23.1%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	645	1950	1950	33.1%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	742	1950	1950	38.1%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	324	1950	1950	16.6%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	715	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	361	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	938	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	583	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	949	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	860	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	957	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	323	1950	1950	16.6%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	400	1950	1950	20.5%

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	-	-	4371	0	0	32.4	51.3	0.0	83.7	-	-	-	-
Rusty Cutter	-	-	4371	0	0	32.4	51.3	0.0	83.7	-	-	-	-
1/1	77	77	-	-	-	0.3	0.1	-	0.4	19.2	1.0	0.1	1.0
1/2	605	605	-	-	-	3.7	11.3	-	14.9	88.9	10.6	11.3	21.8
2/2+2/1	698	698	-	-	-	4.6	7.3	-	11.9	61.3	6.8	7.3	14.0
2/3	264	264	-	-	-	1.7	0.8	-	2.5	33.6	4.2	0.8	5.0
3/2+3/1	1033	1033	-	-	-	5.9	4.0	-	9.9	34.6	8.5	4.0	12.5
3/3	324	324	-	-	-	1.6	0.6	-	2.2	24.4	4.7	0.6	5.2
4/2+4/1	829	829	1658	0	0	0.7	0.5	-	1.1	4.9	2.8	0.5	3.2
5/1	353	353	353	0	0	0.0	0.3	-	0.3	2.6	0.0	0.3	0.3
5/2+5/3	1180	1180	2360	0	0	0.0	0.9	-	0.9	2.8	1.3	0.9	2.2
6/1	676	676	-	-	-	2.7	1.1	-	3.8	20.4	10.0	1.1	11.1
6/2	952	952	-	-	-	4.6	10.7	-	15.3	57.8	16.5	10.7	27.2
6/3	628	628	-	-	-	2.0	0.9	-	2.9	16.7	8.2	0.9	9.1
7/1	632	632	-	-	-	0.2	0.7	-	0.9	4.9	0.5	0.7	1.2
7/2	1044	1044	-	-	-	3.1	7.7	-	10.8	37.2	18.0	7.7	25.7
7/3	186	186	-	-	-	0.6	0.1	-	0.7	13.0	3.3	0.1	3.4
8/1	853	853	-	-	-	0.6	3.3	-	3.9	16.4	3.3	3.3	6.6
8/2	225	225	-	-	-	0.1	0.1	-	0.2	3.5	0.1	0.1	0.3
8/3	225	225	-	-	-	0.1	0.1	-	0.2	3.5	0.1	0.1	0.3
9/1	645	645	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
9/2	742	742	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/3	324	324	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	715	715	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	361	361	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	938	938	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

11/2	583	583	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	949	949	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	860	860	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	957	957	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	323	323	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	400	400	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 0.4 Total Delay for Signalled Lanes (pcuHr): 16.45 Cycle Time (s): 64 C1 Stream: 2 PRC for Signalled Lanes (%): -10.3 Total Delay for Signalled Lanes (pcuHr): 37.37 Cycle Time (s): 64 C1 Stream: 3 PRC for Signalled Lanes (%): -6.0 Total Delay for Signalled Lanes (pcuHr): 26.68 Cycle Time (s): 64 PRC Over All Lanes (%): -10.3 Total Delay Over All Lanes(pcuHr): 83.69													

Stage Sequence Diagram**Stage Stream: 1****Stage Stream: 2****Stage Stream: 3****Stage Timings****Stage Stream: 1**

Stage	1	2
Duration	19	31
Change Point	13	39

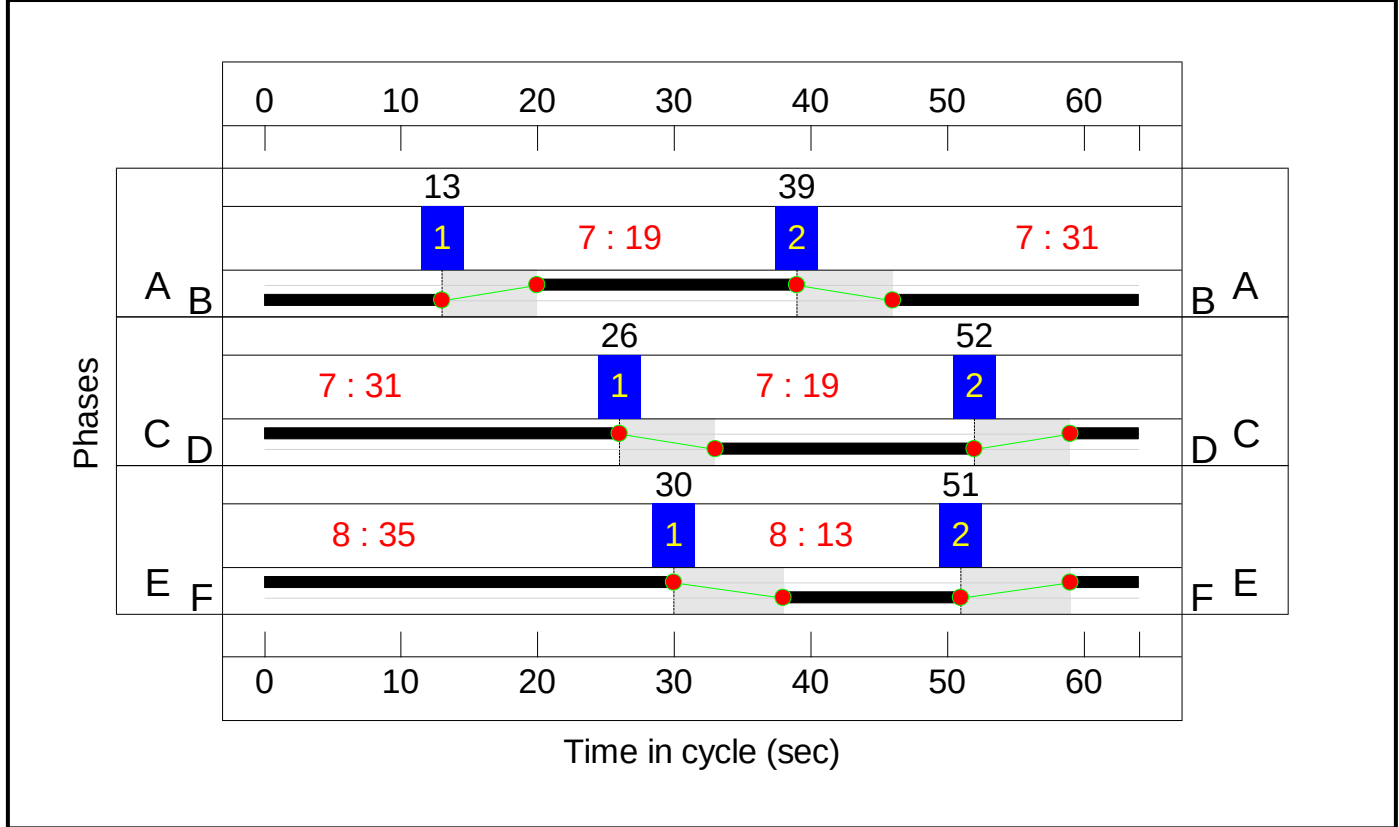
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	26	52

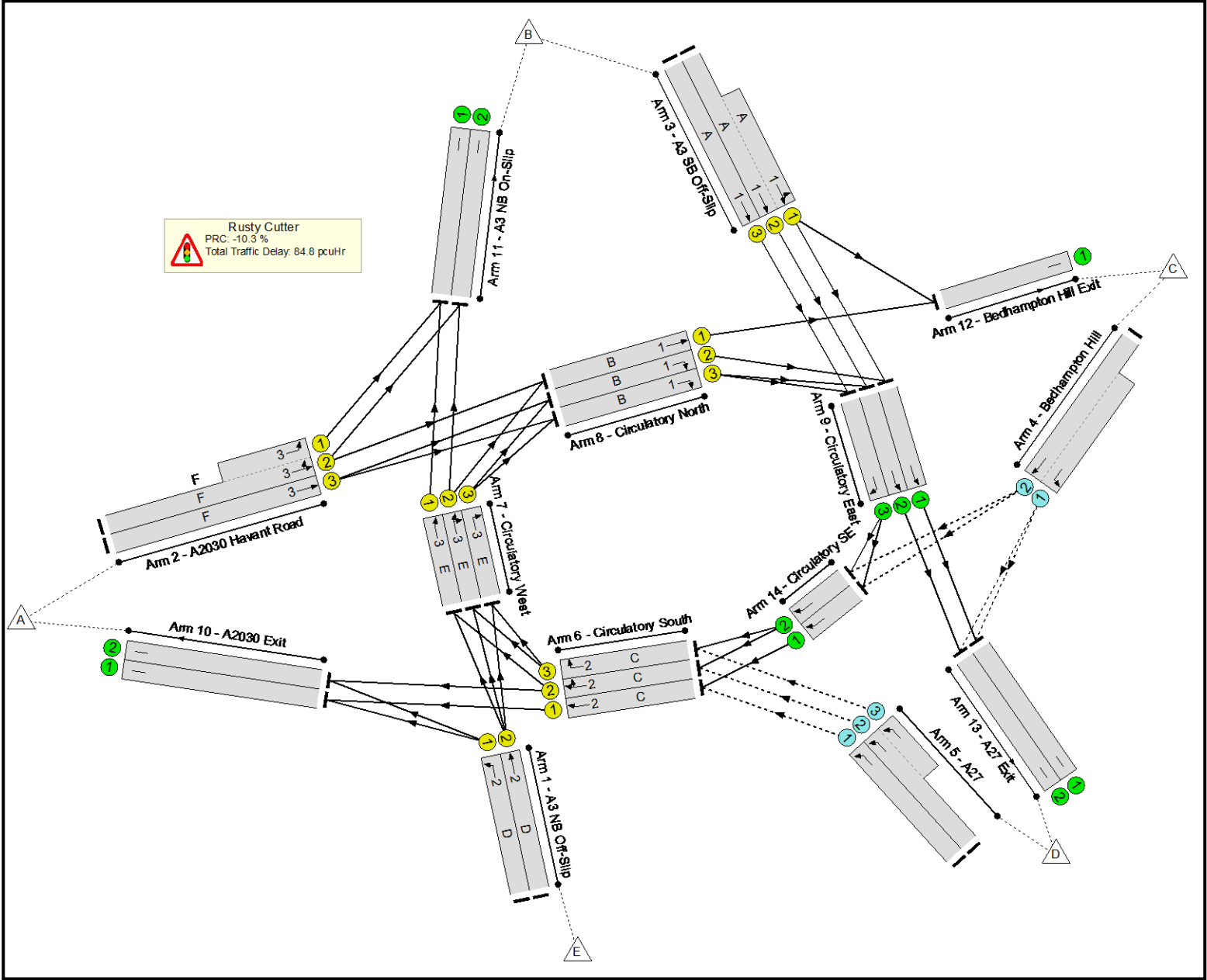
Stage Stream: 3

Stage	1	2
Duration	13	35
Change Point	30	51

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	99.3%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	99.3%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	79	1950	609	13.0%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	605	1950	609	99.3%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	700	1950:1950	411+323	95.4 : 95.4%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	268	1950	427	62.8%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	19	-	1035	1950:1950	577+576	89.8 : 89.8%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	19	-	327	1950	609	53.7%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	831	1950:1950	851+891	46.9 : 48.5%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	355	1950	1057	33.6%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1184	1950:1950	915+901	64.7 : 65.7%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	680	1950	975	69.7%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	955	1950	975	97.9%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	630	1950	975	64.6%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	634	1950	1097	57.8%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	1046	1950	1097	95.4%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	186	1950	1097	17.0%
8/1	Circulatory North Ahead	U	1	N/A	B		1	31	-	853	1950	975	87.5%

Full Input Data And Results

8/2	Circulatory North Right	U	1	N/A	B		1	31	-	227	1950	975	23.3%
8/3	Circulatory North Right	U	1	N/A	B		1	31	-	227	1950	975	23.3%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	648	1950	1950	33.2%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	745	1950	1950	38.2%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	327	1950	1950	16.8%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	720	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	363	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	942	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	949	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	864	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	961	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	325	1950	1950	16.7%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	401	1950	1950	20.6%

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	-	-	4385	0	0	32.6	52.2	0.0	84.8	-	-	-	-
Rusty Cutter	-	-	4385	0	0	32.6	52.2	0.0	84.8	-	-	-	-
1/1	79	79	-	-	-	0.3	0.1	-	0.4	19.2	1.0	0.1	1.1
1/2	605	605	-	-	-	3.7	11.3	-	14.9	88.9	10.6	11.3	21.8
2/2+2/1	700	700	-	-	-	4.6	7.3	-	11.9	61.3	6.8	7.3	14.0
2/3	268	268	-	-	-	1.7	0.8	-	2.5	33.9	4.2	0.8	5.1
3/2+3/1	1035	1035	-	-	-	5.9	4.1	-	10.0	34.9	8.5	4.1	12.6
3/3	327	327	-	-	-	1.7	0.6	-	2.2	24.5	4.7	0.6	5.3
4/2+4/1	831	831	1662	0	0	0.7	0.5	-	1.1	4.9	2.8	0.5	3.2
5/1	355	355	355	0	0	0.0	0.3	-	0.3	2.6	0.0	0.3	0.3
5/2+5/3	1184	1184	2368	0	0	0.0	0.9	-	0.9	2.9	1.3	0.9	2.2
6/1	680	680	-	-	-	2.7	1.1	-	3.9	20.5	10.1	1.1	11.2
6/2	955	955	-	-	-	4.6	11.2	-	15.8	59.7	16.5	11.2	27.8
6/3	630	630	-	-	-	2.0	0.9	-	2.9	16.8	8.2	0.9	9.1
7/1	634	634	-	-	-	0.2	0.7	-	0.9	5.0	0.5	0.7	1.2
7/2	1046	1046	-	-	-	3.1	7.9	-	11.0	37.9	18.1	7.9	25.9
7/3	186	186	-	-	-	0.6	0.1	-	0.7	13.0	3.3	0.1	3.4
8/1	853	853	-	-	-	0.6	3.3	-	3.9	16.4	3.3	3.3	6.6
8/2	227	227	-	-	-	0.1	0.2	-	0.2	3.5	0.1	0.2	0.3
8/3	227	227	-	-	-	0.1	0.2	-	0.2	3.5	0.1	0.2	0.3
9/1	648	648	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
9/2	745	745	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/3	327	327	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	720	720	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	363	363	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	942	942	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

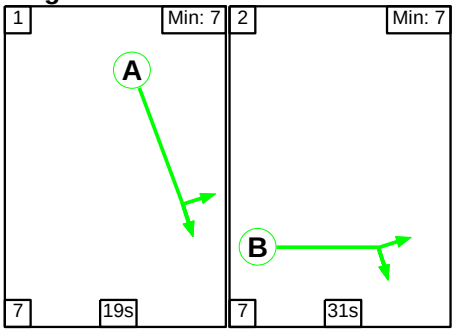
Full Input Data And Results

11/2	585	585	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	949	949	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	864	864	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	961	961	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	325	325	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
14/2	401	401	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
C1 Stream: 1 PRC for Signalled Lanes (%): 0.2 C1 Stream: 2 PRC for Signalled Lanes (%): -10.3 C1 Stream: 3 PRC for Signalled Lanes (%): -6.0 PRC Over All Lanes (%): -10.3 Total Delay for Signalled Lanes (pcuHr): 16.57 Total Delay for Signalled Lanes (pcuHr): 38.00 Total Delay for Signalled Lanes (pcuHr): 26.99 Total Delay Over All Lanes(pcuHr): 84.78 Cycle Time (s): 64 Cycle Time (s): 64 Cycle Time (s): 64													

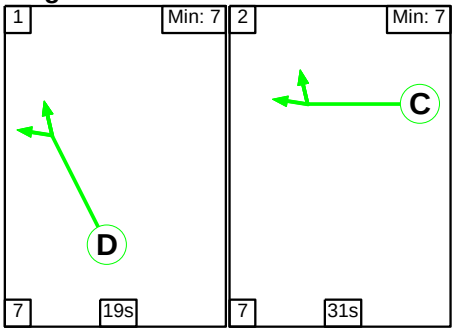
Full Input Data And Results
Scenario 7: '2028 PM Peak Plus Com Dev Plus Prop Dev' (FG7: '2028 PM Peak Plus Com Dev Plus Prop Dev',
Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

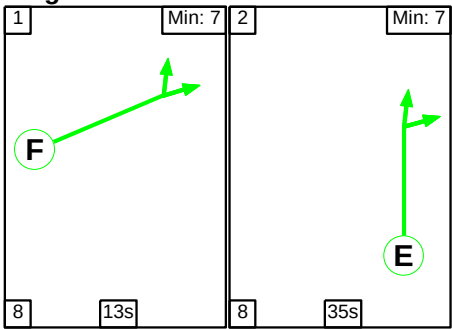
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	19	31
Change Point	13	39

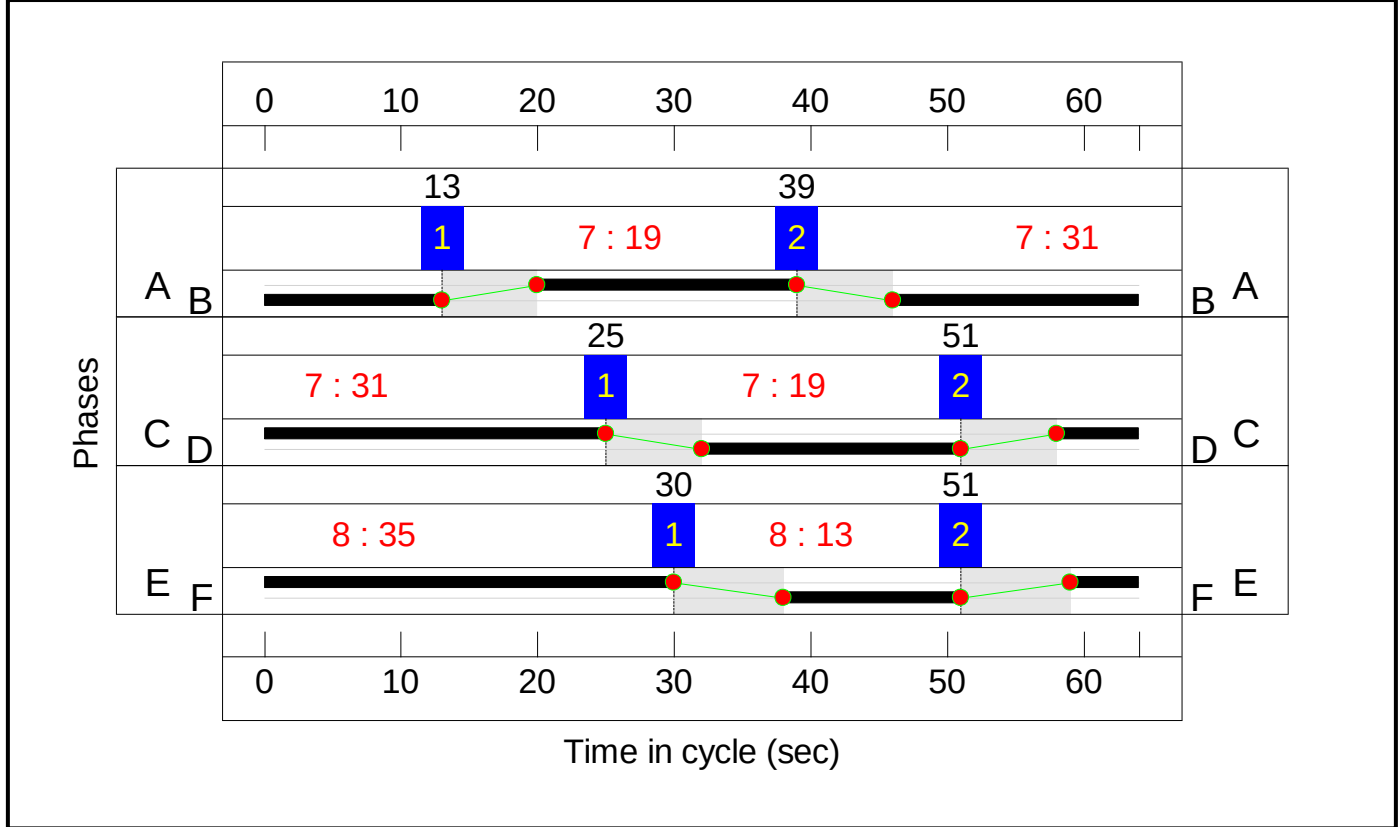
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	25	51

Stage Stream: 3

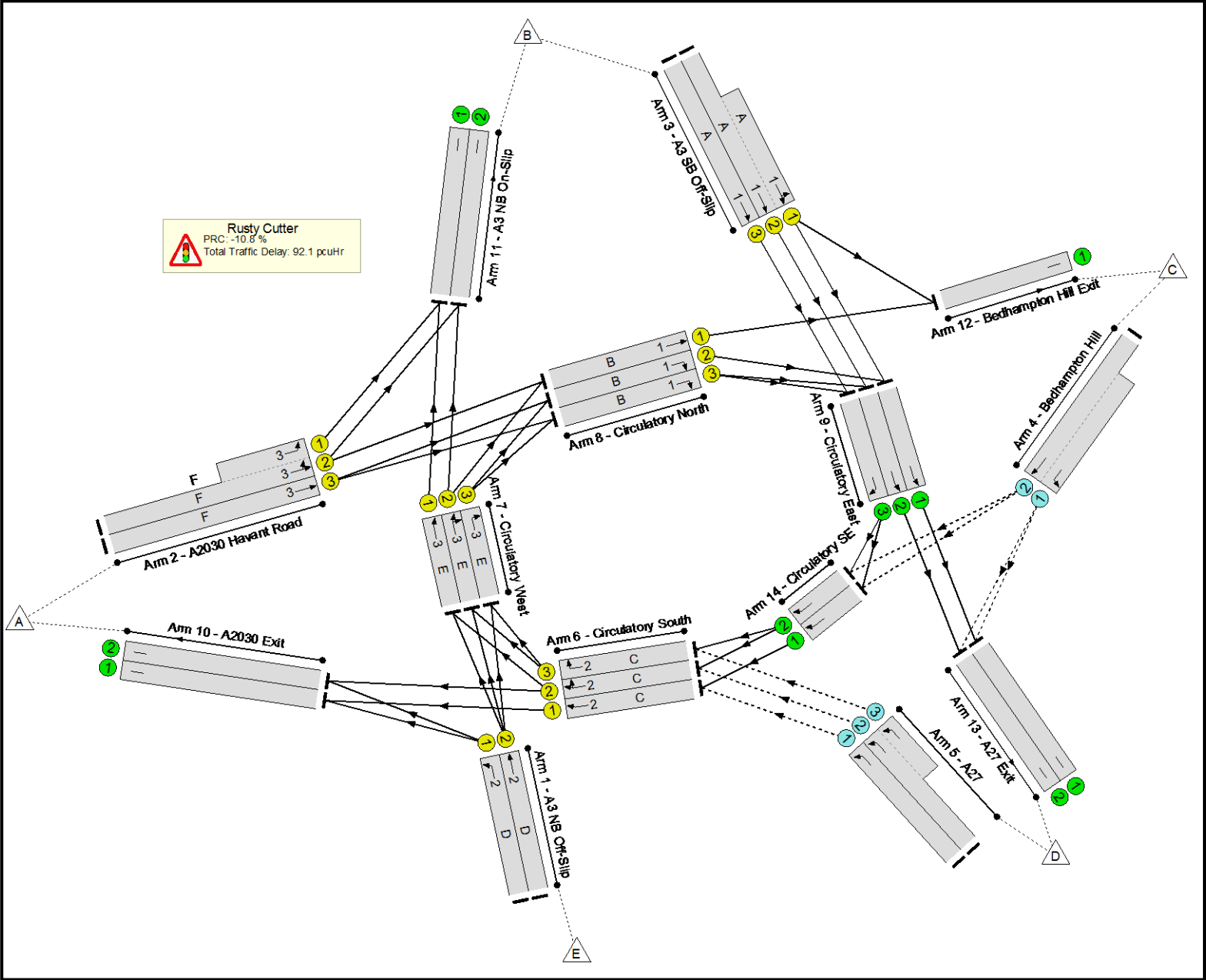
Stage	1	2
Duration	13	35
Change Point	30	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	99.7%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	99.7%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	117	1950	609	19.2%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	605	1950	609	99.3%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	722	1950:1950	411+336	96.7 : 96.7%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	305	1950	427	71.5%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	19	-	1035	1950:1950	576+577	89.8 : 89.8%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	19	-	354	1950	609	58.1%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	836	1950:1950	832+874	48.6 : 49.5%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	377	1950	1051	35.9%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1184	1950:1950	903+888	65.6 : 66.7%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	717	1950	975	73.5%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	972	1950	975	99.7%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	630	1950	975	64.6%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	634	1950	1097	57.8%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	1046	1950	1097	95.4%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	186	1950	1097	17.0%
8/1	Circulatory North Ahead	U	1	N/A	B		1	31	-	858	1950	975	88.0%

Full Input Data And Results

8/2	Circulatory North Right	U	1	N/A	B		1	31	-	246	1950	975	25.2%
8/3	Circulatory North Right	U	1	N/A	B		1	31	-	245	1950	975	25.1%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	668	1950	1950	34.3%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	762	1950	1950	39.1%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	354	1950	1950	18.2%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	776	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	959	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	954	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	884	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	978	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	340	1950	1950	17.4%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	418	1950	1950	21.4%

Full Input Data And Results

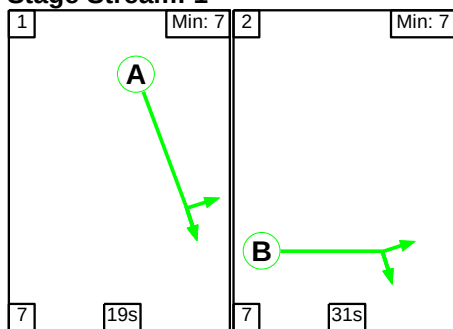
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	4417	0	0	33.9	58.3	0.0	92.1	-	-	-	-
Rusty Cutter	-	-	4417	0	0	33.9	58.3	0.0	92.1	-	-	-	-
1/1	117	117	-	-	-	0.5	0.1	-	0.6	19.8	1.5	0.1	1.6
1/2	605	605	-	-	-	3.7	11.3	-	14.9	88.9	10.6	11.3	21.8
2/2+2/1	722	722	-	-	-	4.8	8.6	-	13.5	67.1	6.8	8.6	15.5
2/3	305	305	-	-	-	2.0	1.2	-	3.2	37.7	5.0	1.2	6.2
3/2+3/1	1035	1035	-	-	-	5.9	4.1	-	10.0	34.9	8.5	4.1	12.6
3/3	354	354	-	-	-	1.8	0.7	-	2.5	25.5	5.2	0.7	5.9
4/2+4/1	836	836	1672	0	0	0.7	0.5	-	1.2	5.0	2.8	0.5	3.3
5/1	377	377	377	0	0	0.0	0.3	-	0.3	2.7	0.0	0.3	0.3
5/2+5/3	1184	1184	2368	0	0	0.0	1.0	-	1.0	3.0	1.6	1.0	2.6
6/1	717	717	-	-	-	2.9	1.4	-	4.3	21.6	10.9	1.4	12.3
6/2	972	972	-	-	-	4.7	14.9	-	19.6	72.5	17.1	14.9	31.9
6/3	630	630	-	-	-	2.0	0.9	-	2.9	16.7	8.2	0.9	9.1
7/1	634	634	-	-	-	0.1	0.7	-	0.8	4.7	0.4	0.7	1.1
7/2	1046	1046	-	-	-	3.3	7.9	-	11.2	38.5	18.1	7.9	26.0
7/3	186	186	-	-	-	0.6	0.1	-	0.7	14.0	3.3	0.1	3.4
8/1	858	858	-	-	-	0.5	3.5	-	4.0	16.8	3.8	3.5	7.3
8/2	246	246	-	-	-	0.1	0.2	-	0.2	3.5	0.1	0.2	0.3
8/3	245	245	-	-	-	0.1	0.2	-	0.2	3.5	0.1	0.2	0.3
9/1	668	668	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
9/2	762	762	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/3	354	354	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	776	776	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	959	959	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

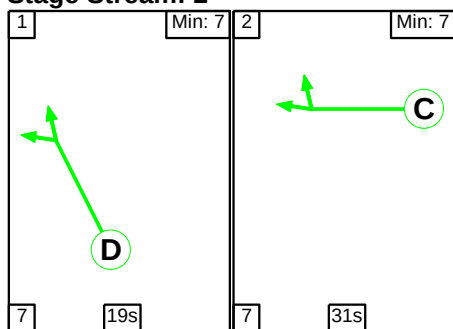
[illegible]

Stage Sequence Diagram

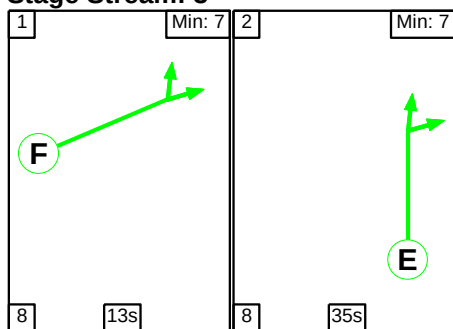
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	19	31
Change Point	13	39

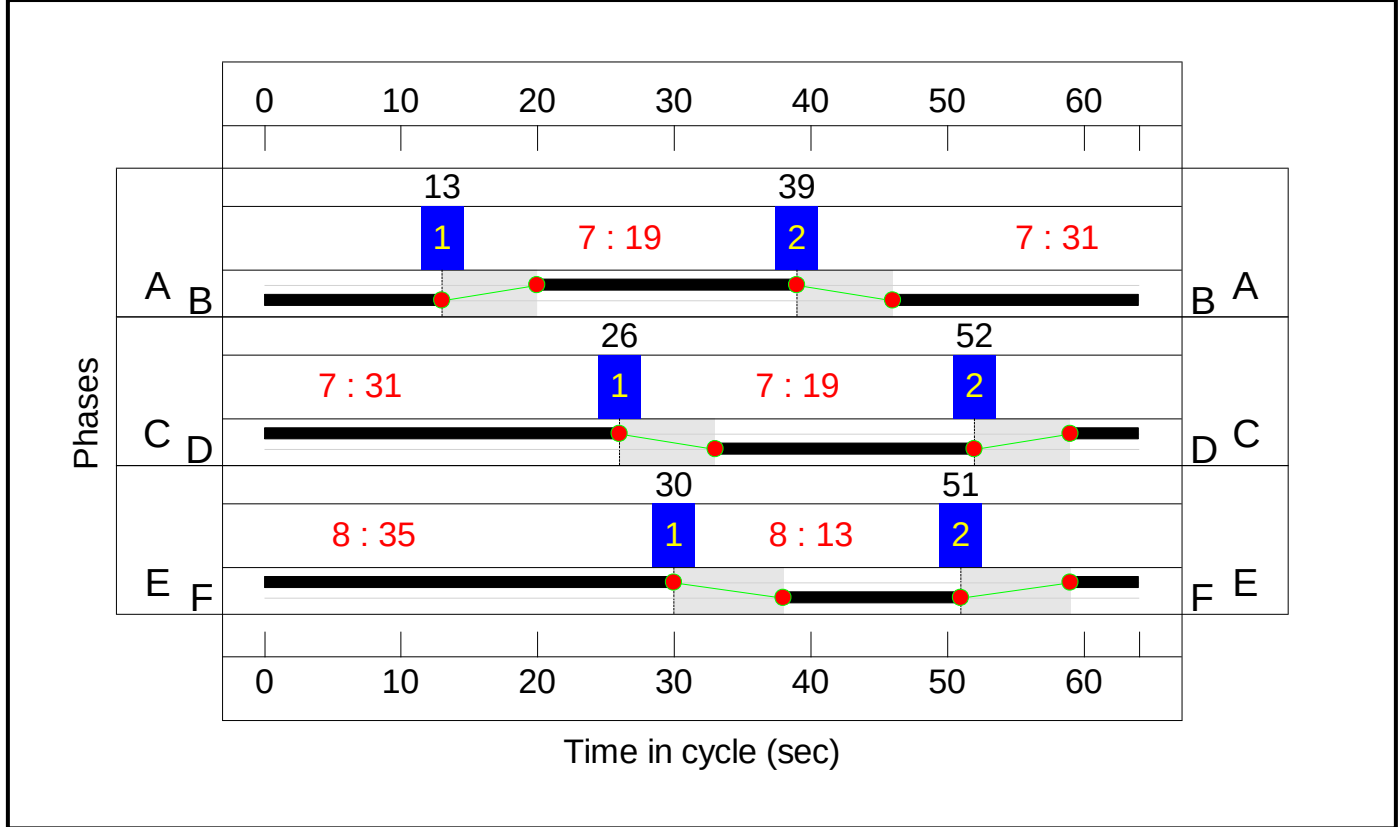
Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	26	52

Stage Stream: 3

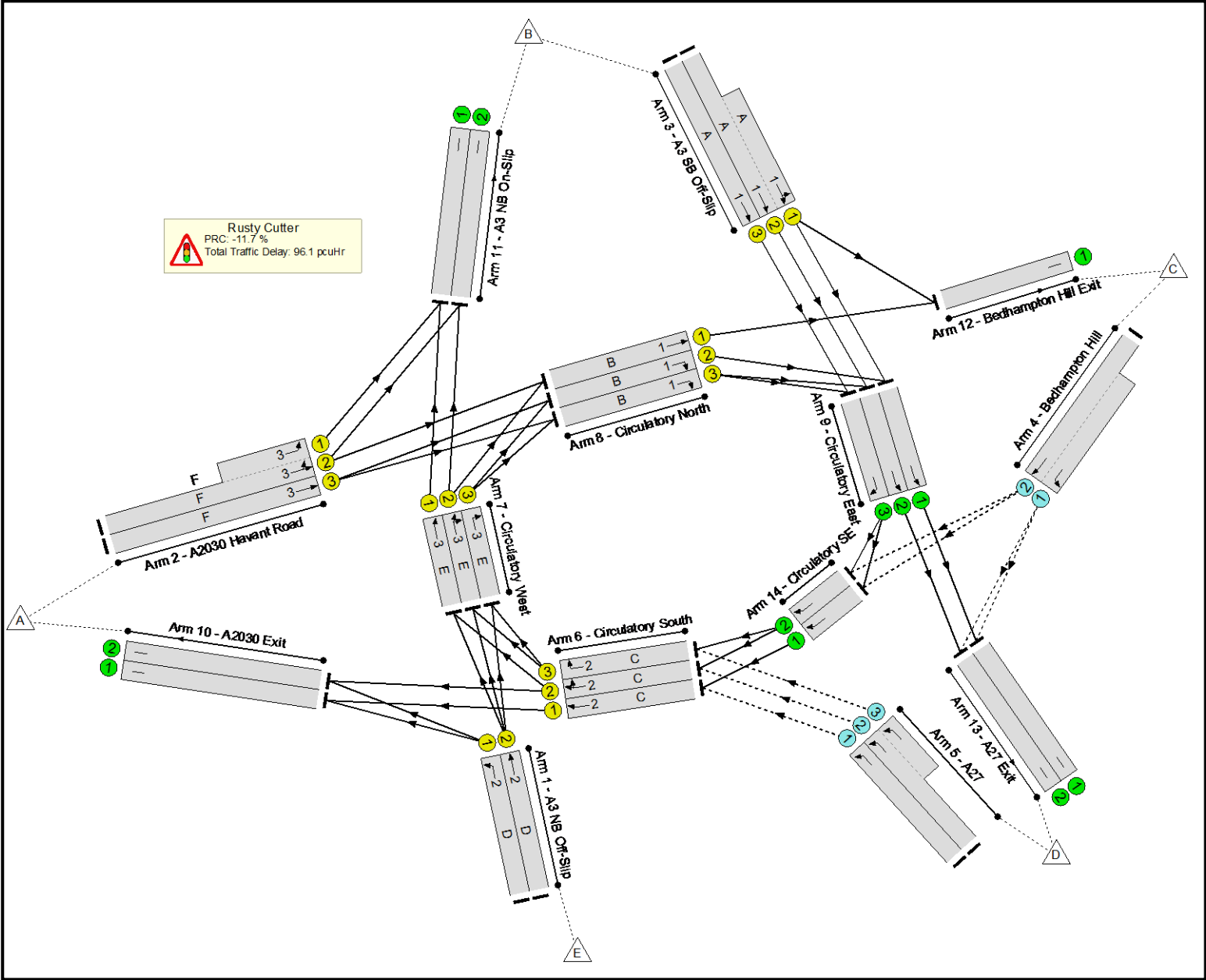
Stage	1	2
Duration	13	35
Change Point	30	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Full Input Data And 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	-	-		-	-	-	-	-	-	100.5%
Rusty Cutter	-	-	N/A	-	-		-	-	-	-	-	-	100.5%
1/1	A3 NB Off-Slip Left	U	2	N/A	D		1	19	-	117	1950	609	19.2%
1/2	A3 NB Off-Slip Ahead	U	2	N/A	D		1	19	-	605	1950	609	99.3%
2/2+2/1	A2030 Havant Road Ahead Left	U	3	N/A	F		1	13	-	722	1950:1950	411+336	96.7 : 96.7%
2/3	A2030 Havant Road Ahead	U	3	N/A	F		1	13	-	305	1950	427	71.5%
3/2+3/1	A3 SB Off-Slip Ahead Left	U	1	N/A	A		1	19	-	1045	1950:1950	576+577	90.6 : 90.6%
3/3	A3 SB Off-Slip Ahead	U	1	N/A	A		1	19	-	354	1950	609	58.1%
4/2+4/1	Bedhampton Hill Left Ahead	O	N/A	N/A	-		-	-	-	836	1950:1950	828+870	48.8 : 49.7%
5/1	A27 Left	O	N/A	N/A	-		-	-	-	377	1950	1051	35.9%
5/2+5/3	A27 Left	O	N/A	N/A	-		-	-	-	1201	1950:1950	903+888	66.5 : 67.7%
6/1	Circulatory South Ahead	U	2	N/A	C		1	31	-	717	1950	975	73.5%
6/2	Circulatory South Right Ahead	U	2	N/A	C		1	31	-	980	1950	975	100.5%
6/3	Circulatory South Right	U	2	N/A	C		1	31	-	639	1950	975	65.5%
7/1	Circulatory West Ahead	U	3	N/A	E		1	35	-	642	1950	1097	58.2%
7/2	Circulatory West Right Ahead	U	3	N/A	E		1	35	-	1055	1950	1097	96.2%
7/3	Circulatory West Right	U	3	N/A	E		1	35	-	186	1950	1097	17.0%
8/1	Circulatory North Ahead	U	1	N/A	B		1	31	-	858	1950	975	88.0%

Full Input Data And Results

8/2	Circulatory North Right	U	1	N/A	B		1	31	-	246	1950	975	25.2%
8/3	Circulatory North Right	U	1	N/A	B		1	31	-	245	1950	975	25.1%
9/1	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	673	1950	1950	34.5%
9/2	Circulatory East Ahead	U	N/A	N/A	-		-	-	-	767	1950	1950	39.3%
9/3	Circulatory East Right	U	N/A	N/A	-		-	-	-	354	1950	1950	18.2%
10/1	A2030 Exit	U	N/A	N/A	-		-	-	-	776	Inf	Inf	0.0%
10/2	A2030 Exit	U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
11/1	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	967	Inf	Inf	0.0%
11/2	A3 NB On-Slip	U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%
12/1	Bedhampton Hill Exit	U	N/A	N/A	-		-	-	-	954	Inf	Inf	0.0%
13/1	A27 Exit	U	N/A	N/A	-		-	-	-	889	Inf	Inf	0.0%
13/2	A27 Exit	U	N/A	N/A	-		-	-	-	983	Inf	Inf	0.0%
14/1	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	340	1950	1950	17.4%
14/2	Circulatory SE Ahead	U	N/A	N/A	-		-	-	-	418	1950	1950	21.4%

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	-	-	4451	0	0	34.2	61.8	0.0	96.1	-	-	-	-
Rusty Cutter	-	-	4451	0	0	34.2	61.8	0.0	96.1	-	-	-	-
1/1	117	117	-	-	-	0.5	0.1	-	0.6	19.8	1.5	0.1	1.6
1/2	605	605	-	-	-	3.7	11.3	-	14.9	88.9	10.6	11.3	21.8
2/2+2/1	722	722	-	-	-	4.8	8.6	-	13.5	67.1	6.8	8.6	15.5
2/3	305	305	-	-	-	2.0	1.2	-	3.2	37.7	5.0	1.2	6.2
3/2+3/1	1045	1045	-	-	-	6.0	4.5	-	10.5	36.1	8.7	4.5	13.2
3/3	354	354	-	-	-	1.8	0.7	-	2.5	25.5	5.2	0.7	5.9
4/2+4/1	836	836	1672	0	0	0.7	0.5	-	1.2	5.1	2.9	0.5	3.4
5/1	377	377	377	0	0	0.0	0.3	-	0.3	2.7	0.0	0.3	0.3
5/2+5/3	1201	1201	2402	0	0	0.0	1.0	-	1.0	3.1	1.7	1.0	2.7
6/1	717	717	-	-	-	3.0	1.4	-	4.3	21.8	10.9	1.4	12.3
6/2	980	975	-	-	-	5.0	17.0	-	21.9	80.5	17.5	17.0	34.5
6/3	639	639	-	-	-	2.1	0.9	-	3.0	16.9	8.3	0.9	9.3
7/1	638	638	-	-	-	0.3	0.7	-	1.0	5.4	0.7	0.7	1.3
7/2	1055	1055	-	-	-	3.2	8.9	-	12.0	41.0	18.2	8.9	27.1
7/3	186	186	-	-	-	0.6	0.1	-	0.7	13.0	3.3	0.1	3.4
8/1	858	858	-	-	-	0.6	3.5	-	4.0	16.9	3.8	3.5	7.3
8/2	246	246	-	-	-	0.1	0.2	-	0.2	3.5	0.1	0.2	0.3
8/3	245	245	-	-	-	0.1	0.2	-	0.2	3.5	0.1	0.2	0.3
9/1	673	673	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
9/2	767	767	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/3	354	354	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/1	776	776	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	398	398	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	963	963	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

[illegible]

Appendix E

ASSESSMENT OF FORMAL PEDESTRIAN CROSSING

PMV2 Calculation

SURVEY RESULTS

Hour	Time	Pedestrians	Vehicles	PV ² x 10 ⁸
1	07:00 to 08:00	38	1112	0.47
2	08:00 to 09:00	58	1172	0.79
3	09:00 to 10:00	35	954	0.31
4	10:00 to 11:00	25	949	0.22
5	11:00 to 12:00		936	0.00
6	12:00 to 13:00		980	0.00
7	13:00 to 14:00		1003	0.00
8	14:00 to 15:00		1063	0.00
9	15:00 to 16:00	55	1143	0.71
10	16:00 to 17:00	48	1259	0.76
11	17:00 to 18:00	42	1094	0.51
12	18:00 to 19:00	24	903	0.20

TOTALS 323.70224 12569

4 busiest hours in descending order

1	0.79
2	0.76
3	0.71
4	0.51

Average value of PV ² 0.69 x 10 ⁸

PV2	x 10 to the 8	top
46557604	0.465576	0.465600
79445378	0.794454	0.7945
31441814	0.314418	0.314400
22238941	0.222389	0.222400
0	0.000000	0.0000
0	0.000000	0.000000
0	0.000000	0.000000
0	0.000000	0.000000
71431104	0.714311	0.7143
75635096	0.756351	0.7564
50586537	0.505865	0.505900
19912495	0.199125	0.199100

ATC Survey Results	
Eastbound	Westbound
637	475
683	489
504	450
497	453
479	457
498	481
511	492
525	538
558	585
571	687
445	649
432	471

Pedestrian Survey Count
9
11
13
8

General Resi							
Hour	Cyclists			Pedestrians			SUB-TOTAL
	Arr	Dep	Trips	Arr	Dep	Trips	
07:00	0.004	0.014	6	0.021	0.069	29	35
08:00	0.002	0.015	5	0.036	0.136	55	61
09:00	0.002	0.006	3	0.046	0.057	33	36
10:00	0.002	0.006	3	0.039	0.044	27	29
15:00	0.012	0.007	6	0.132	0.065	63	70
16:00	0.013	0.002	5	0.087	0.038	40	45
17:00	0.015	0.011	8	0.074	0.035	35	43
18:00	0.01	0.005	5	0.05	0.036	28	33

Care Home							
Hour	Cyclists			Pedestrians			SUB-TOTAL
	Arr	Dep	Trips	Arr	Dep	Trips	
07:00	0	0	0	0.06	0.023	5	5
08:00	0.008	0.008	1	0.03	0.023	3	4
09:00	0.008	0.008	1	0.038	0.15	11	12
10:00	0	0	0	0.053	0.03	5	5
15:00	0.023	0.023	3	0.015	0.045	4	6
16:00	0	0	0	0.015	0.038	3	3
17:00	0.03	0.023	3	0	0.015	1	4
18:00	0	0	0	0.023	0	1	1
TOTAL			48			344	393

Absolute Total	5%	5% * 4	TOTAL	Percentage likely to use crossing (32%)
40	2	8	48	29
65	3	13	78	47
48	2	10	58	35
34	2	7	41	25
76	4	15	91	55
48	2	10	58	35
48	2	10	57	34
34	2	7	41	24