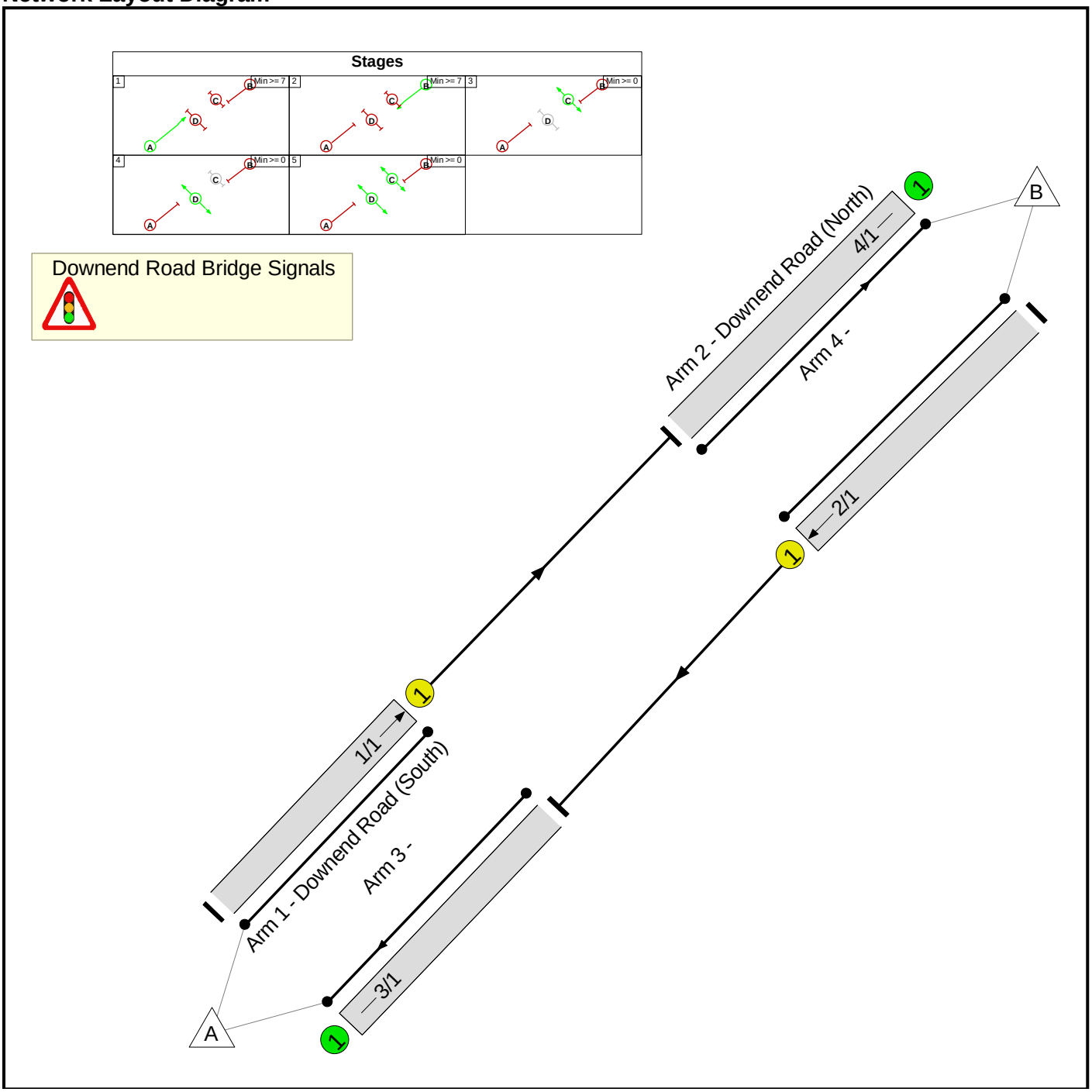
JCT Revised Submission Full Input Data And Results

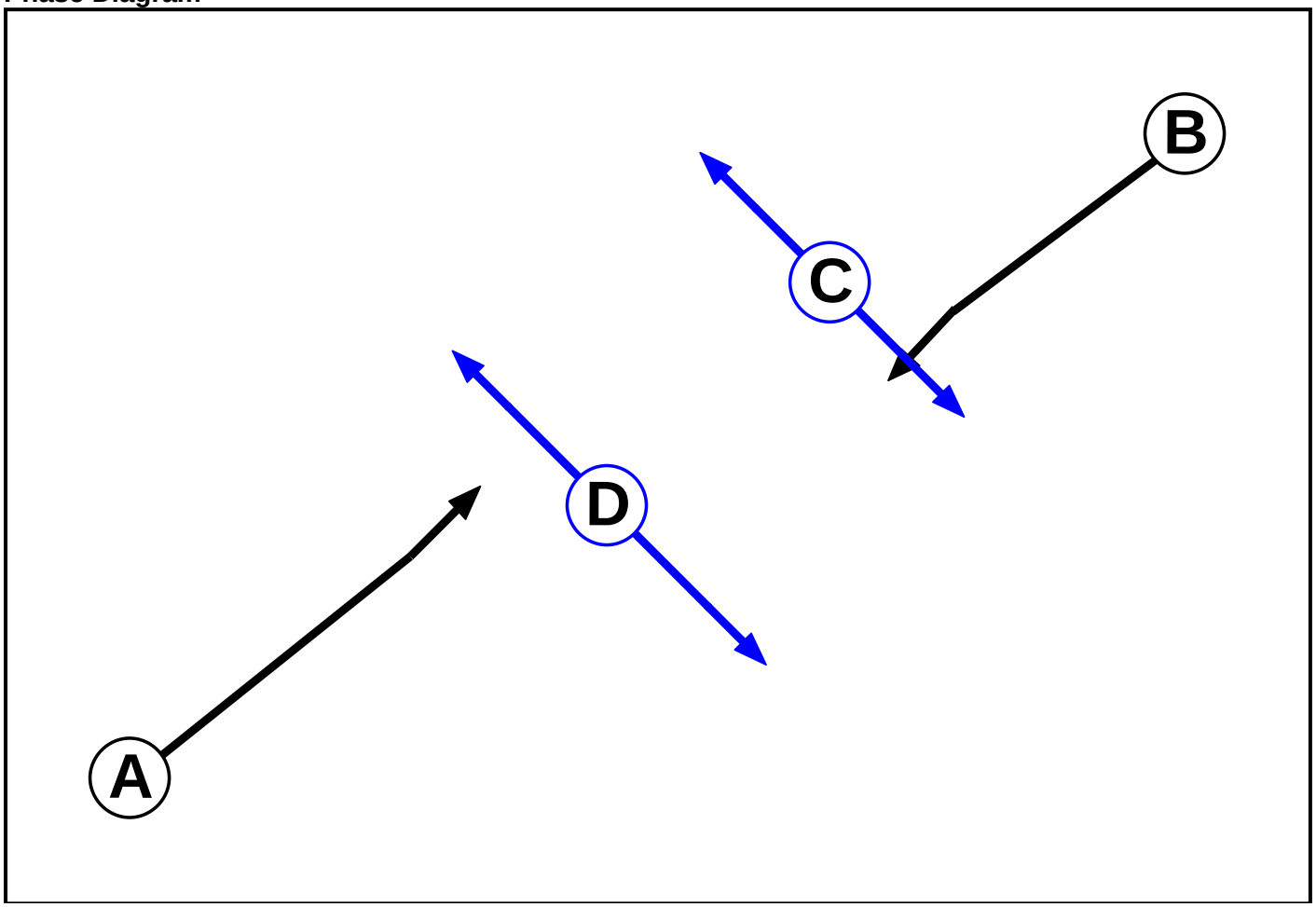
User and Project Details

Project:	**Downend Bridge**
Title:	**Revised Submission**
Location:	Fareham
Client:	i-Transport
Design Layout Ref:	Fareham Signalised Ped Scheme
Date Started:	30/07/21
Date Completed:	30/07/21
Model Assumptions:	Introduction of signal ped crossing on northern and southern arms Traffic flow profile for the 07:30 - 08:30 used as higher than the 7am-8am or the 8am-9am flows Intergreen period of 10 seconds used Optimised cycle times
Checked By:	Tim Wall
Checked By Date:	30/07/21
Additional detail:	
File name:	Downend Bridge RS JCT - Ped Signals N and S.lsg3x
Author:	Jon Wilkinson
Company:	i-Transport
Address:	Grove House, Lutyens Close, Chineham Court, Basingstoke RG24 8AG

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		5	5
D	Pedestrian		5	5

JCT Revised Submission Full Input Data And Results

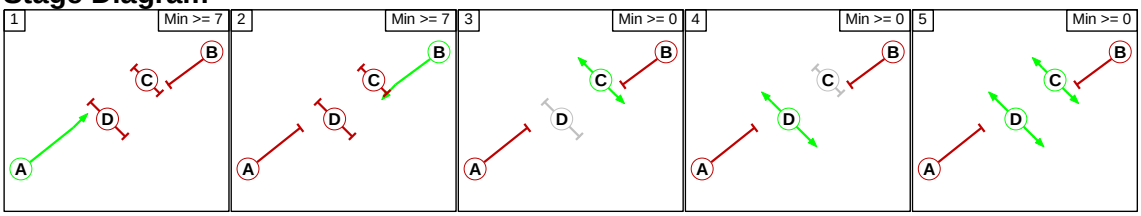
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D
	A		10	9	5
	B	10		5	9
	C	7	7		-
	D	7	7	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

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

JCT Revised Submission Full Input Data And Results

Give-Way Lane Input Data

Junction: Downend Road Bridge Signals
There are no Opposed Lanes in this Junction

JCT Revised Submission Full Input Data And Results

Lane Input Data

Junction: Downend Road Bridge Signals												
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 (Downend Road (South))	U	A	2	3	60.0	Geom	-	3.00	5.00	Y	Arm 4 Ahead	Inf
2/1 (Downend Road (North))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 3 Ahead	Inf
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2026 with Dev AM 07:30-08:30'	07:30	08:30	01:00	

Scenario 1: 'AM Peak CT70 (North Only)' (FG1: '2026 with Dev AM 07:30-08:30', Plan 1: 'North Only')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	498	498
	B	410	0	410
	Tot.	410	498	908

Traffic Lane Flows

Lane	Scenario 1: AM Peak CT70 (North Only)
Junction: Downend Road Bridge Signals	
1/1	498
2/1	410
3/1	410
4/1	498

Lane Saturation Flows

Junction: Downend Road Bridge Signals								
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 (Downend Road (South))	3.00	5.00	Y	Arm 4 Ahead	Inf	100.0 %	1705	1705
2/1 (Downend Road (North))	3.00	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1915	1915
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'AM Peak CT70 (South Only)' (FG1: '2026 with Dev AM 07:30-08:30', Plan 2: 'South Only')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	498	498
	B	410	0	410
	Tot.	410	498	908

Traffic Lane Flows

Lane	Scenario 2: AM Peak CT70 (South Only)
Junction: Downend Road Bridge Signals	
1/1	498
2/1	410
3/1	410
4/1	498

Lane Saturation Flows

Junction: Downend Road Bridge Signals								
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 (Downend Road (South))	3.00	5.00	Y	Arm 4 Ahead	Inf	100.0 %	1705	1705
2/1 (Downend Road (North))	3.00	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1915	1915
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak CT80 (Both Peds)' (FG1: '2026 with Dev AM 07:30-08:30', Plan 3: 'Both Peds')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	498	498
	B	410	0	410
	Tot.	410	498	908

JCT Revised Submission Full Input Data And Results

Traffic Lane Flows

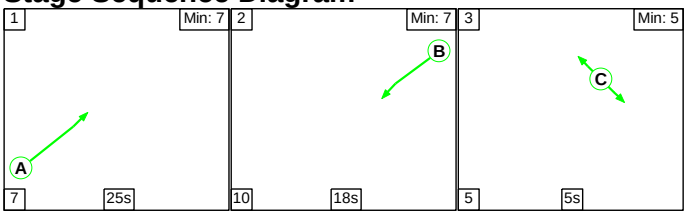
Lane	Scenario 3: AM Peak CT80 (Both Peds)
Junction: Downend Road Bridge Signals	
1/1	498
2/1	410
3/1	410
4/1	498

Lane Saturation Flows

Junction: Downend Road Bridge Signals								
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 (Downend Road (South))	3.00	5.00	Y	Arm 4 Ahead	Inf	100.0 %	1705	1705
2/1 (Downend Road (North))	3.00	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1915	1915
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM Peak CT70 (North Only)' (FG1: '2026 with Dev AM 07:30-08:30', Plan 1: 'North Only')

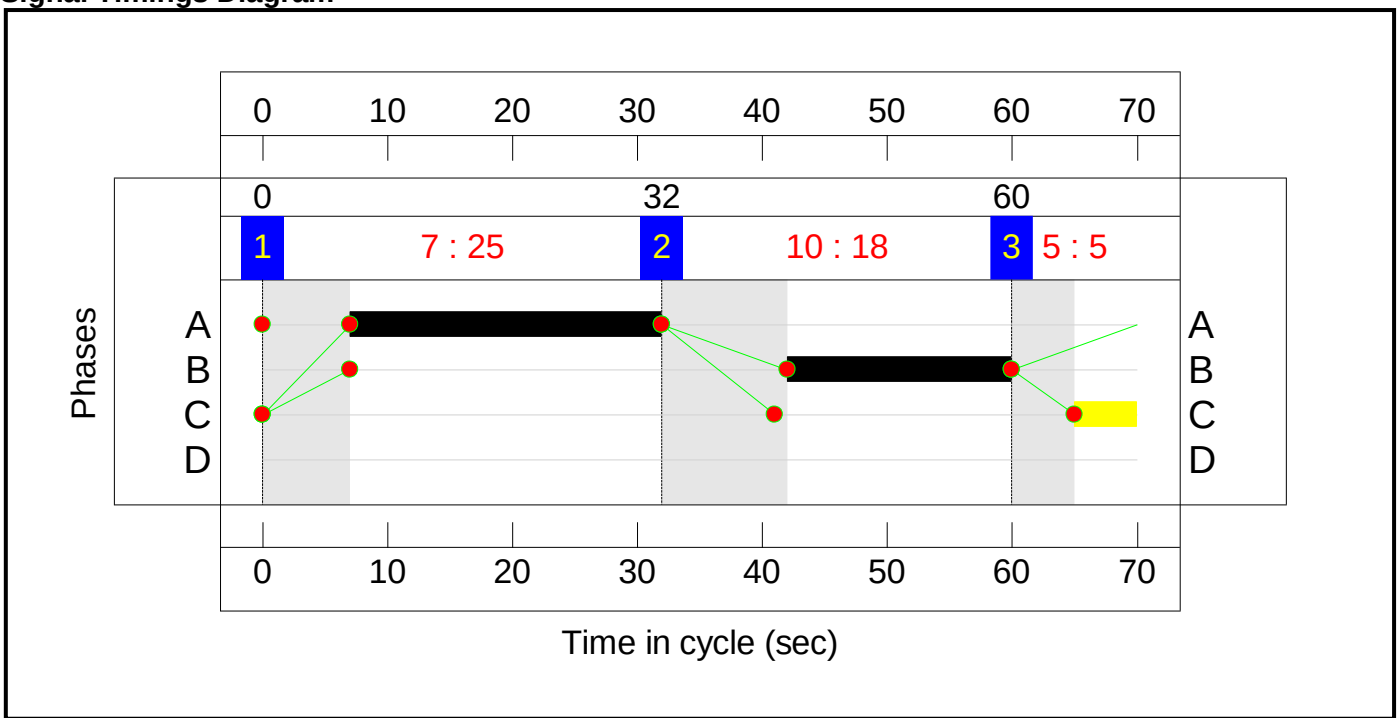
Stage Sequence Diagram



Stage Timings

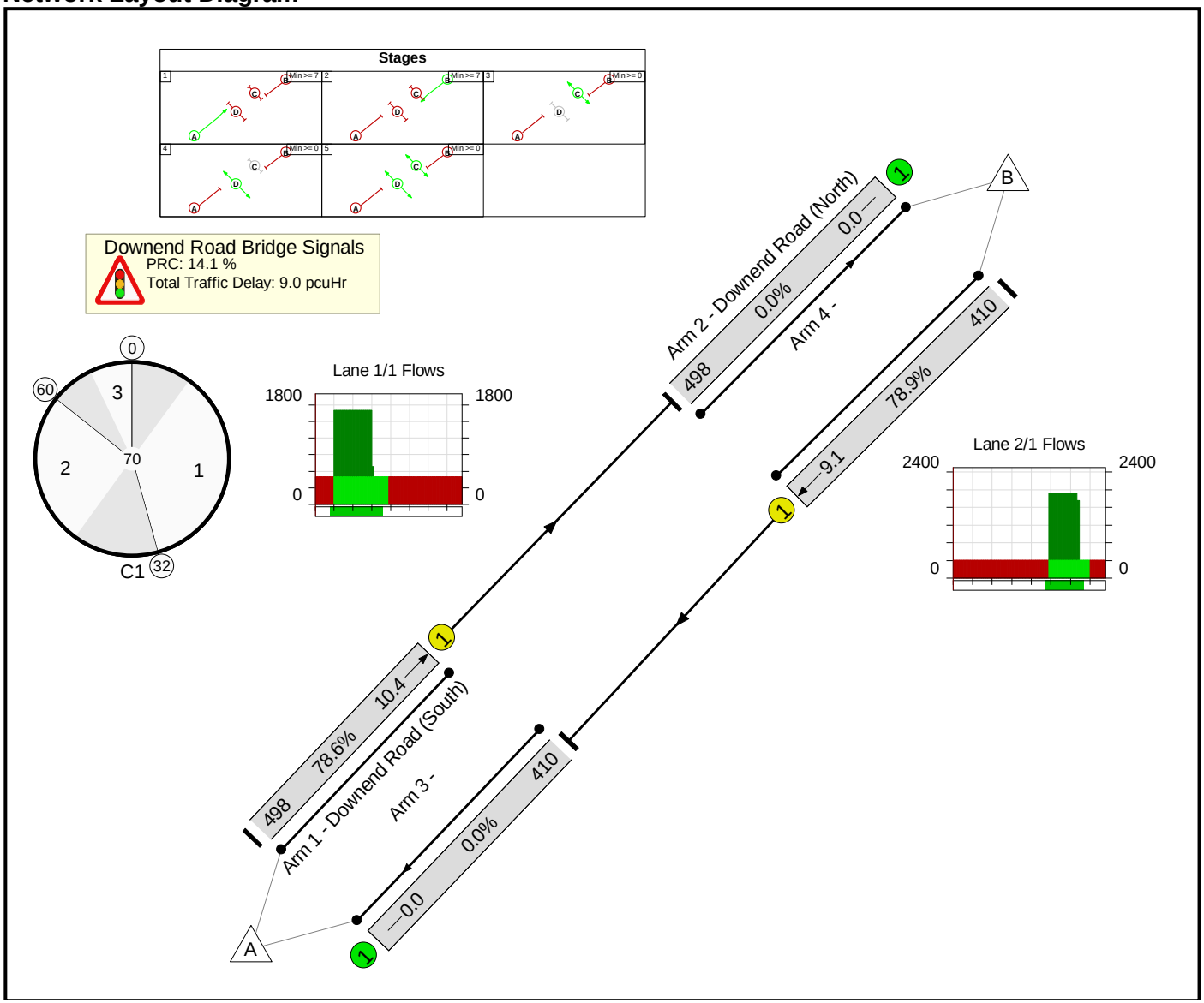
Stage	1	2	3
Duration	25	18	5
Change Point	0	32	60

Signal Timings Diagram



JCT Revised Submission Full Input Data And Results

Network Layout Diagram



JCT Revised Submission 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: Revised Submission	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.9%**
Downend Road Bridge Signals	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.9%**
1/1	Downend Road (South) Ahead	U	N/A	N/A	A		1	25	-	498	1705	633	78.6%
2/1	Downend Road (North) Ahead	U	N/A	N/A	B		1	18	-	410	1915	520	78.9%
3/1		U	N/A	N/A	-		-	-	-	410	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Revised Submission	**-**	**-**	**0**	**0**	**0**	**5.4**	**3.6**	**0.0**	**9.0**	**-**	**-**	**-**	**-**
Downend Road Bridge Signals	**-**	**-**	**0**	**0**	**0**	**5.4**	**3.6**	**0.0**	**9.0**	**-**	**-**	**-**	**-**
1/1	498	498	-	-	-	2.7	1.8	-	4.5	32.5	8.6	1.8	10.4
2/1	410	410	-	-	-	2.7	1.8	-	4.5	39.5	7.3	1.8	9.1
3/1	410	410	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 14.1 Total Delay for Signalled Lanes (pcuHr): 9.00 Cycle Time (s): 70

PRC Over All Lanes (%): 14.1 Total Delay Over All Lanes(pcuHr): 9.00

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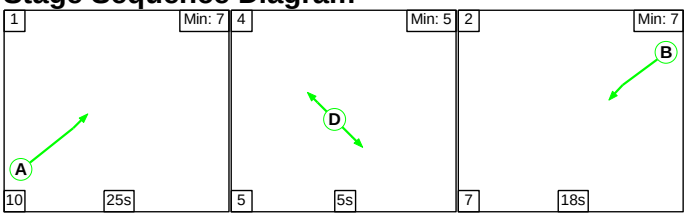
Scenario 2: 'AM Peak CT70 (South Only)' (FG1: '2026 with Dev AM 07:30-08:30', Plan 2: 'South Only')

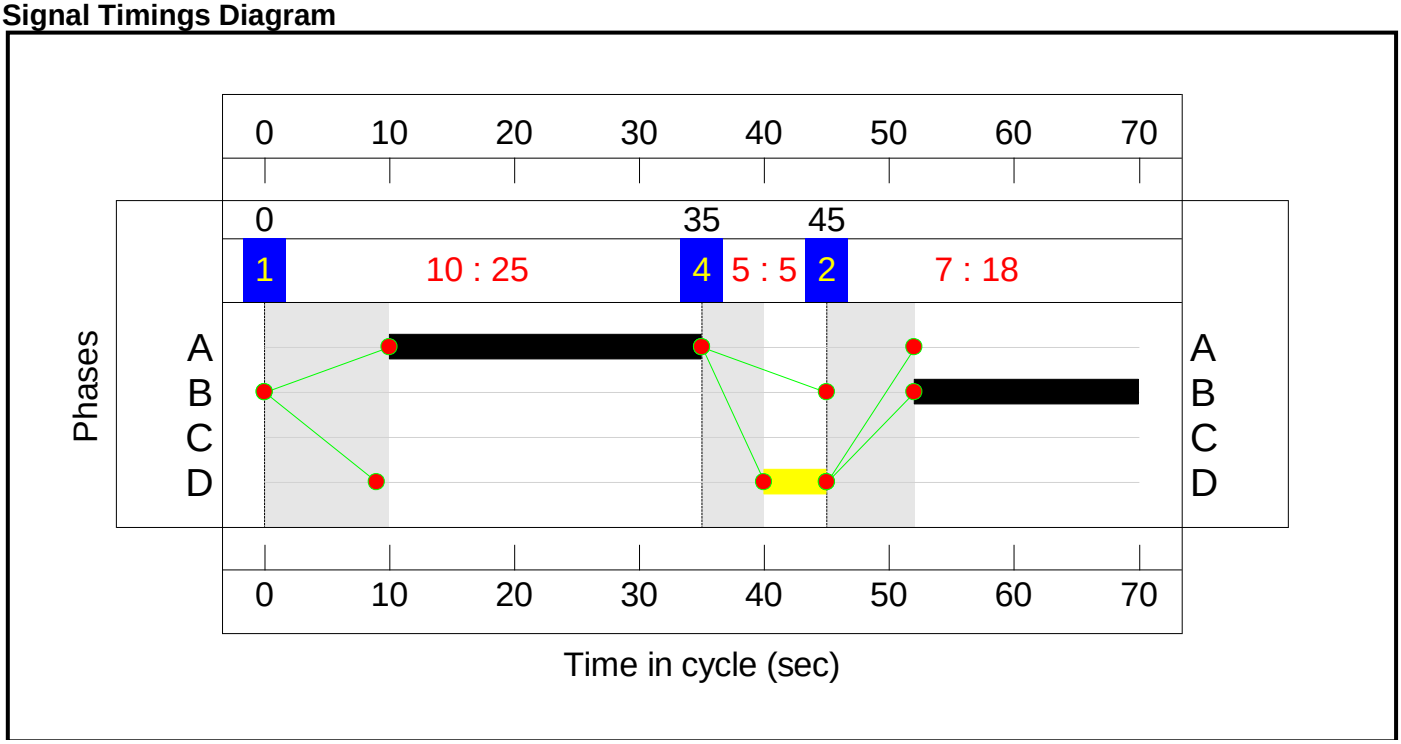
Stage Sequence Diagram



Stage Timings

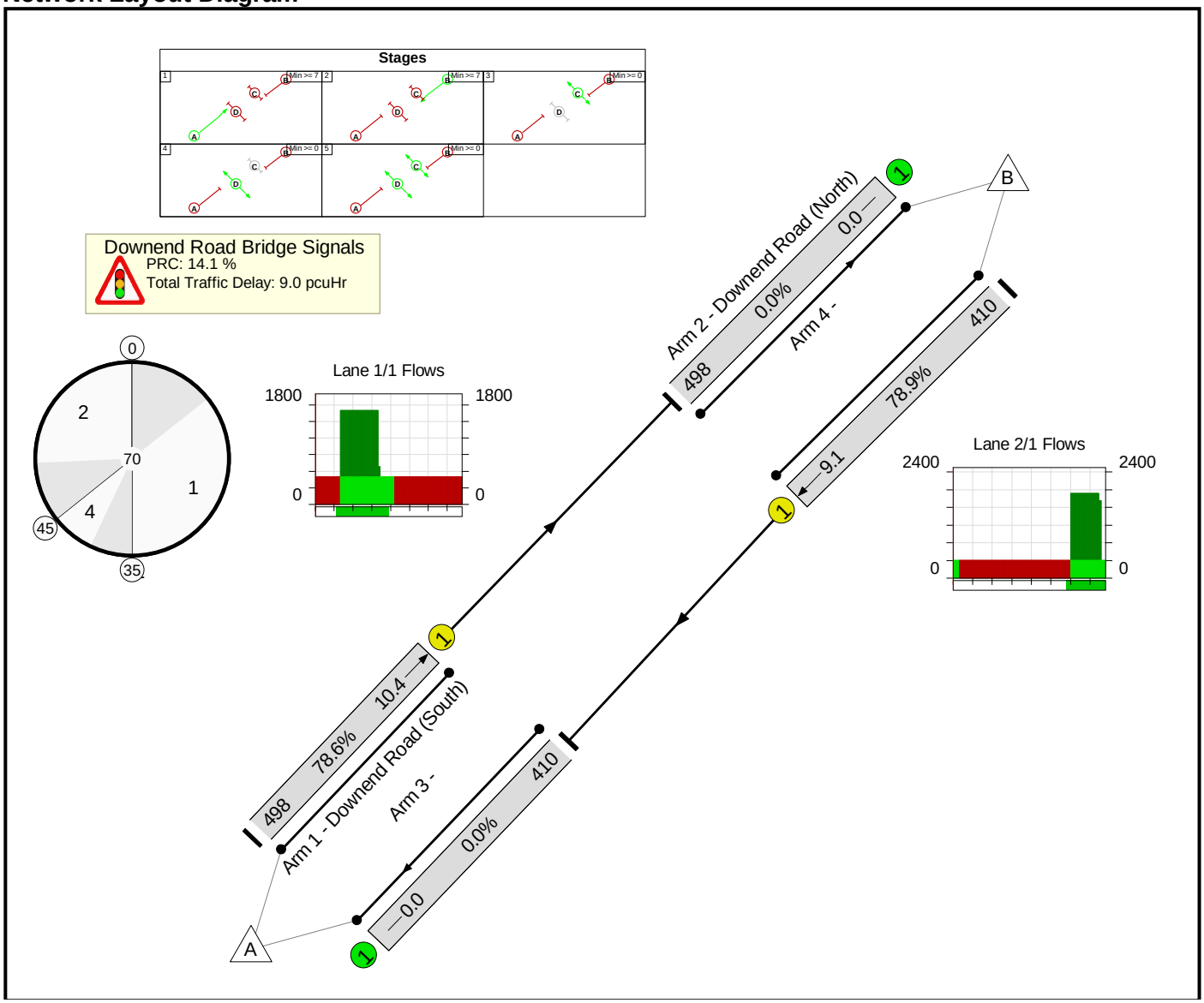
Stage	1	4	2
Duration	25	5	18
Change Point	0	35	45

Signal Timings Diagram



JCT Revised Submission Full Input Data And Results

Network Layout Diagram



JCT Revised Submission 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: Revised Submission	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.9%**
Downend Road Bridge Signals	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.9%**
1/1	Downend Road (South) Ahead	U	N/A	N/A	A		1	25	-	498	1705	633	78.6%
2/1	Downend Road (North) Ahead	U	N/A	N/A	B		1	18	-	410	1915	520	78.9%
3/1		U	N/A	N/A	-		-	-	-	410	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Revised Submission	**-**	**-**	**0**	**0**	**0**	**5.4**	**3.6**	**0.0**	**9.0**	**-**	**-**	**-**	**-**
Downend Road Bridge Signals	**-**	**-**	**0**	**0**	**0**	**5.4**	**3.6**	**0.0**	**9.0**	**-**	**-**	**-**	**-**
1/1	498	498	-	-	-	2.7	1.8	-	4.5	32.5	8.6	1.8	10.4
2/1	410	410	-	-	-	2.7	1.8	-	4.5	39.5	7.3	1.8	9.1
3/1	410	410	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 14.1 Total Delay for Signalled Lanes (pcuHr): 9.00 Cycle Time (s): 70

PRC Over All Lanes (%): 14.1 Total Delay Over All Lanes(pcuHr): 9.00

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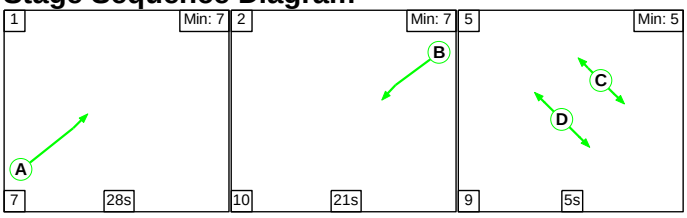
Scenario 3: 'AM Peak CT80 (Both Peds)' (FG1: '2026 with Dev AM 07:30-08:30', Plan 3: 'Both Peds')

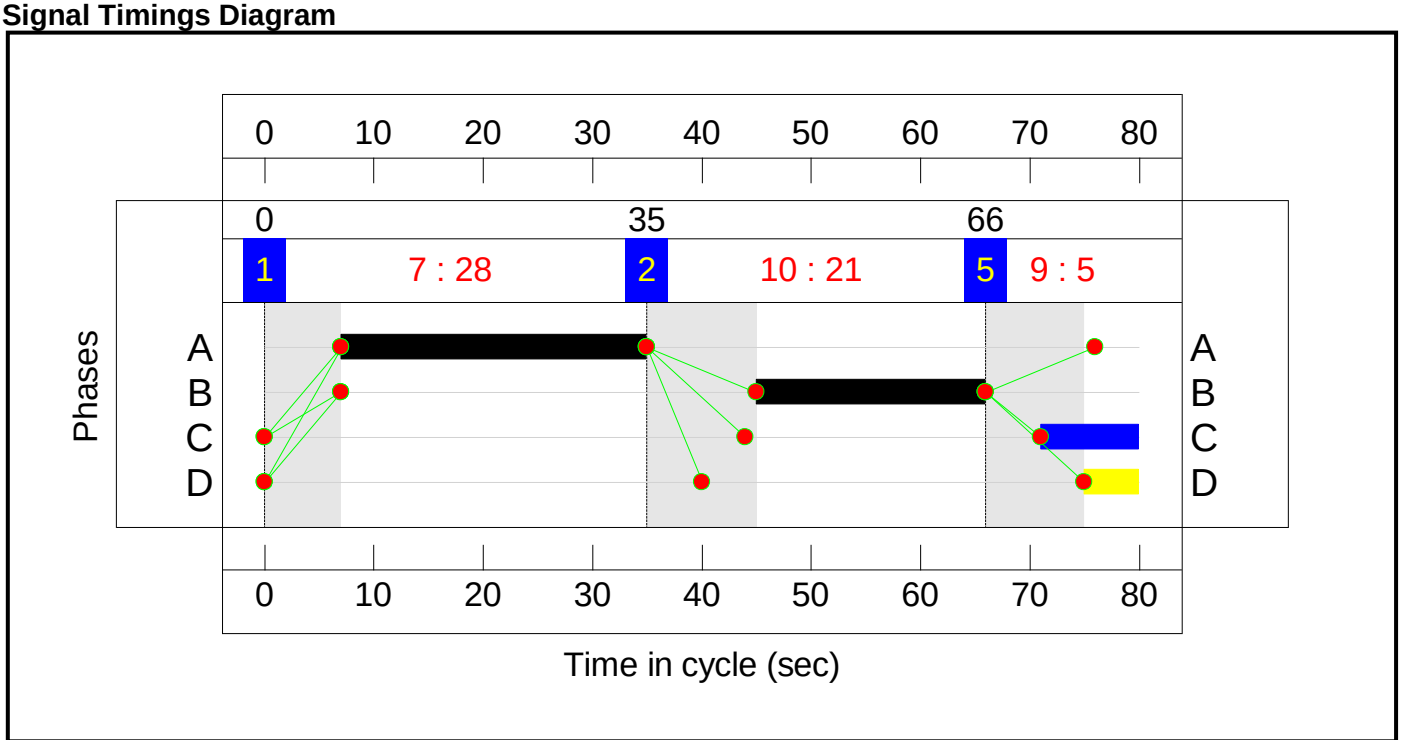
Stage Sequence Diagram



Stage Timings

Stage	1	2	5
Duration	28	21	5
Change Point	0	35	66

Signal Timings Diagram



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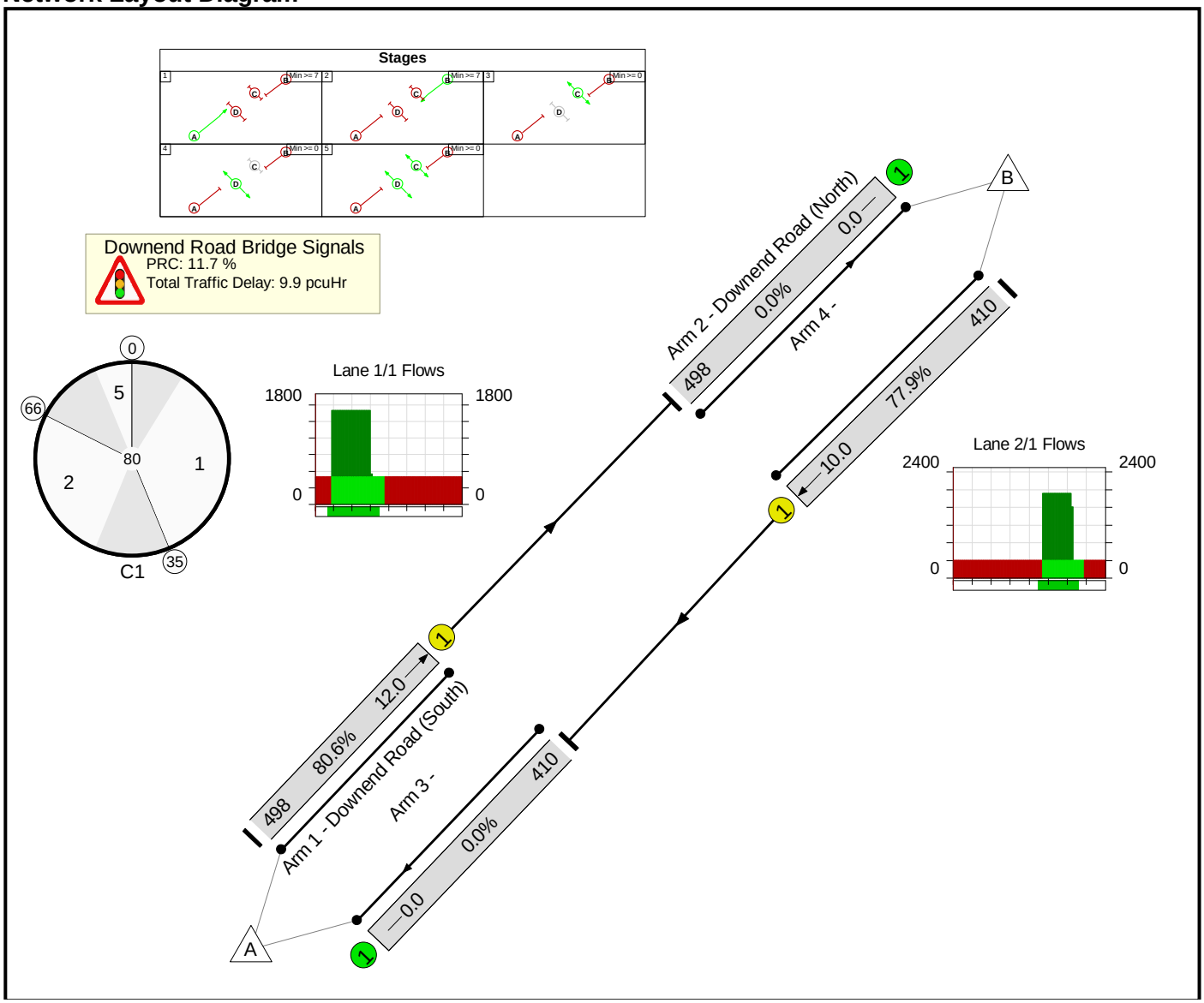
Network Layout Diagram



JCT Revised Submission 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: Revised Submission	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.6%**
Downend Road Bridge Signals	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.6%**
1/1	Downend Road (South) Ahead	U	N/A	N/A	A		1	28	-	498	1705	618	80.6%
2/1	Downend Road (North) Ahead	U	N/A	N/A	B		1	21	-	410	1915	527	77.9%
3/1		U	N/A	N/A	-		-	-	-	410	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Revised Submission	**-**	**-**	**0**	**0**	**0**	**6.2**	**3.7**	**0.0**	**9.9**	**-**	**-**	**-**	**-**
Downend Road Bridge Signals	**-**	**-**	**0**	**0**	**0**	**6.2**	**3.7**	**0.0**	**9.9**	**-**	**-**	**-**	**-**
1/1	498	498	-	-	-	3.2	2.0	-	5.2	37.5	10.0	2.0	12.0
2/1	410	410	-	-	-	3.0	1.7	-	4.8	41.8	8.3	1.7	10.0
3/1	410	410	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 11.7 Total Delay for Signalled Lanes (pcuHr): 9.94 Cycle Time (s): 80

PRC Over All Lanes (%): 11.7 Total Delay Over All Lanes(pcuHr): 9.94