

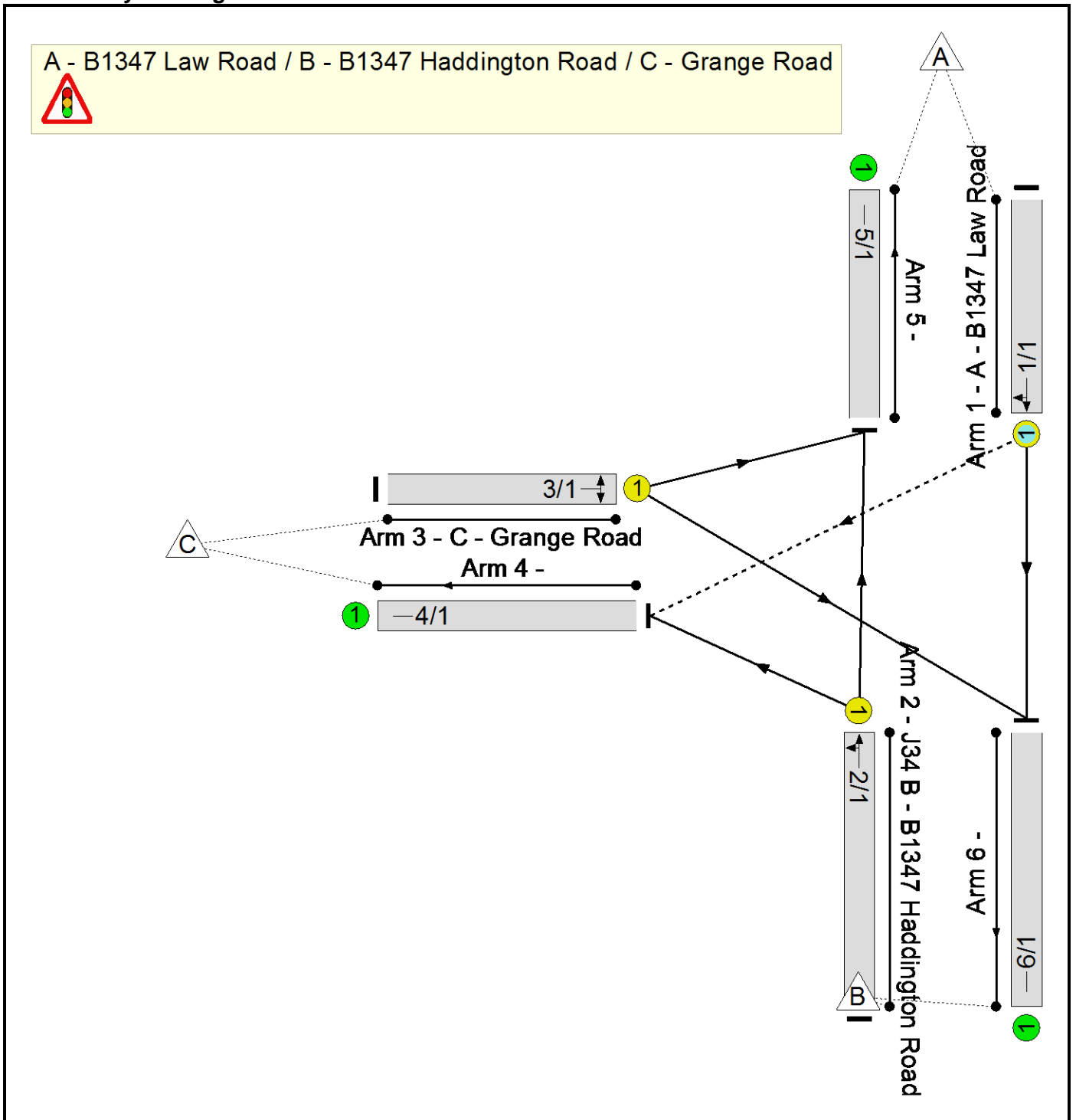
# Appendix H Model Reports

**Full Input Data And Results**

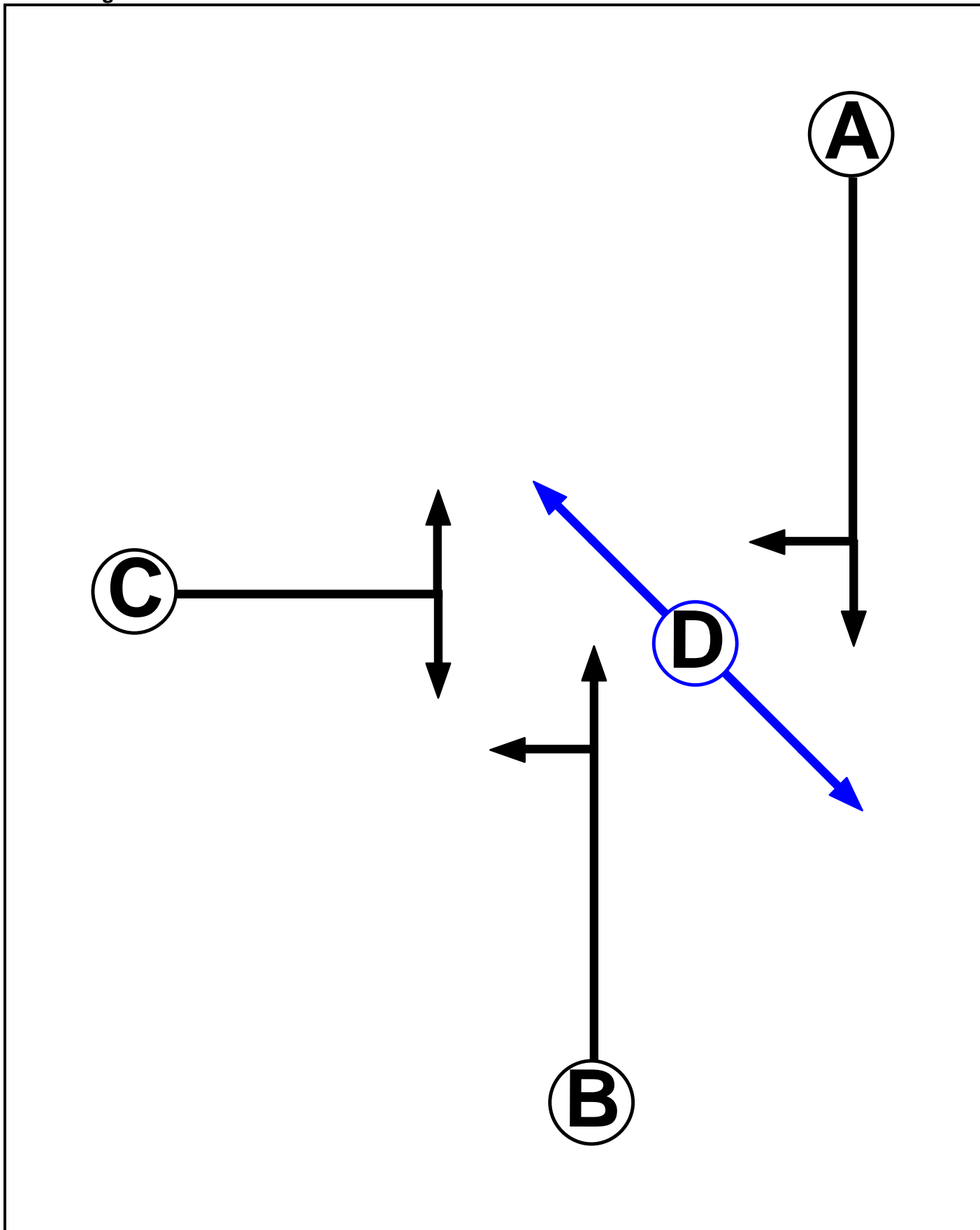
**User and Project Details**

<b>Project:</b>	<b>Safer Active Travel Law Primary &amp; North Berwick High School</b>
<b>Title:</b>	<b>Grange Road</b>
<b>Location:</b>	
<b>File name:</b>	Grange Rd NB.lsg3x
<b>Author:</b>	GS
<b>Company:</b>	Peter Brett Associates
<b>Address:</b>	160 West George Street
<b>Notes:</b>	

### Network Layout Diagram



Phase Diagram



## Full Input Data And Results

### Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		12	12

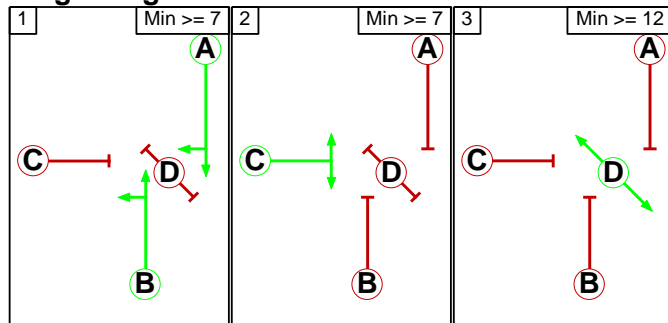
### Phase Intergreens Matrix

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

### Phases in Stage

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

### Stage Diagram



### Phase Delays

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

### Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1			
	2	5		7
	3	9	9	

Full Input Data And Results

**Give-Way Lane Input Data**

Junction: A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A - B1347 Law Road)	4/1 (Right)	1439	0	2/1	1.09	All	-	-	-	-	-

Full Input Data And Results

**Lane Input Data**

Junction: A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road												
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 (A - B1347 Law Road)	O	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Right	Inf
											Arm 6 Ahead	Inf
2/1 (J34 B - B1347 Haddington Road)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Left	8.00
											Arm 5 Ahead	Inf
3/1 (C - Grange Road)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Left	8.00
											Arm 6 Right	Inf
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak Hour'	08:30	09:30	01:00	
2: 'AM Peak 15 mins'	08:30	08:45	00:15	

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

**Traffic Flows, Desired**

**Desired Flow :**

Origin	Destination				
	A	B	C	Tot.	
A	0	80	122	202	
B	89	0	120	209	
C	143	54	0	197	
Tot.	232	134	242	608	

**Traffic Lane Flows**

Lane	Scenario 1: AM Peak Hour
Junction: A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road	
1/1	202
2/1	209
3/1	197
4/1	242
5/1	232
6/1	134

Full Input Data And Results

**Lane Saturation Flows**

Junction: A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road								
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 (A - B1347 Law Road)	3.25	0.00	Y	Arm 4 Right	Inf	60.4 %	1940	1940
				Arm 6 Ahead	Inf	39.6 %		
2/1 (J34 B - B1347 Haddington Road)	3.25	0.00	Y	Arm 4 Left	8.00	57.4 %	1751	1751
				Arm 5 Ahead	Inf	42.6 %		
3/1 (C - Grange Road)	3.25	0.00	Y	Arm 5 Left	8.00	72.6 %	1708	1708
				Arm 6 Right	Inf	27.4 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

**Scenario 2: 'AM Peak 15 mins'** (FG2: 'AM Peak 15 mins', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
	A	B	C	Tot.	
Origin	A	0	27	69	96
	B	19	0	56	75
	C	47	18	0	65
	Tot.	66	45	125	236

**Traffic Lane Flows**

Lane	Scenario 2: AM Peak 15 mins
Junction: A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road	
1/1	96
2/1	75
3/1	65
4/1	125
5/1	66
6/1	45

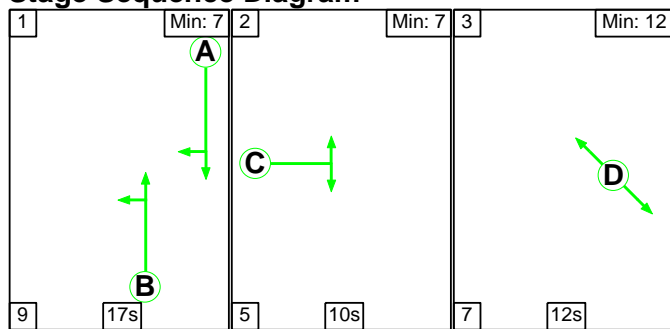


**Lane Saturation Flows**

Junction: A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road								
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 (A - B1347 Law Road)	3.25	0.00	Y	Arm 4 Right	Inf	71.9 %	1940	1940
				Arm 6 Ahead	Inf	28.1 %		
2/1 (J34 B - B1347 Haddington Road)	3.25	0.00	Y	Arm 4 Left	8.00	74.7 %	1702	1702
				Arm 5 Ahead	Inf	25.3 %		
3/1 (C - Grange Road)	3.25	0.00	Y	Arm 5 Left	8.00	72.3 %	1708	1708
				Arm 6 Right	Inf	27.7 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

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

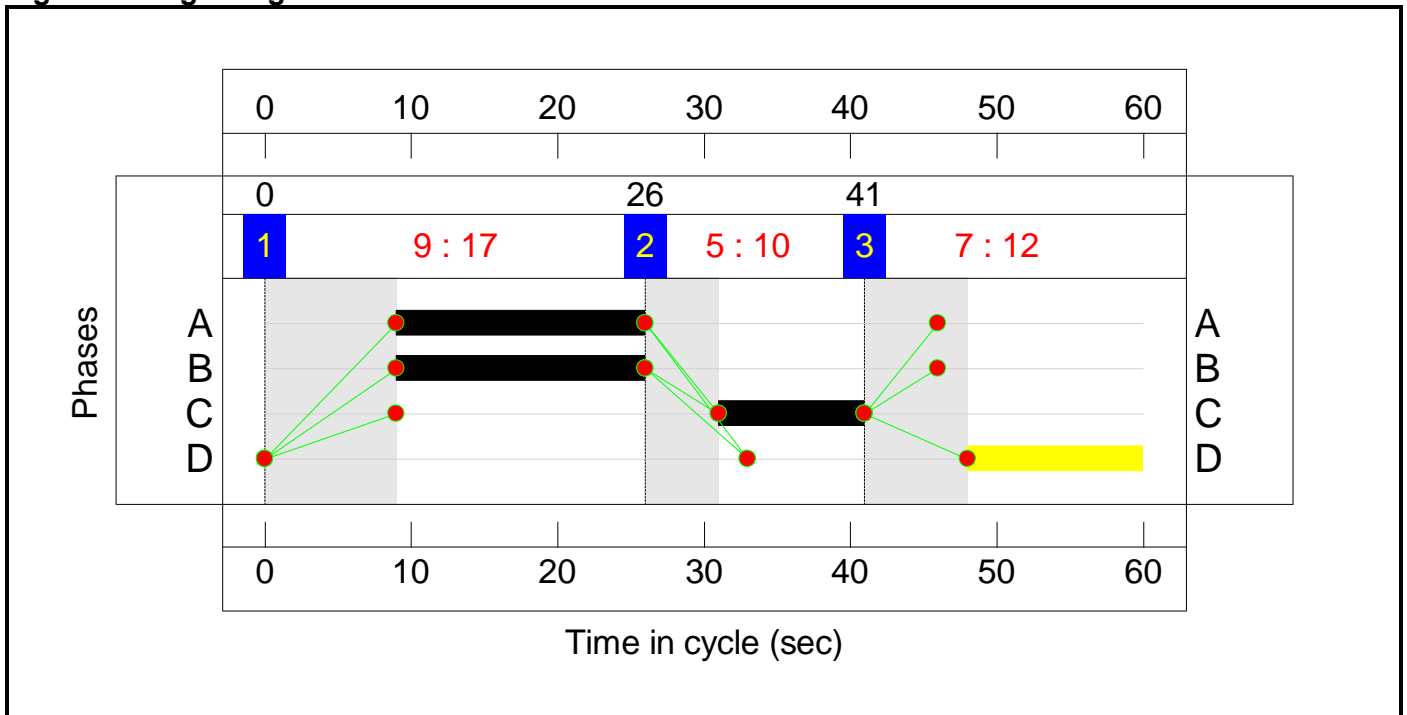
**Stage Sequence Diagram**



**Stage Timings**

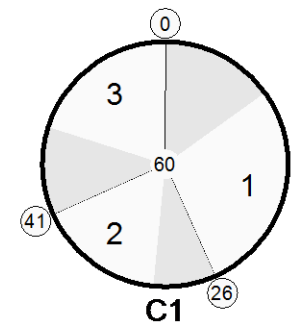
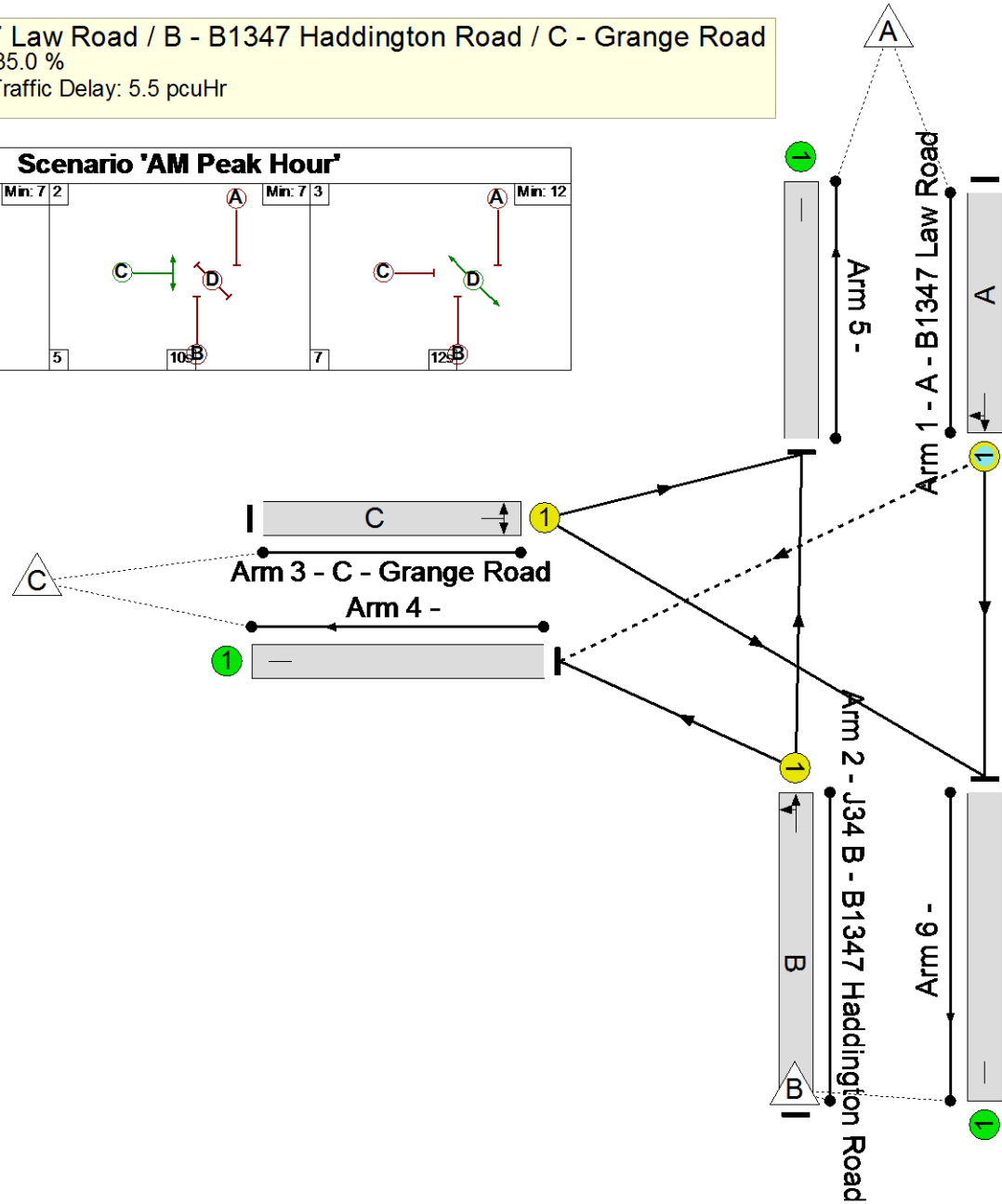
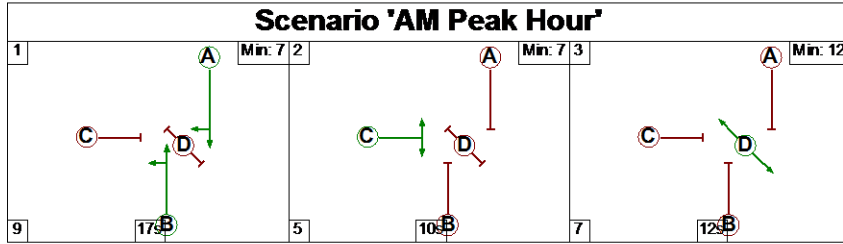
Stage	1	2	3
Duration	17	10	12
Change Point	0	26	41

### Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**

A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road  
 PRC: 35.0 %  
 Total Traffic Delay: 5.5 pcuHr



Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Grange Road</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>66.6%</b>
<b>A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>66.6%</b>
1/1	A - B1347 Law Road Right Ahead	O	N/A	N/A	A		1	17	-	202	1940	303	66.6%
2/1	J34 B - B1347 Haddington Road Left Ahead	U	N/A	N/A	B		1	17	-	209	1751	525	39.8%
3/1	C - Grange Road Left Right	U	N/A	N/A	C		1	10	-	197	1708	313	62.9%
4/1		U	N/A	N/A	-		-	-	-	242	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	232	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	134	Inf	Inf	0.0%

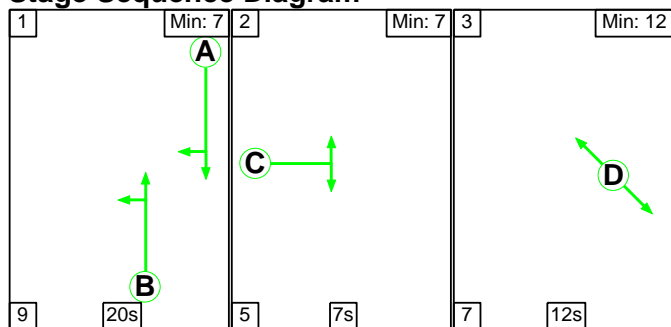
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: Grange Road	-	-	83	39	0	3.3	2.1	0.0	5.5	-	-	-	-	
A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road	-	-	83	39	0	3.3	2.1	0.0	5.5	-	-	-	-	
1/1	202	202	83	39	0	1.1	1.0	-	2.1	37.3	3.1	1.0	4.1	
2/1	209	209	-	-	-	1.0	0.3	-	1.3	22.4	2.7	0.3	3.1	
3/1	197	197	-	-	-	1.2	0.8	-	2.1	37.9	3.0	0.8	3.8	
4/1	242	242	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	232	232	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	134	134	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1		PRC for Signalled Lanes (%):		35.0	Total Delay for Signalled Lanes (pcuHr):			5.47	Cycle Time (s):		60			
		PRC Over All Lanes (%):		35.0	Total Delay Over All Lanes(pcuHr):			5.47						

Full Input Data And Results

Scenario 2: 'AM Peak 15 mins' (FG2: 'AM Peak 15 mins', Plan 1: 'Network Control Plan 1')

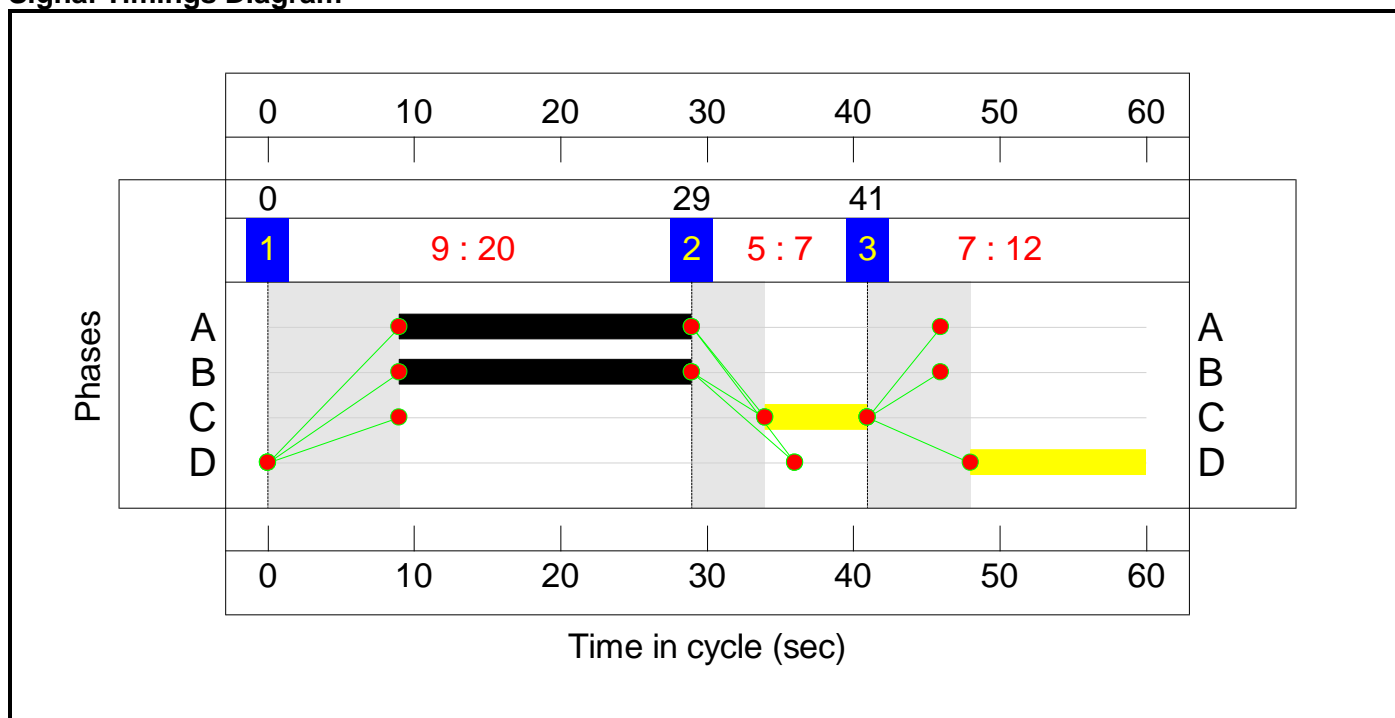
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	20	7	12
Change Point	0	29	41

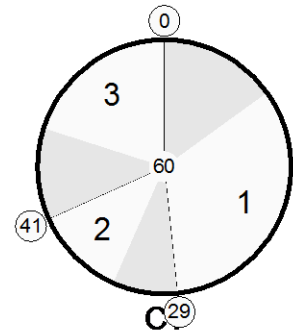
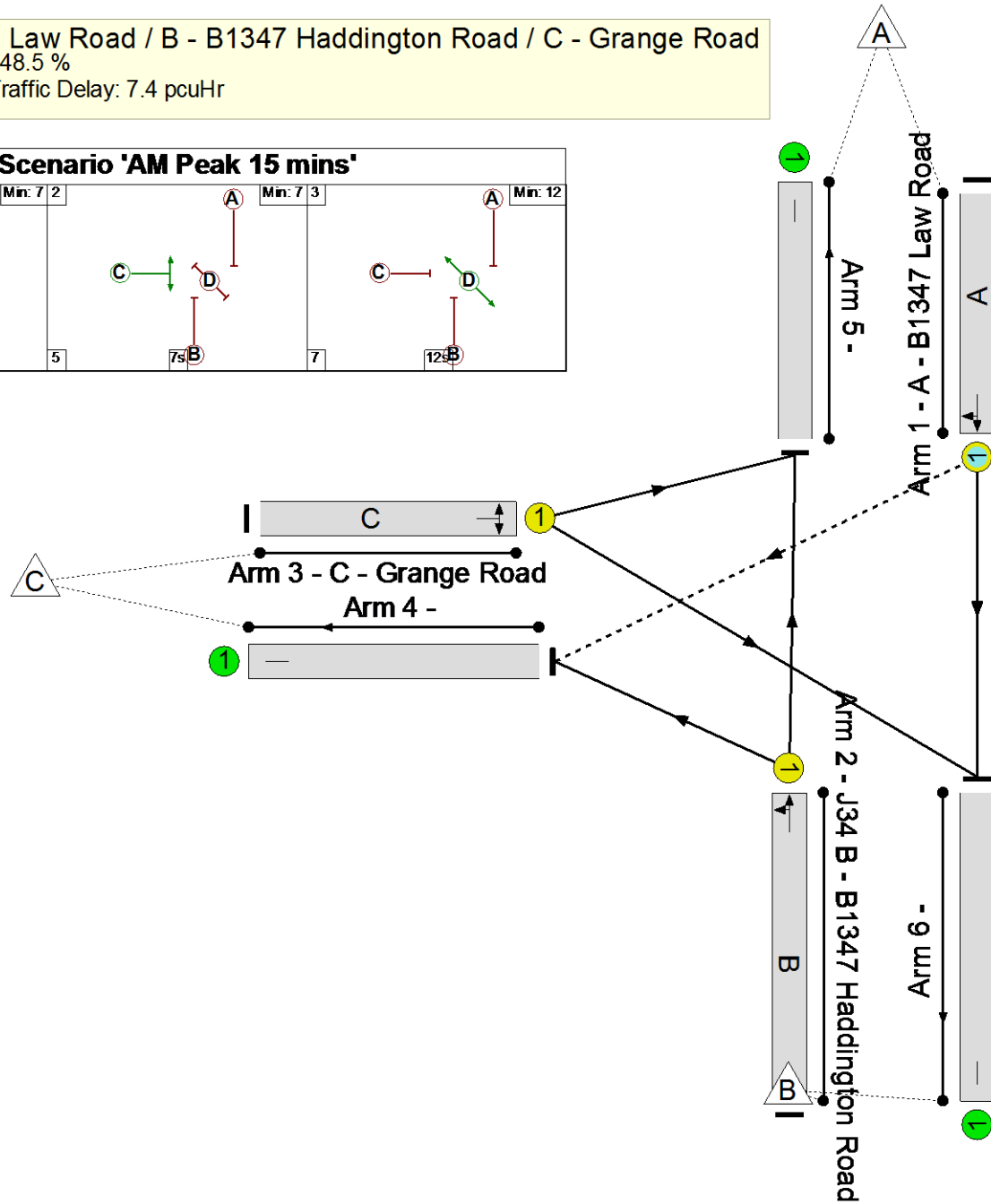
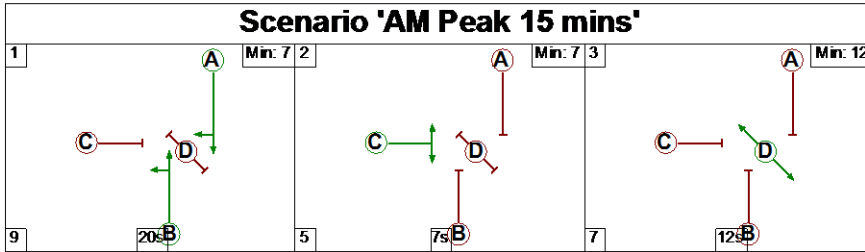
Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**



A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road  
 PRC: -48.5 %  
 Total Traffic Delay: 7.4 pcuHr



Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Grange Road</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>133.6%</b>
<b>A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>133.6%</b>
1/1	A - B1347 Law Road Right Ahead	O	N/A	N/A	A		1	20	-	96	1940	72	<b>133.6%</b>
2/1	J34 B - B1347 Haddington Road Left Ahead	U	N/A	N/A	B		1	20	-	75	1702	149	50.4%
3/1	C - Grange Road Left Right	U	N/A	N/A	C		1	7	-	65	1708	57	<b>114.2%</b>
4/1		U	N/A	N/A	-		-	-	-	125	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	66	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	45	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Grange Road	-	-	40	12	0	2.2	5.2	0.0	7.4	-	-	-	-
A - B1347 Law Road / B - B1347 Haddington Road / C - Grange Road	-	-	40	12	0	2.2	5.2	0.0	7.4	-	-	-	-
1/1	96	72	40	12	0	1.2	3.5	-	4.7	175.3	8.0	13.8	21.8
2/1	75	75	-	-	-	0.3	0.1	-	0.4	21.4	3.9	0.5	4.4
3/1	65	57	-	-	-	0.6	1.6	-	2.3	126.3	4.9	6.5	11.4
4/1	108	108	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	60	60	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	36	36	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<p>C1                      PRC for Signalled Lanes (%): -48.5                      Total Delay for Signalled Lanes (pcuHr): 7.40                      Cycle Time (s): 60</p> <p>                                 PRC Over All Lanes (%): -48.5                      Total Delay Over All Lanes(pcuHr): 7.40</p>													