



Appendix

6.3 Junction Modeling

BALLINA FLOOD RELIEF SCHEME EIAR

Appendix 6.3: JUNCTION MODELLING



MGW0290
S4.P01
November 2024

APPENDIX 6

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
S4 P01	Final for Submission	SB/SW	RG	PJG	14 Nov 2024

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Prepared by:

RPS

Prepared for:

Mayo County Council

APPENDIX 6

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APPENDIX 6

1 JUNCTION MODELLING

**1.1 Junction Assessment Bunree Road / R294 East / R294 West
(Using Junctions 9 Software)**

Junctions 8
PICADY 8 - Priority Intersection Module
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2023
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Filename: Site 20 - Construction Year 2026 - No Scheme.arc8
Path: W:\MGW0290_Mayo Co Co_Ballina FRS\6.x Project Directories\6.30 Traffic & Transport\Chapter 6 Traffic & Transport\Modelling\2. Construction Year 2026 - No Scheme
Report generation date: 23/05/2023 10:09:26

« (Default Analysis Set) - Scenario 1, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Pedestrian Flows
- » Direct/Resultant Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
A1 - Scenario 1												
Stream B-C	0.12	6.44	0.10	A	4.77	A	0.34	8.69	0.25	A	6.57	A
Stream B-A	0.31	10.20	0.24	B			0.88	15.14	0.47	C		
Stream C-AB	0.41	5.49	0.22	A			0.31	5.99	0.19	A		
Stream C-A	-	-	-	-			-	-	-	-		
Stream A-BC	0.15	1.87	0.13	A			0.25	2.04	0.20	A		

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM" model duration: 08:00 - 09:00

"D2 - Scenario 1, PM" model duration: 16:00 - 17:00

Run using Junctions 8.0.6.541 at 23/05/2023 10:09:26

File summary

Title	Site 20 - Bunree Road / R294 Healy Terrace(E) / R294 Healy Terrace(W)
Location	
Site Number	
Date	10/05/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Sean.Britton
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - Scenario 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	Arm A - Zebra Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm A - Zebra Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, AM	Scenario 1	AM		FLAT	08:00	09:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	4.77	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
B	B	Bunree Road		Minor
C	C	R294(E)		Major
A	A	R294(W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.00		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.40	3.70								100	100

Pedestrian Crossings

Arm	Crossing Type
B	None
C	None
A	Zebra

Zebra Crossings

Arm	Space between crossing and junction entry (Left) (PCU)	Space between crossing and junction entry (Right) (PCU)	Vehicles queueing on exit (PCU)	Central Refuge	Crossing Data Type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
A			0.00		Distance	0.00	0.00				

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	600.050	0.095	0.240	0.151	0.343
1	B-C	714.398	0.095	0.241	-	-
1	C-B	689.785	0.232	0.232	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B	FLAT	✓	174.00	100.000
C	FLAT	✓	437.00	100.000
A	FLAT	✓	286.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
B	-	-
C	-	-
A	FLAT	0.00

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	B	174.00	174.00		
08:00-08:15	C	437.00	437.00		
08:00-08:15	A	286.00	286.00		0.00
08:15-08:30	B	174.00	174.00		
08:15-08:30	C	437.00	437.00		
08:15-08:30	A	286.00	286.00		0.00
08:30-08:45	B	174.00	174.00		
08:30-08:45	C	437.00	437.00		
08:30-08:45	A	286.00	286.00		0.00
08:45-09:00	B	174.00	174.00		
08:45-09:00	C	437.00	437.00		
08:45-09:00	A	286.00	286.00		0.00

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	125.000	161.000
	B	109.000	0.000	65.000
	C	327.000	110.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.44	0.56
	B	0.63	0.00	0.37
	C	0.75	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.10	6.44	0.12	A
B-A	0.24	10.20	0.31	B
C-AB	0.22	5.49	0.41	A
C-A	-	-	-	-
A-BC	0.13	1.87	0.15	A

Junctions 8
PICADY 8 - Priority Intersection Module
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Filename: Site 20 - Clare St Closure.arc8

Path: W:\MGW0290_Mayo Co Co_Ballina FRS\6.x Project Directories\6.30 Traffic & Transport\Chapter 6 Traffic & Transport\Modelling\3c. Construction Year 2026 - Clare St Closure

Report generation date: 23/05/2023 10:41:56

« (Default Analysis Set) - Scenario 1, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Pedestrian Flows
- » Direct/Resultant Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
A1 - Scenario 1												
Stream B-C	1.26	16.45	0.56	C	121.63	F	2.37	26.02	0.71	D	78.69	F
Stream B-A	39.51	294.01	1.06	F			26.51	213.50	1.02	F		
Stream C-AB	0.41	5.49	0.22	A			0.31	5.99	0.19	A		
Stream C-A	-	-	-	-			-	-	-	-		
Stream A-BC	0.15	1.87	0.13	A			0.25	2.04	0.20	A		

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - Scenario 1, AM" model duration: 08:00 - 09:00

"D2 - Scenario 1, PM " model duration: 16:00 - 17:00

Run using Junctions 8.0.6.541 at 23/05/2023 10:41:56

File summary

Title	Site 20 - Bunree Road / R294 Healy Terrace(E) / R294 Healy Terrace(W)
Location	
Site Number	
Date	10/05/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Sean.Britton
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - Scenario 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	Arm A - Zebra Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm A - Zebra Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Scenario 1, PM	Scenario 1	PM		FLAT	16:00	17:00	60	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	78.69	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
B	B	Bunree Road		Minor
C	C	R294 (E)		Major
A	A	R294 (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.00		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.40	3.70								100	100

Pedestrian Crossings

Arm	Crossing Type
B	None
C	None
A	Zebra

Zebra Crossings

Arm	Space between crossing and junction entry (Left) (PCU)	Space between crossing and junction entry (Right) (PCU)	Vehicles queueing on exit (PCU)	Central Refuge	Crossing Data Type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
A			0.00		Distance	0.00	0.00				

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	600.050	0.095	0.240	0.151	0.343
1	B-C	714.398	0.095	0.241	-	-
1	C-B	689.785	0.232	0.232	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B	FLAT	✓	792.00	100.000
C	FLAT	✓	322.00	100.000
A	FLAT	✓	446.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
B	-	-
C	-	-
A	FLAT	0.00

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:00-16:15	B	792.00	792.00		
16:00-16:15	C	322.00	322.00		
16:00-16:15	A	446.00	446.00		0.00
16:15-16:30	B	792.00	792.00		
16:15-16:30	C	322.00	322.00		
16:15-16:30	A	446.00	446.00		0.00
16:30-16:45	B	792.00	792.00		
16:30-16:45	C	322.00	322.00		
16:30-16:45	A	446.00	446.00		0.00
16:45-17:00	B	792.00	792.00		
16:45-17:00	C	322.00	322.00		
16:45-17:00	A	446.00	446.00		0.00

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	153.000	293.000
	B	458.000	0.000	334.000
	C	227.000	95.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.34	0.66
	B	0.58	0.00	0.42
	C	0.70	0.30	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.71	26.02	2.37	D
B-A	1.02	213.50	26.51	F
C-AB	0.19	5.99	0.31	A
C-A	-	-	-	-
A-BC	0.20	2.04	0.25	A

APPENDIX 6

1.2 Junction of Tolan / Pearse / Tone / O’Rahilly Streets (Using Junctions 9 Software)

1.2.1 Calculating Pearse Street

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
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Filename: picardy pearse street ballina 2.j9
Path: X:\January 2024\Karl Ronan
Report generation date: 08/02/2024 10:29:40

- »2026, AM
- »2026, PM
- »2026 no const, AM
- »2026 no const, PM

Summary of junction performance

	AM									PM								
	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2026																		
Stream B-ACD	D1	0.0	~1	0.00	0.00	A	12.28	B	-9 % [Stream D-ABC]	D2	0.0	~1	0.00	0.00	A	8.78	A	-4 % [Stream D-ABC]
Stream A-D		0.0	~1	0.00	0.00	A					0.0	~1	0.00	0.00	A			
Stream D-ABC		4.4	23.3	59.97	0.84	F					2.9	15.2	42.49	0.76	E			
Stream C-ABD		1.4	7.3	11.16	0.47	B					1.4	7.0	9.41	0.45	A			
2026 no const																		
Stream B-ACD	D3	0.0	~1	0.00	0.00	A	9.49	A	0 % [Stream D-ABC]	D4	0.0	~1	0.00	0.00	A	7.74	A	7 % [Stream D-ABC]
Stream A-D		0.0	~1	0.00	0.00	A					0.0	~1	0.00	0.00	A			
Stream D-ABC		2.6	13.0	34.86	0.74	D					1.9	9.2	27.37	0.66	D			
Stream C-ABD		1.0	4.5	8.65	0.38	A					1.0	4.2	7.46	0.37	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	03/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\karl.ronan
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026	AM	ONE HOUR	00:00	01:30	15
D2	2026	PM	ONE HOUR	16:00	17:30	15
D3	2026 no const	AM	ONE HOUR	00:00	01:30	15
D4	2026 no const	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Network flow scaling factor (%)

A1	100.000
----	---------

2026, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		12.28	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-9	Stream D-ABC

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major
D	untitled		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00			0.0		-
C	6.00			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	50	20
D	One lane	3.00	30	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	574	-	-	-	-	-	-	0.222	0.318	0.222	-	-	-
B-A	504	0.092	0.232	0.232	-	-	-	0.146	0.331	-	0.232	0.232	0.116
B-C	637	0.098	0.247	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	504	0.092	0.232	0.232	-	-	-	0.146	0.331	0.146	-	-	-
B-D, offside lane	504	0.092	0.232	0.232	-	-	-	0.146	0.331	0.146	-	-	-
C-B	574	0.222	0.222	0.318	-	-	-	-	-	-	-	-	-
D-A	643	-	-	-	-	-	-	0.249	-	0.099	-	-	-
D-B, nearside lane	502	0.145	0.145	0.330	-	-	-	0.231	0.231	0.091	-	-	-
D-B, offside lane	502	0.145	0.145	0.330	-	-	-	0.231	0.231	0.091	-	-	-
D-C	502	-	0.145	0.330	0.116	0.231	0.231	0.231	0.231	0.091	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	793	100.000
B		✓	0	100.000
C		✓	413	100.000
D		✓	256	100.000

Origin-Destination Data

Demand (Veh/hr)

	From	To			
		A	B	C	D
	A	0	793	0	0
	B	0	0	0	0
	C	287	126	0	0
	D	117	139	0	0

Vehicle Mix

Heavy Vehicle Percentages

	From	To			
		A	B	C	D
	A	0	3	0	0
	B	0	0	0	0
	C	3	3	0	0
	D	3	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-ACD	0.00	0.00	0.0	~1	A
A-B					
A-C					
A-D	0.00	0.00	0.0	~1	A
D-ABC	0.84	59.97	4.4	23.3	F
C-ABD	0.47	11.16	1.4	7.3	B
C-D					
C-A					

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	402	0.000	0	0.0	0.000	A
A-B	597			597			
A-C	0			0			
A-D	0	493	0.000	0	0.0	0.000	A
D-ABC	193	408	0.473	189	0.9	16.241	C
C-ABD	150	588	0.255	148	0.5	8.167	A
C-D	0			0			
C-A	161			161			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	375	0.000	0	0.0	0.000	A
A-B	713			713			
A-C	0			0			
A-D	0	477	0.000	0	0.0	0.000	A
D-ABC	230	379	0.608	228	1.5	23.494	C
C-ABD	200	598	0.335	199	0.8	9.039	A
C-D	0			0			
C-A	171			171			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	402	0.000	0	0.0	0.000	A
A-B	597			597			
A-C	0			0			
A-D	0	493	0.000	0	0.0	0.000	A
D-ABC	193	408	0.473	189	0.9	16.241	C
C-ABD	150	588	0.255	148	0.5	8.167	A
C-D	0			0			
C-A	161			161			

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	337	0.000	0	0.0	0.000	A
A-B	873			873			
A-C	0			0			
A-D	0	455	0.000	0	0.0	0.000	A
D-ABC	282	337	0.837	272	3.9	49.766	E
C-ABD	288	614	0.469	285	1.4	10.996	B
C-D	0			0			
C-A	167			167			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	336	0.000	0	0.0	0.000	A
A-B	873			873			
A-C	0			0			
A-D	0	455	0.000	0	0.0	0.000	A
D-ABC	282	336	0.839	280	4.4	59.973	F
C-ABD	289	616	0.470	289	1.4	11.162	B
C-D	0			0			
C-A	165			165			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	373	0.000	0	0.0	0.000	A
A-B	713			713			
A-C	0			0			
A-D	0	476	0.000	0	0.0	0.000	A
D-ABC	230	378	0.609	241	1.7	28.073	D
C-ABD	202	600	0.336	204	0.8	9.196	A
C-D	0			0			
C-A	170			170			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	401	0.000	0	0.0	0.000	A
A-B	597			597			
A-C	0			0			
A-D	0	493	0.000	0	0.0	0.000	A
D-ABC	193	407	0.474	196	0.9	17.264	C
C-ABD	151	589	0.256	152	0.5	8.285	A
C-D	0			0			
C-A	160			160			

Queue Variation Results for each time segment

00:00 - 00:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.87	0.55	1.00	1.40	1.45			N/A	N/A
C-ABD	0.49	0.00	0.00	0.49	0.49			N/A	N/A

00:15 - 00:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.46	0.10	1.14	2.81	3.74			N/A	N/A
C-ABD	0.75	0.55	1.00	1.40	1.45			N/A	N/A

00:30 - 00:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	3.86	0.05	0.66	10.94	18.00			N/A	N/A
C-ABD	1.39	0.03	0.28	1.39	3.61			N/A	N/A

00:45 - 01:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	4.36	0.04	0.39	11.50	23.35			N/A	N/A
C-ABD	1.42	0.03	0.34	3.39	7.28			N/A	N/A

01:00 - 01:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.66	0.04	0.40	4.42	7.86			N/A	N/A
C-ABD	0.80	0.53	0.99	1.40	1.45			N/A	N/A

01:15 - 01:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.93	0.03	0.32	1.84	4.64			N/A	N/A
C-ABD	0.51	0.05	0.51	1.30	1.40			N/A	N/A

2026, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		8.78	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-4	Stream D-ABC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	682	100.000
B		✓	0	100.000
C		✓	485	100.000
D		✓	234	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	682	0	0
	B	0	0	0	0
	C	363	122	0	0
	D	115	119	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	0	0
	B	0	0	0	0
	C	3	3	0	0
	D	3	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-ACD	0.00	0.00	0.0	~1	A
A-B					
A-C					
A-D	0.00	0.00	0.0	~1	A
D-ABC	0.76	42.49	2.9	15.2	E

C-ABD	0.45	9.41	1.4	7.0	A
C-D					
C-A					

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	405	0.000	0	0.0	0.000	A
A-B	513			513			
A-C	0			0			
A-D	0	481	0.000	0	0.0	0.000	A
D-ABC	176	411	0.429	173	0.7	14.963	B
C-ABD	159	647	0.246	157	0.5	7.337	A
C-D	0			0			
C-A	206			206			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	379	0.000	0	0.0	0.000	A
A-B	613			613			
A-C	0			0			
A-D	0	463	0.000	0	0.0	0.000	A
D-ABC	210	382	0.551	209	1.2	20.540	C
C-ABD	215	669	0.322	214	0.8	7.935	A
C-D	0			0			
C-A	221			221			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	341	0.000	0	0.0	0.000	A
A-B	751			751			
A-C	0			0			
A-D	0	438	0.000	0	0.0	0.000	A
D-ABC	258	340	0.757	252	2.7	38.224	E
C-ABD	315	702	0.449	312	1.4	9.297	A
C-D	0			0			
C-A	219			219			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	340	0.000	0	0.0	0.000	A
A-B	751			751			
A-C	0			0			
A-D	0	437	0.000	0	0.0	0.000	A
D-ABC	258	340	0.759	257	2.9	42.492	E
C-ABD	316	703	0.450	316	1.4	9.412	A
C-D	0			0			
C-A	218			218			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	377	0.000	0	0.0	0.000	A
A-B	613			613			
A-C	0			0			
A-D	0	462	0.000	0	0.0	0.000	A
D-ABC	210	381	0.552	217	1.3	22.645	C
C-ABD	217	671	0.323	219	0.8	8.055	A
C-D	0			0			
C-A	219			219			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	404	0.000	0	0.0	0.000	A
A-B	513			513			
A-C	0			0			
A-D	0	480	0.000	0	0.0	0.000	A
D-ABC	176	410	0.429	178	0.8	15.641	C

C-ABD	160	648	0.247	161	0.5	7.436	A
C-D	0			0			
C-A	205			205			

Queue Variation Results for each time segment

16:00 - 16:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.73	0.55	1.00	1.40	1.45			N/A	N/A
C-ABD	0.50	0.50	1.00	1.40	1.45			N/A	N/A

16:15 - 16:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.17	0.11	1.05	1.89	2.50			N/A	N/A
C-ABD	0.77	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	2.67	0.04	0.38	7.00	13.92			N/A	N/A
C-ABD	1.39	0.03	0.27	1.39	2.88			N/A	N/A

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	2.87	0.03	0.33	5.48	15.23			N/A	N/A
C-ABD	1.42	0.04	0.36	3.57	7.03			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.29	0.04	0.43	3.32	5.45			N/A	N/A
C-ABD	0.81	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.77	0.03	0.33	1.77	3.58			N/A	N/A
C-ABD	0.53	0.06	0.65	1.33	1.42			N/A	N/A

2026 no const, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		9.49	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	0	Stream D-ABC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 no const	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	468	100.000
B		✓	0	100.000
C		✓	413	100.000
D		✓	256	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	468	0	0
	B	0	0	0	0
	C	287	126	0	0
	D	117	139	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	0	0
	B	0	0	0	0
	C	3	3	0	0
	D	3	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-ACD	0.00	0.00	0.0	~1	A
A-B					
A-C					
A-D	0.00	0.00	0.0	~1	A
D-ABC	0.74	34.86	2.6	13.0	D

C-ABD	0.38	8.65	1.0	4.5	A
C-D					
C-A					

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	427	0.000	0	0.0	0.000	A
A-B	352			352			
A-C	0			0			
A-D	0	493	0.000	0	0.0	0.000	A
D-ABC	193	436	0.442	190	0.8	14.423	B
C-ABD	144	636	0.226	142	0.4	7.283	A
C-D	0			0			
C-A	167			167			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	404	0.000	0	0.0	0.000	A
A-B	421			421			
A-C	0			0			
A-D	0	477	0.000	0	0.0	0.000	A
D-ABC	230	414	0.555	228	1.2	19.174	C
C-ABD	188	654	0.288	187	0.6	7.732	A
C-D	0			0			
C-A	183			183			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	373	0.000	0	0.0	0.000	A
A-B	515			515			
A-C	0			0			
A-D	0	456	0.000	0	0.0	0.000	A
D-ABC	282	383	0.735	277	2.5	32.273	D
C-ABD	261	679	0.384	259	0.9	8.599	A
C-D	0			0			
C-A	194			194			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	373	0.000	0	0.0	0.000	A
A-B	515			515			
A-C	0			0			
A-D	0	455	0.000	0	0.0	0.000	A
D-ABC	282	383	0.736	281	2.6	34.856	D
C-ABD	262	680	0.385	261	1.0	8.655	A
C-D	0			0			
C-A	193			193			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	403	0.000	0	0.0	0.000	A
A-B	421			421			
A-C	0			0			
A-D	0	477	0.000	0	0.0	0.000	A
D-ABC	230	414	0.556	235	1.3	20.693	C
C-ABD	189	655	0.288	190	0.6	7.798	A
C-D	0			0			
C-A	183			183			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	425	0.000	0	0.0	0.000	A
A-B	352			352			
A-C	0			0			
A-D	0	493	0.000	0	0.0	0.000	A
D-ABC	193	436	0.442	195	0.8	15.051	C

C-ABD	144	636	0.227	145	0.4	7.356	A
C-D	0			0			
C-A	166			166			

Queue Variation Results for each time segment

00:00 - 00:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.77	0.55	1.00	1.40	1.45			N/A	N/A
C-ABD	0.41	0.00	0.00	0.41	0.41			N/A	N/A

00:15 - 00:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.20	0.12	1.08	1.91	2.51			N/A	N/A
C-ABD	0.59	0.55	1.00	1.40	1.45			N/A	N/A

00:30 - 00:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	2.46	0.04	0.35	5.83	13.01			N/A	N/A
C-ABD	0.94	0.03	0.26	0.94	0.94			N/A	N/A

00:45 - 01:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	2.60	0.03	0.31	3.68	12.88			N/A	N/A
C-ABD	0.96	0.03	0.35	2.31	4.51			N/A	N/A

01:00 - 01:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.31	0.04	0.45	3.32	5.30			N/A	N/A
C-ABD	0.61	0.55	1.00	1.40	1.45			N/A	N/A

01:15 - 01:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.81	0.04	0.35	1.91	3.63			N/A	N/A
C-ABD	0.42	0.00	0.00	0.42	0.42			N/A	N/A

2026 no const, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		7.74	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	7	Stream D-ABC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 no const	PM	ONE HOUR	16:00	17:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	332	100.000
B		✓	0	100.000
C		✓	484	100.000
D		✓	234	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	332	0	0
	B	0	0	0	0
	C	362	122	0	0
	D	115	119	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	0	0
	B	0	0	0	0
	C	3	3	0	0
	D	3	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-ACD	0.00	0.00	0.0	~1	A
A-B					
A-C					
A-D	0.00	0.00	0.0	~1	A
D-ABC	0.66	27.37	1.9	9.2	D

C-ABD	0.37	7.46	1.0	4.2	A
C-D					
C-A					

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	431	0.000	0	0.0	0.000	A
A-B	250			250			
A-C	0			0			
A-D	0	481	0.000	0	0.0	0.000	A
D-ABC	176	441	0.400	174	0.7	13.359	B
C-ABD	151	696	0.217	149	0.4	6.578	A
C-D	0			0			
C-A	213			213			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	410	0.000	0	0.0	0.000	A
A-B	298			298			
A-C	0			0			
A-D	0	463	0.000	0	0.0	0.000	A
D-ABC	210	419	0.502	209	1.0	17.050	C
C-ABD	200	725	0.276	199	0.6	6.853	A
C-D	0			0			
C-A	235			235			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	381	0.000	0	0.0	0.000	A
A-B	366			366			
A-C	0			0			
A-D	0	438	0.000	0	0.0	0.000	A
D-ABC	258	388	0.663	254	1.8	26.163	D
C-ABD	282	767	0.367	280	0.9	7.420	A
C-D	0			0			
C-A	251			251			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	380	0.000	0	0.0	0.000	A
A-B	366			366			
A-C	0			0			
A-D	0	438	0.000	0	0.0	0.000	A
D-ABC	258	388	0.664	257	1.9	27.373	D
C-ABD	282	767	0.368	282	1.0	7.465	A
C-D	0			0			
C-A	251			251			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	409	0.000	0	0.0	0.000	A
A-B	298			298			
A-C	0			0			
A-D	0	462	0.000	0	0.0	0.000	A
D-ABC	210	418	0.503	214	1.0	17.869	C
C-ABD	201	726	0.276	202	0.6	6.906	A
C-D	0			0			
C-A	234			234			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	0	430	0.000	0	0.0	0.000	A
A-B	250			250			
A-C	0			0			
A-D	0	481	0.000	0	0.0	0.000	A
D-ABC	176	440	0.400	178	0.7	13.794	B

C-ABD	152	697	0.218	153	0.4	6.641	A
C-D	0			0			
C-A	213			213			

Queue Variation Results for each time segment

16:00 - 16:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.65	0.55	1.00	1.40	1.45			N/A	N/A
C-ABD	0.41	0.00	0.00	0.41	0.41			N/A	N/A

16:15 - 16:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.97	0.15	0.98	1.34	1.71			N/A	N/A
C-ABD	0.59	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.82	0.03	0.31	2.86	9.21			N/A	N/A
C-ABD	0.94	0.03	0.26	0.94	0.94			N/A	N/A

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.89	0.03	0.29	1.89	8.26			N/A	N/A
C-ABD	0.96	0.04	0.37	2.37	4.20			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	1.05	0.05	0.51	2.35	3.48			N/A	N/A
C-ABD	0.62	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.00	0.00	0.00	0.00	0.00			N/A	N/A
A-D	0.00	0.00	0.00	0.00	0.00			N/A	N/A
D-ABC	0.68	0.04	0.38	1.55	2.52			N/A	N/A
C-ABD	0.43	0.00	0.00	0.43	0.43			N/A	N/A

APPENDIX 6

1.2.2 Calculating Tone Street

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
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Filename: picardy pearse street ballina 3.j9
 Path: X:\January 2024\Karl Ronan
 Report generation date: 08/02/2024 10:23:34

- »2026, AM
- »2026, PM
- »2026 no const, AM
- »2026 no const, PM

Summary of junction performance

	AM									PM								
	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2026																		
Stream B-C	D1	1.3	4.4	15.00	0.57	B	6.32	A	8 % [Stream B-A]	D2	2.0	8.6	18.73	0.68	C	8.50	A	6 % [Stream B-A]
Stream B-A		1.0	4.7	26.29	0.50	D					1.0	4.8	27.04	0.50	D			
Stream C-AB		0.0	~1	0.00	0.00	A					0.0	~1	0.00	0.00	A			
2026 no const																		
Stream B-C	D3	1.1	3.6	13.30	0.54	B	7.14	A	20 % [Stream B-A]	D4	1.8	6.5	16.40	0.65	C	10.15	B	15 % [Stream B-A]
Stream B-A		0.7	3.5	19.67	0.43	C					0.7	3.5	19.98	0.43	C			
Stream C-AB		0.0	~1	0.00	0.00	A					0.0	~1	0.00	0.00	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

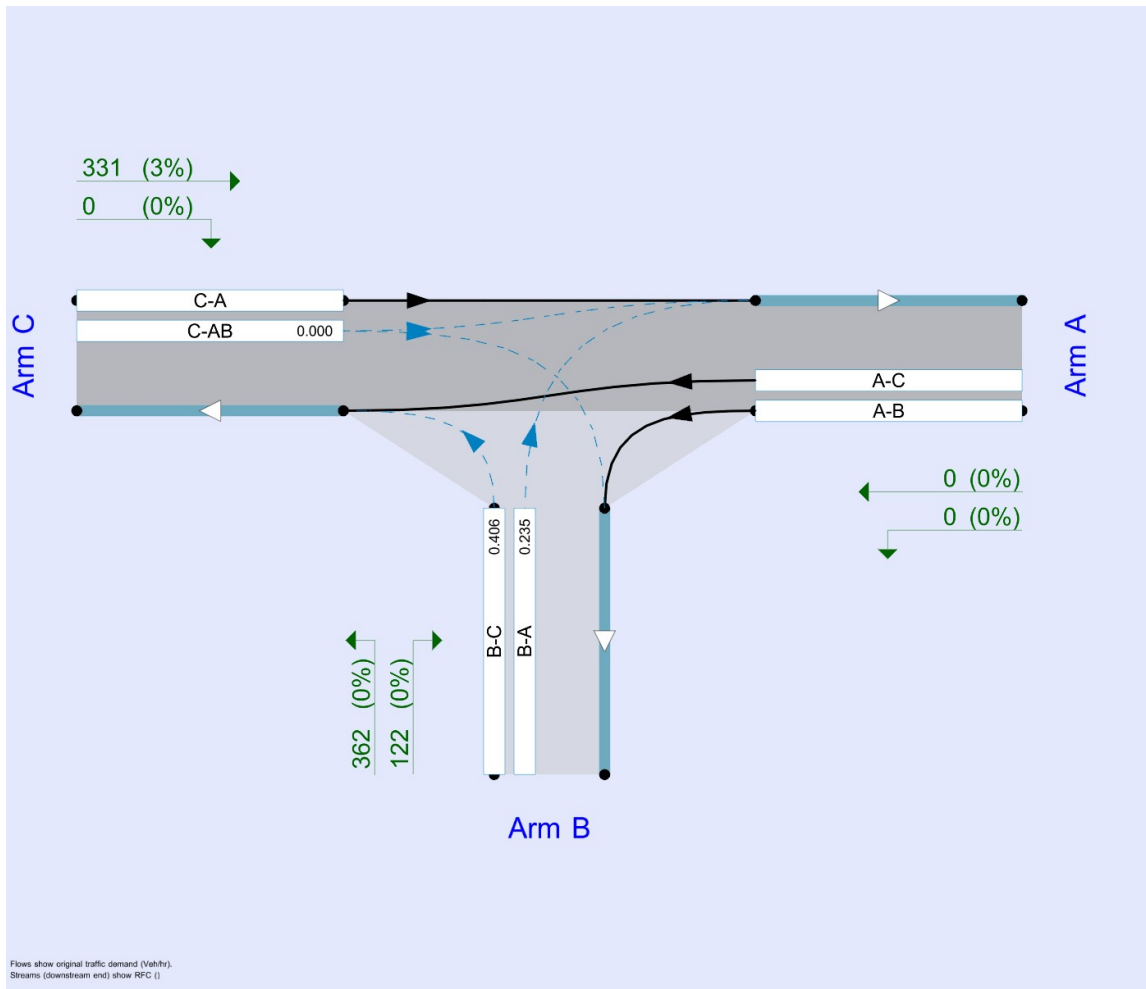
File summary

File Description

Title	
Location	
Site number	
Date	04/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\karl.ronan
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026	AM	ONE HOUR	00:00	01:30	15
D2	2026	PM	ONE HOUR	00:00	01:30	15
D3	2026 no const	AM	ONE HOUR	00:00	01:30	15
D4	2026 no const	PM	ONE HOUR	00:00	01:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		6.32	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	8	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	7.50	7.50	7.50	7.00	3.00		1.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	450	0.082	0.207	0.130	0.296
B-C	722	0.111	0.280	-	-
C-B	574	0.222	0.222	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	413	100.000
C		✓	793	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	0
	B	126	0	287
	C	793	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	3	0	3
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-C	0.57	15.00	1.3	4.4	B
B-A	0.50	26.29	1.0	4.7	D
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	639	0.338	214	0.5	8.442	A
B-A	95	345	0.275	93	0.4	14.229	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	597			597			
A-B	0			0			
A-C	0			0			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	258	611	0.422	257	0.7	10.140	B
B-A	113	319	0.355	113	0.5	17.362	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	713			713			
A-B	0			0			
A-C	0			0			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	316	559	0.566	314	1.3	14.575	B
B-A	139	276	0.502	137	1.0	25.518	D
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	873			873			
A-B	0			0			
A-C	0			0			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	316	556	0.569	316	1.3	14.999	B
B-A	139	275	0.504	139	1.0	26.289	D
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	873			873			
A-B	0			0			
A-C	0			0			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	258	608	0.424	260	0.8	10.411	B
B-A	113	318	0.356	115	0.6	17.847	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	713			713			
A-B	0			0			
A-C	0			0			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	636	0.340	217	0.5	8.604	A
B-A	95	344	0.275	96	0.4	14.511	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	597			597			
A-B	0			0			
A-C	0			0			

Queue Variation Results for each time segment

00:00 - 00:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.50	0.50	1.00	1.40	1.45			N/A	N/A
B-A	0.37	0.00	0.00	0.37	0.37			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:15 - 00:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.72	0.14	0.89	1.38	1.44			N/A	N/A
B-A	0.53	0.53	1.00	1.40	1.45			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:30 - 00:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.26	0.03	0.27	1.26	2.47			N/A	N/A
B-A	0.96	0.03	0.28	0.96	2.57			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:45 - 01:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.29	0.03	0.28	1.29	4.38			N/A	N/A
B-A	0.99	0.03	0.30	1.29	4.72			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:00 - 01:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.75	0.07	0.74	1.45	1.45			N/A	N/A
B-A	0.57	0.05	0.49	1.34	1.45			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:15 - 01:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.52	0.04	0.42	1.33	1.47			N/A	N/A
B-A	0.39	0.03	0.35	1.16	1.35			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2026, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		8.50	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	6	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	485	100.000
C		✓	682	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	0
	B	122	0	363
	C	682	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-C	0.68	18.73	2.0	8.6	C
B-A	0.50	27.04	1.0	4.8	D
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	273	665	0.411	271	0.7	9.065	A
B-A	92	356	0.258	90	0.3	13.480	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	513			513			
A-B	0			0			
A-C	0			0			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	326	640	0.510	325	1.0	11.365	B
B-A	110	325	0.338	109	0.5	16.628	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	613			613			
A-B	0			0			
A-C	0			0			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	400	594	0.673	396	1.9	17.849	C
B-A	134	270	0.498	133	0.9	25.943	D
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	751			751			
A-B	0			0			
A-C	0			0			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	400	591	0.676	399	2.0	18.728	C
B-A	134	267	0.503	134	1.0	27.040	D
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	751			751			
A-B	0			0			
A-C	0			0			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	326	637	0.512	330	1.1	11.857	B
B-A	110	323	0.340	111	0.5	17.194	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	613			613			
A-B	0			0			
A-C	0			0			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	273	663	0.412	275	0.7	9.307	A
B-A	92	355	0.259	93	0.4	13.755	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	513			513			
A-B	0			0			
A-C	0			0			

Queue Variation Results for each time segment

00:00 - 00:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.69	0.55	1.00	1.40	1.45			N/A	N/A
B-A	0.34	0.00	0.00	0.34	0.34			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:15 - 00:30

	Mean	Q05	Q50	Q90	Q95	Percentile	Marker	Probability of reaching or	Probability of exactly reaching

Stream	(Veh)	(Veh)	(Veh)	(Veh)	(Veh)	message	message	exceeding marker	marker
B-C	1.01	0.10	0.96	1.63	1.94			N/A	N/A
B-A	0.50	0.00	0.00	0.50	0.50			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:30 - 00:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.94	0.03	0.30	1.94	8.60			N/A	N/A
B-A	0.94	0.03	0.27	0.94	2.41			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:45 - 01:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.02	0.03	0.28	2.02	6.97			N/A	N/A
B-A	0.98	0.03	0.30	1.51	4.82			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:00 - 01:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.08	0.06	0.68	2.28	3.24			N/A	N/A
B-A	0.53	0.05	0.46	1.30	1.42			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:15 - 01:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.71	0.04	0.40	1.59	2.47			N/A	N/A
B-A	0.36	0.03	0.33	1.09	1.31			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2026 no const, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		7.14	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 no const	AM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	412	100.000
C		✓	467	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	0
	B	125	0	287
	C	467	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	3	0	3
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-C	0.54	13.30	1.1	3.6	B
B-A	0.43	19.67	0.7	3.5	C
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	646	0.335	214	0.5	8.299	A
B-A	94	376	0.250	93	0.3	12.641	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	352			352			
A-B	0			0			
A-C	0			0			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	258	625	0.413	257	0.7	9.767	A
B-A	112	356	0.315	112	0.5	14.692	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	420			420			
A-B	0			0			
A-C	0			0			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	316	588	0.538	314	1.1	13.074	B
B-A	138	321	0.428	137	0.7	19.366	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	514			514			
A-B	0			0			
A-C	0			0			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	316	586	0.539	316	1.1	13.304	B
B-A	138	320	0.430	138	0.7	19.674	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	514			514			
A-B	0			0			
A-C	0			0			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	258	623	0.414	260	0.7	9.950	A
B-A	112	356	0.316	113	0.5	14.932	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	420			420			
A-B	0			0			
A-C	0			0			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	216	644	0.335	217	0.5	8.439	A
B-A	94	376	0.250	95	0.3	12.832	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	352			352			
A-B	0			0			
A-C	0			0			

Queue Variation Results for each time segment

00:00 - 00:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.50	0.00	0.00	0.50	0.50			N/A	N/A
B-A	0.33	0.00	0.00	0.33	0.33			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:15 - 00:30

	Mean	Q05	Q50	Q90	Q95	Percentile	Marker	Probability of reaching or	Probability of exactly reaching

Stream	(Veh)	(Veh)	(Veh)	(Veh)	(Veh)	message	message	exceeding marker	marker
B-C	0.69	0.16	0.91	1.38	1.44			N/A	N/A
B-A	0.45	0.00	0.00	0.45	0.45			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:30 - 00:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.13	0.03	0.27	1.13	1.15			N/A	N/A
B-A	0.72	0.03	0.26	0.72	0.72			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:45 - 01:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.15	0.03	0.28	1.15	3.63			N/A	N/A
B-A	0.74	0.03	0.30	1.44	3.49			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:00 - 01:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.72	0.07	0.77	1.41	1.50			N/A	N/A
B-A	0.47	0.04	0.41	1.25	1.37			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:15 - 01:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.51	0.04	0.43	1.30	1.42			N/A	N/A
B-A	0.34	0.03	0.29	0.81	1.16			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2026 no const, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		10.15	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	15	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 no const	PM	ONE HOUR	00:00	01:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	0	100.000
B		✓	484	100.000
C		✓	331	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	0
	B	122	0	362
	C	331	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-C	0.65	16.40	1.8	6.5	C
B-A	0.43	19.98	0.7	3.5	C
C-AB	0.00	0.00	0.0	~1	A
C-A					
A-B					
A-C					

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	273	671	0.406	270	0.7	8.907	A
B-A	92	390	0.235	91	0.3	11.962	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	249			249			
A-B	0			0			
A-C	0			0			

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	325	652	0.499	324	1.0	10.929	B
B-A	110	365	0.301	109	0.4	14.057	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	298			298			
A-B	0			0			
A-C	0			0			

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	399	619	0.644	396	1.7	15.891	C
B-A	134	316	0.425	133	0.7	19.523	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	364			364			
A-B	0			0			
A-C	0			0			

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	399	617	0.646	398	1.8	16.396	C
B-A	134	314	0.427	134	0.7	19.976	C
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	364			364			
A-B	0			0			
A-C	0			0			

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	325	651	0.500	328	1.0	11.277	B
B-A	110	363	0.302	111	0.4	14.346	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	298			298			
A-B	0			0			
A-C	0			0			

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	273	670	0.407	274	0.7	9.117	A
B-A	92	389	0.236	92	0.3	12.150	B
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	249			249			
A-B	0			0			
A-C	0			0			

Queue Variation Results for each time segment

00:00 - 00:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.67	0.55	1.00	1.40	1.45			N/A	N/A
B-A	0.30	0.00	0.00	0.30	0.30			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:15 - 00:30

	Mean	Q05	Q50	Q90	Q95	Percentile	Marker	Probability of reaching or	Probability of exactly reaching

Stream	(Veh)	(Veh)	(Veh)	(Veh)	(Veh)	message	message	exceeding marker	marker
B-C	0.97	0.12	0.96	1.46	1.80			N/A	N/A
B-A	0.42	0.00	0.00	0.42	0.42			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:30 - 00:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.73	0.03	0.29	1.73	6.47			N/A	N/A
B-A	0.71	0.03	0.26	0.71	0.71			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

00:45 - 01:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.77	0.03	0.28	1.77	5.20			N/A	N/A
B-A	0.73	0.03	0.30	1.06	3.53			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:00 - 01:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.02	0.06	0.76	1.95	2.77			N/A	N/A
B-A	0.44	0.04	0.37	1.19	1.34			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

01:15 - 01:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.70	0.04	0.43	1.44	2.04			N/A	N/A
B-A	0.31	0.03	0.28	0.50	0.97			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

APPENDIX 6

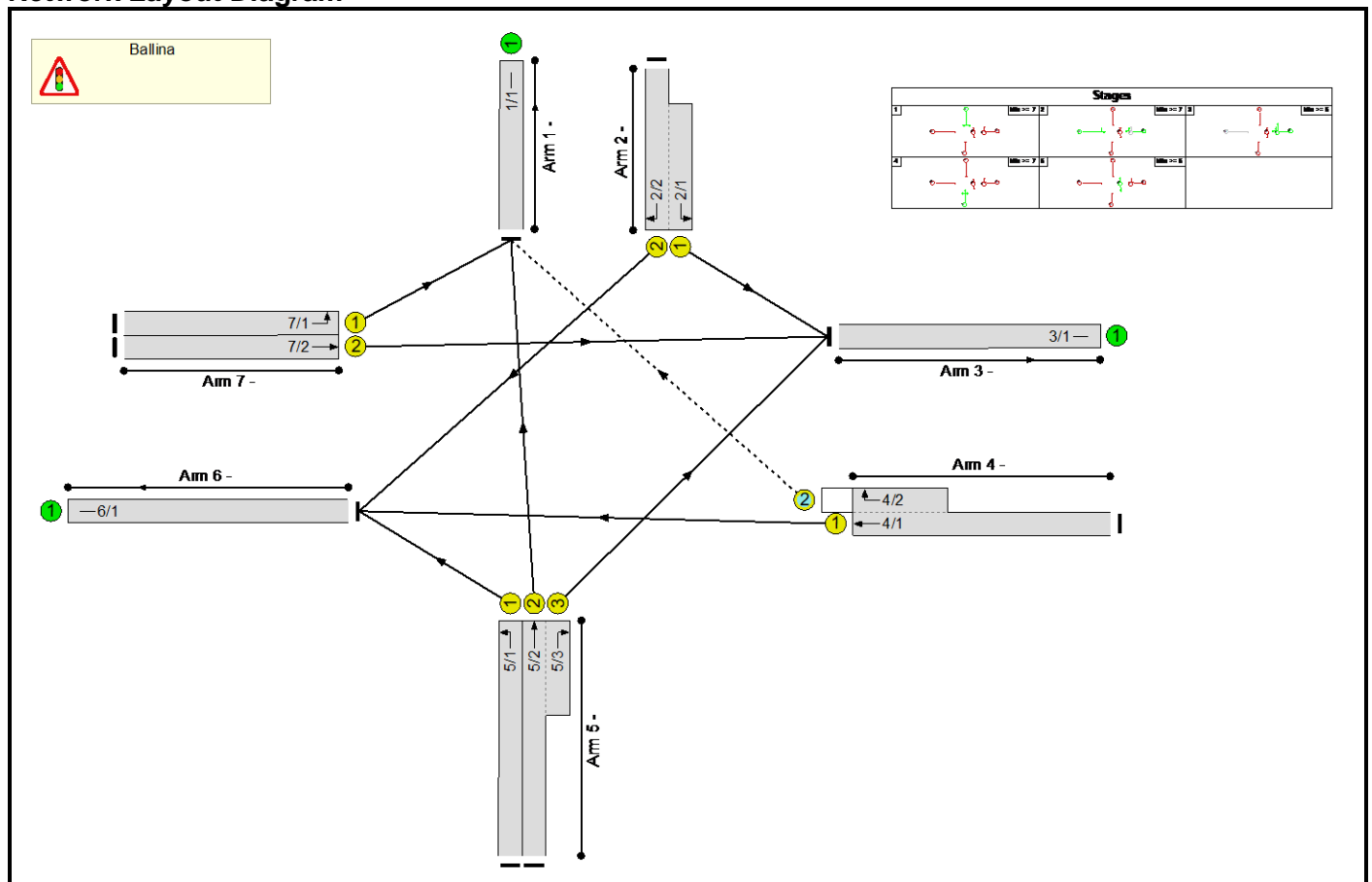
1.3 LinSig Analysis of the Junction of Bury Street / Kevin Barry Street / Teeling Street / Lord Edward Street

Full Input Data And Results
Full Input Data And Results

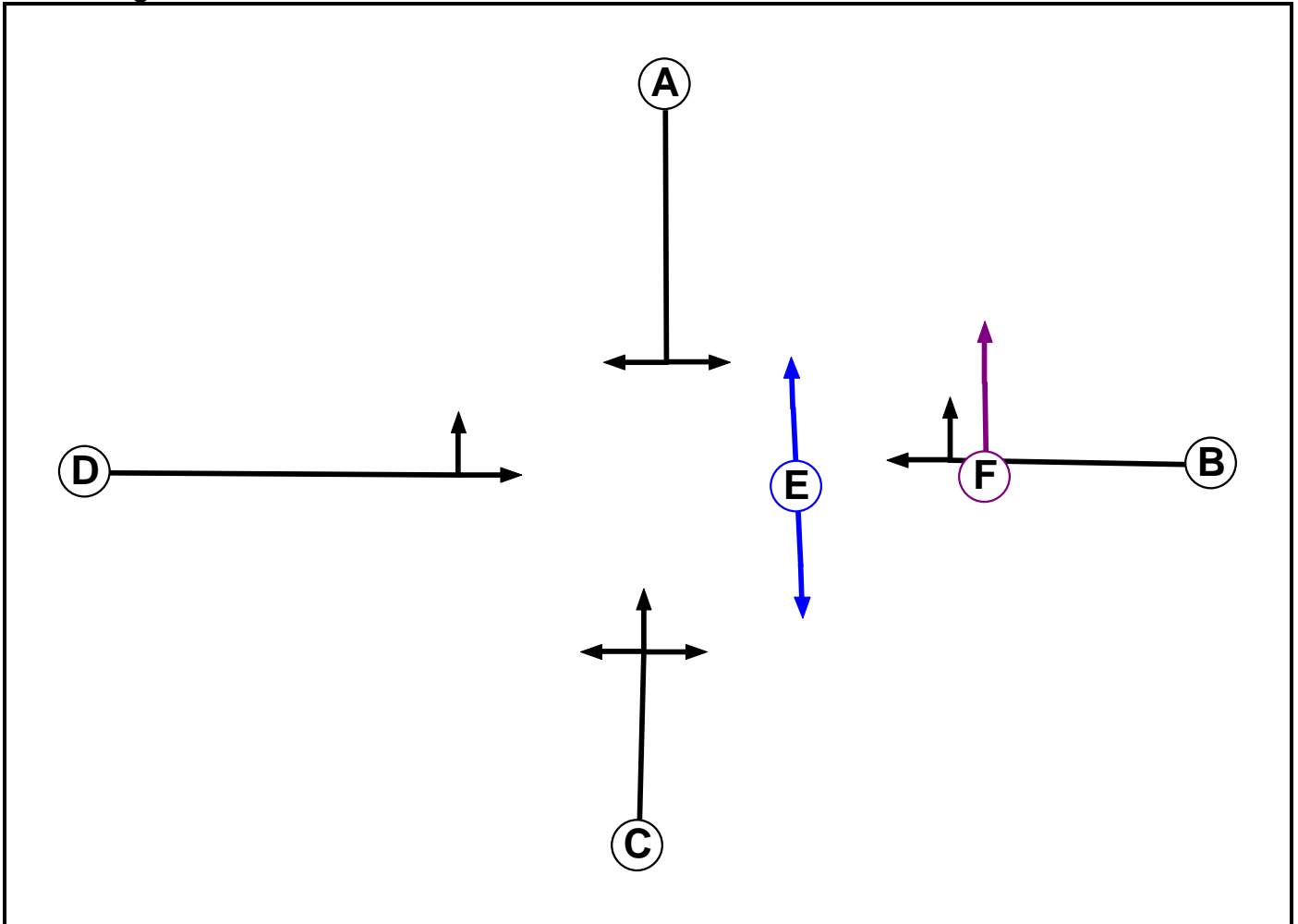
User and Project Details

Project:	Ballina FRS
Title:	
Location:	
Additional detail:	
File name:	Junction of Bury St./Teeling St./Lord Edward St/Kevin Barry St/.lsg3x
Author:	
Company:	
Address:	

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	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		6	6
F	Ind. Arrow	B	5	5

Full Input Data And Results

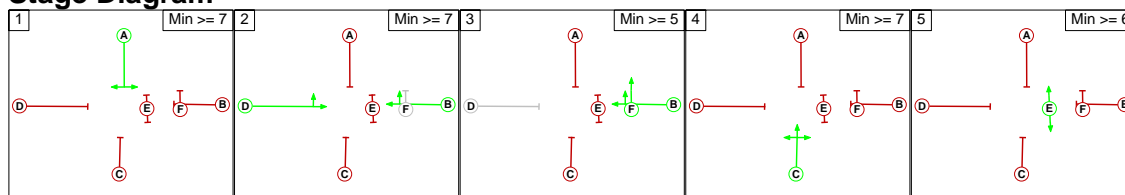
Phase Intergrens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		5	5	5	5	5
	B	5		5	-	5	-
	C	5	5		5	5	5
	D	5	-	5		5	-
	E	8	8	8	8		8
	F	5	-	5	-	5	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage				
		1	2	3	4	5
From Stage	1		5	5	5	5
	2	5		0	5	5
	3	5	2		5	5
	4	5	5	5		5
	5	8	8	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Ballina											
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)
4/2	1/1 (Right)	1439	0	7/1	1.09	All	2.00	-	0.50	2	2.00
				7/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Ballina												
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	U		2	3	60.0	Inf	-	-	-	-	-	-
2/1	U	A	2	3	8.0	User	1300	-	-	-	-	-
2/2	U	A	2	3	60.0	User	1600	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U	B	2	3	60.0	User	1800	-	-	-	-	-
4/2	O	B F	2	3	6.0	User	1600	-	-	-	-	-
5/1	U	C	2	3	9.0	User	1300	-	-	-	-	-
5/2	U	C	2	3	15.0	User	1800	-	-	-	-	-
5/3	U	C	2	3	6.0	User	1600	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U	D	2	3	60.0	User	1300	-	-	-	-	-
7/2	U	D	2	3	60.0	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM no construction'	08:00	09:00	01:00	
2: 'PM no construction'	16:00	17:00	01:00	
3: 'Am construction'	08:00	09:00	01:00	
4: 'PM construction'	16:00	17:00	01:00	

Scenario 1: 'Scenario 1' (FG1: 'AM no construction', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination	
	Tot.	-
Tot.	-	-

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: Scenario 1
Junction: Ballina	
1/1	713
2/1 (short)	106
2/2 (with short)	275(In) 169(Out)
3/1	531
4/1 (with short)	277(In) 227(Out)
4/2 (short)	50
5/1	78
5/2 (with short)	436(In) 372(Out)
5/3 (short)	64
6/1	474
7/1	291
7/2	361

Lane Saturation Flows

Junction: Ballina								
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	Infinite Saturation Flow						Inf	Inf
2/1	This lane uses a directly entered Saturation Flow						1300	1300
2/2	This lane uses a directly entered Saturation Flow						1600	1600
3/1	Infinite Saturation Flow						Inf	Inf
4/1	This lane uses a directly entered Saturation Flow						1800	1800
4/2	This lane uses a directly entered Saturation Flow						1600	1600
5/1	This lane uses a directly entered Saturation Flow						1300	1300
5/2	This lane uses a directly entered Saturation Flow						1800	1800
5/3	This lane uses a directly entered Saturation Flow						1600	1600
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1300	1300
7/2	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: 'New Scenario' (FG2: 'PM no construction', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination	
Origin		Tot.	
	Tot.		-

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: New Scenario
Junction: Ballina	
1/1	584
2/1 (short)	134
2/2 (with short)	314(In) 180(Out)
3/1	690
4/1 (with short)	334(In) 256(Out)
4/2 (short)	78
5/1	153
5/2 (with short)	461(In) 312(Out)
5/3 (short)	149
6/1	589
7/1	194
7/2	407

Lane Saturation Flows

Junction: Ballina								
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	Infinite Saturation Flow						Inf	Inf
2/1	This lane uses a directly entered Saturation Flow						1300	1300
2/2	This lane uses a directly entered Saturation Flow						1600	1600
3/1	Infinite Saturation Flow						Inf	Inf
4/1	This lane uses a directly entered Saturation Flow						1800	1800
4/2	This lane uses a directly entered Saturation Flow						1600	1600
5/1	This lane uses a directly entered Saturation Flow						1300	1300
5/2	This lane uses a directly entered Saturation Flow						1800	1800
5/3	This lane uses a directly entered Saturation Flow						1600	1600
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1300	1300
7/2	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: 'New Scenario' (FG3: 'Am construction', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination	
Origin		Tot.	
	Tot.		-

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: New Scenario
Junction: Ballina	
1/1	713
2/1 (short)	106
2/2 (with short)	275(In) 169(Out)
3/1	531
4/1 (with short)	277(In) 227(Out)
4/2 (short)	50
5/1	382
5/2 (with short)	436(In) 372(Out)
5/3 (short)	64
6/1	778
7/1	291
7/2	361

Lane Saturation Flows

Junction: Ballina								
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	Infinite Saturation Flow						Inf	Inf
2/1	This lane uses a directly entered Saturation Flow						1300	1300
2/2	This lane uses a directly entered Saturation Flow						1600	1600
3/1	Infinite Saturation Flow						Inf	Inf
4/1	This lane uses a directly entered Saturation Flow						1800	1800
4/2	This lane uses a directly entered Saturation Flow						1600	1600
5/1	This lane uses a directly entered Saturation Flow						1300	1300
5/2	This lane uses a directly entered Saturation Flow						1800	1800
5/3	This lane uses a directly entered Saturation Flow						1600	1600
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1300	1300
7/2	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: 'New Scenario' (FG4: 'PM construction', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination	
Origin		Tot.	
	Tot.		-

Full Input Data And Results

Traffic Lane Flows

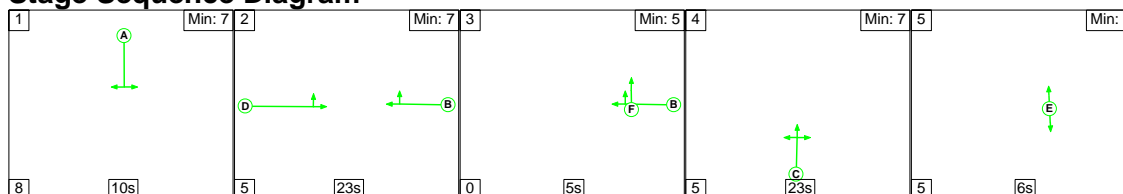
Lane	Scenario 4: New Scenario
Junction: Ballina	
1/1	584
2/1 (short)	134
2/2 (with short)	314(In) 180(Out)
3/1	690
4/1 (with short)	334(In) 256(Out)
4/2 (short)	78
5/1	480
5/2 (with short)	461(In) 312(Out)
5/3 (short)	149
6/1	916
7/1	194
7/2	407

Lane Saturation Flows

Junction: Ballina								
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	Infinite Saturation Flow						Inf	Inf
2/1	This lane uses a directly entered Saturation Flow						1300	1300
2/2	This lane uses a directly entered Saturation Flow						1600	1600
3/1	Infinite Saturation Flow						Inf	Inf
4/1	This lane uses a directly entered Saturation Flow						1800	1800
4/2	This lane uses a directly entered Saturation Flow						1600	1600
5/1	This lane uses a directly entered Saturation Flow						1300	1300
5/2	This lane uses a directly entered Saturation Flow						1800	1800
5/3	This lane uses a directly entered Saturation Flow						1600	1600
6/1	Infinite Saturation Flow						Inf	Inf
7/1	This lane uses a directly entered Saturation Flow						1300	1300
7/2	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: 'Scenario 1' (FG1: 'AM no construction', Plan 1: 'Network Control Plan 1')

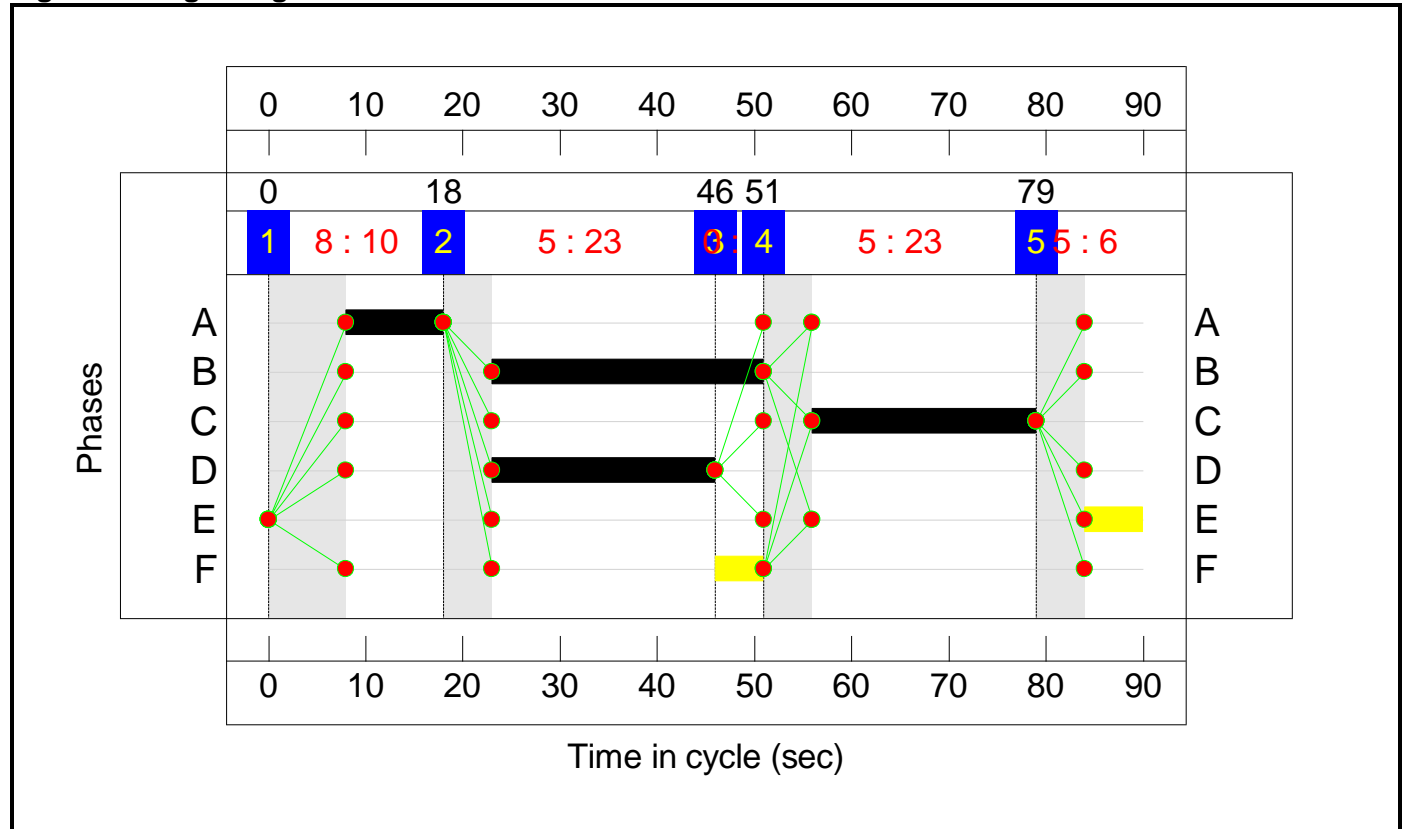
Stage Sequence Diagram



Stage Timings


Stage	1	2	3	4	5
Duration	10	23	5	23	6
Change Point	0	18	46	51	79

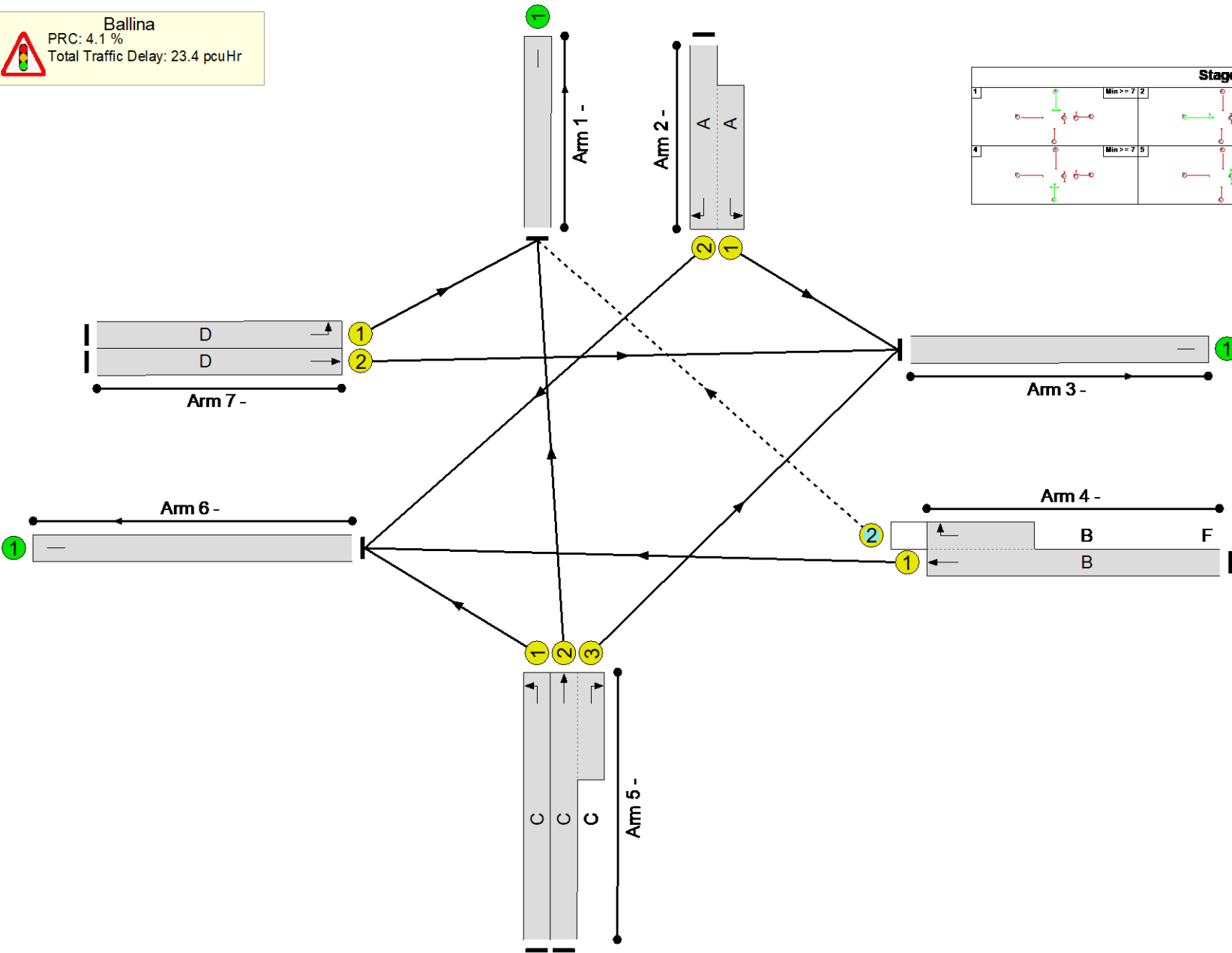
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Ballina
 PRC: 4.1 %
 Total Traffic Delay: 23.4 pcuHr



Stages

1	Min >= 7 2	Min >= 7 3	Min >= 5
4	Min >= 7 5	Min >= 8	

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	-	-		-	-	-	-	-	-	86.4%
Ballina	-	-	N/A	-	-		-	-	-	-	-	-	86.4%
1/1		U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
2/2+2/1	Left Right	U	N/A	N/A	A		1	10	-	275	1600:1300	196+159	86.4 : 66.7%
3/1		U	N/A	N/A	-		-	-	-	531	Inf	Inf	0.0%
4/1+4/2	Right Ahead	U+O	N/A	N/A	B	F	1	28	5	277	1800:1600	512+113	44.3 : 44.3%
5/1	Left	U	N/A	N/A	C		1	23	-	78	1300	347	22.5%
5/2+5/3	Ahead Right	U	N/A	N/A	C		1	23	-	436	1800:1600	441+76	84.3 : 84.3%
6/1		U	N/A	N/A	-		-	-	-	474	Inf	Inf	0.0%
7/1	Left	U	N/A	N/A	D		1	23	-	291	1300	347	83.9%
7/2	Ahead	U	N/A	N/A	D		1	23	-	361	1800	480	75.2%

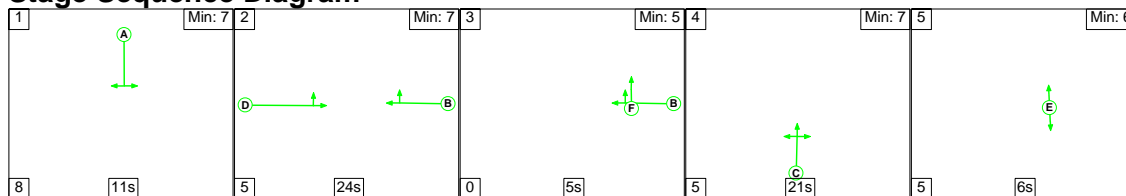
Full Input Data And Results

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	-	-	40	9	1	14.5	8.6	0.2	23.4	-	-	-	-
Ballina	-	-	40	9	1	14.5	8.6	0.2	23.4	-	-	-	-
1/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2+2/1	275	275	-	-	-	2.9	1.7	-	4.6	60.1	4.1	1.7	5.8
3/1	531	531	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	277	277	40	9	1	1.8	0.4	0.2	2.4	31.4	4.4	0.4	4.7
5/1	78	78	-	-	-	0.6	0.1	-	0.7	32.5	1.5	0.1	1.7
5/2+5/3	436	436	-	-	-	3.7	2.5	-	6.2	51.2	9.1	2.5	11.7
6/1	474	474	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	291	291	-	-	-	2.5	2.4	-	4.9	60.9	6.9	2.4	9.3
7/2	361	361	-	-	-	3.0	1.5	-	4.5	45.0	8.2	1.5	9.7
C1			PRC for Signalled Lanes (%):		4.1	Total Delay for Signalled Lanes (pcuHr):		23.35	Cycle Time (s):		90		
			PRC Over All Lanes (%):		4.1	Total Delay Over All Lanes(pcuHr):		23.35					

Full Input Data And Results

Scenario 2: 'New Scenario' (FG2: 'PM no construction', Plan 1: 'Network Control Plan 1')

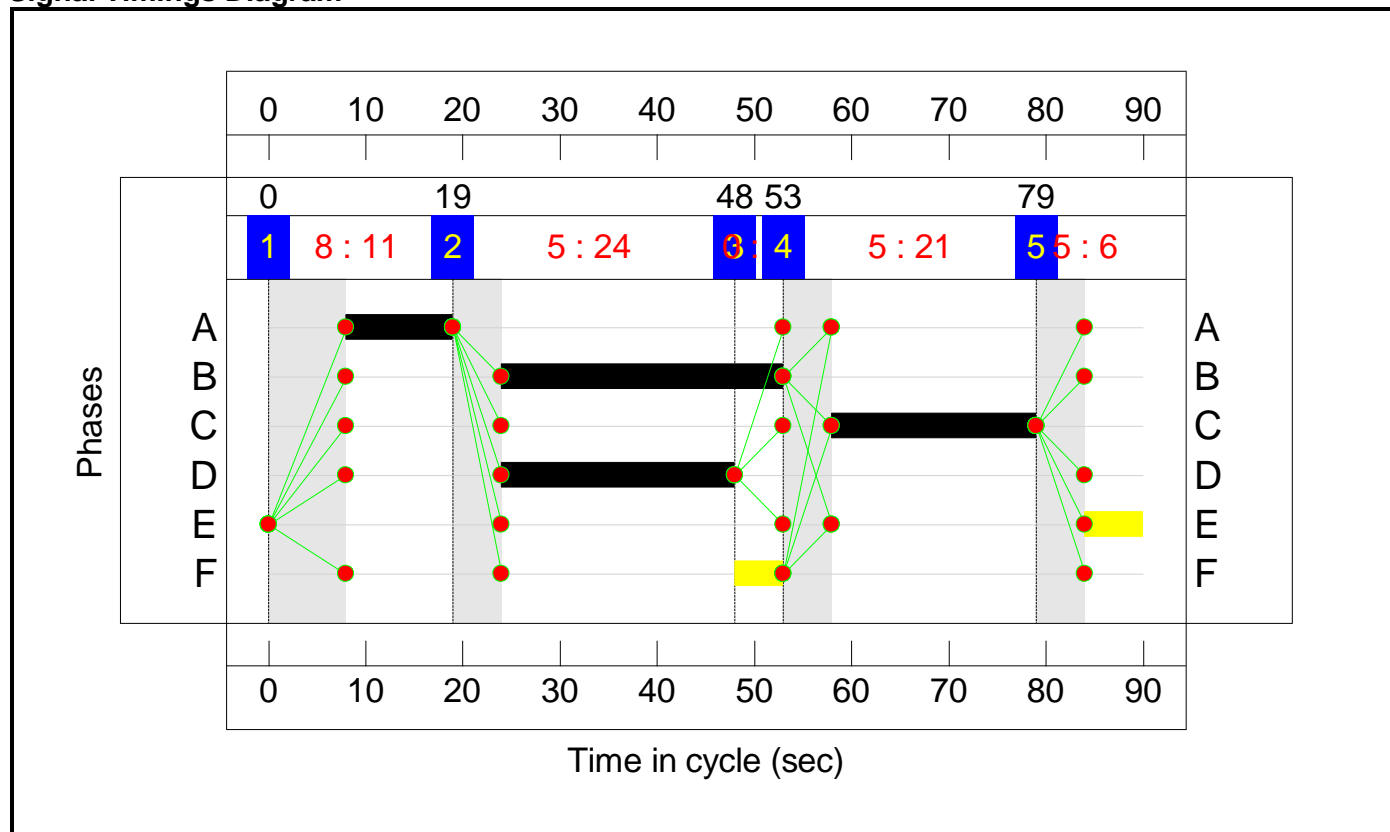
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	11	24	5	21	6
Change Point	0	19	48	53	79


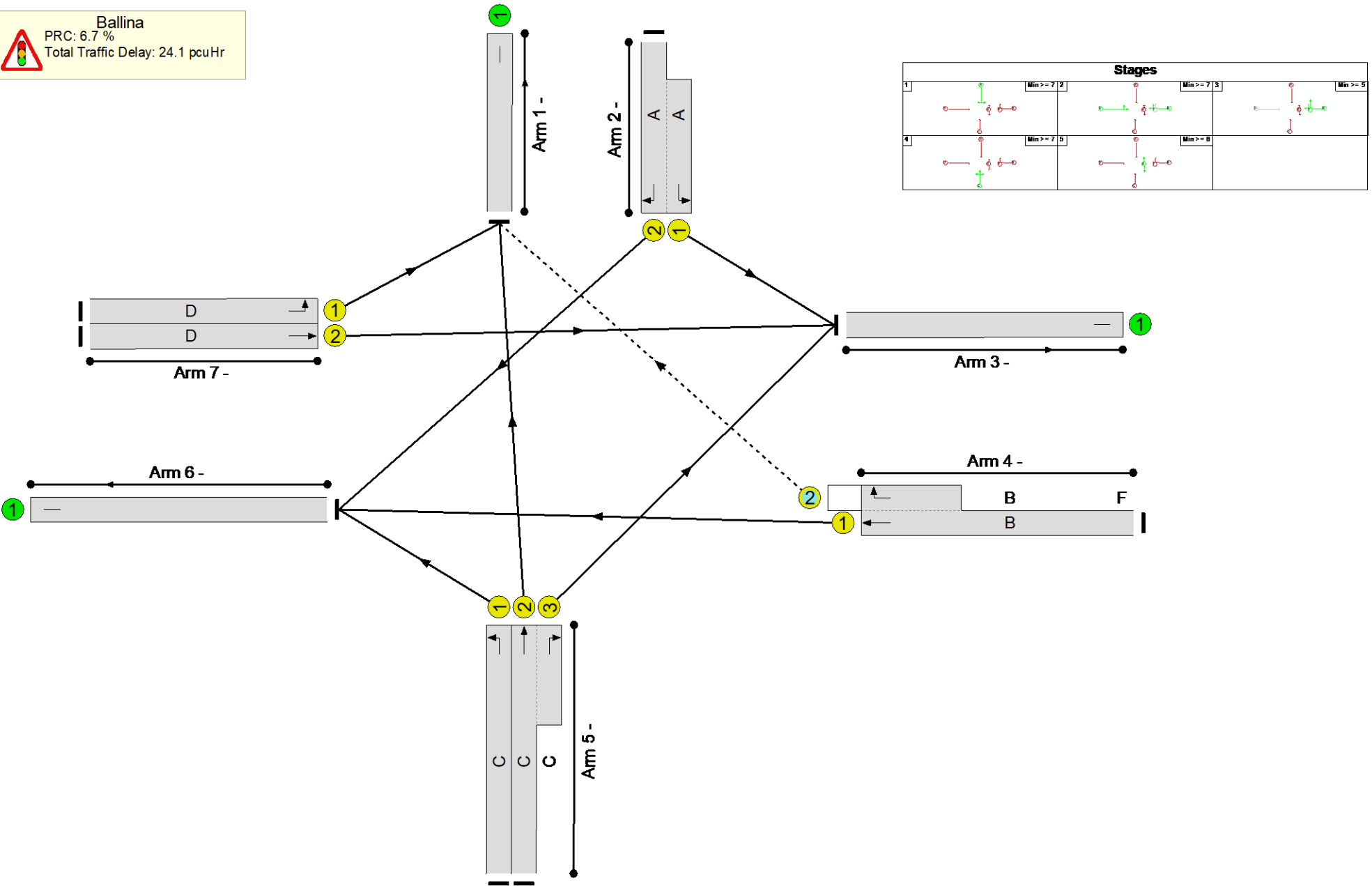
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

Ballina
 PRC: 6.7 %
 Total Traffic Delay: 24.1 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 (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
Ballina	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
1/1		U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
2/2+2/1	Left Right	U	N/A	N/A	A		1	11	-	314	1600:1300	213+173	84.4 : 77.3%
3/1		U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
4/1+4/2	Right Ahead	U+O	N/A	N/A	B	F	1	29	5	334	1800:1600	508+155	50.4 : 50.4%
5/1	Left	U	N/A	N/A	C		1	21	-	153	1300	318	48.1%
5/2+5/3	Ahead Right	U	N/A	N/A	C		1	21	-	461	1800:1600	370+177	84.3 : 84.3%
6/1		U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
7/1	Left	U	N/A	N/A	D		1	24	-	194	1300	361	53.7%
7/2	Ahead	U	N/A	N/A	D		1	24	-	407	1800	500	81.4%

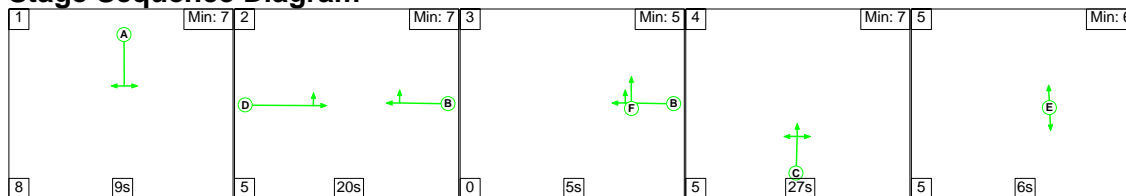
Full Input Data And Results

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	-	-	52	24	2	15.5	8.2	0.4	24.1	-	-	-	-
Ballina	-	-	52	24	2	15.5	8.2	0.4	24.1	-	-	-	-
1/1	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2+2/1	314	314	-	-	-	3.3	2.0	-	5.4	61.4	4.3	2.0	6.4
3/1	690	690	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	334	334	52	24	2	2.1	0.5	0.4	3.0	32.3	4.9	0.5	5.4
5/1	153	153	-	-	-	1.2	0.5	-	1.7	40.0	3.3	0.5	3.7
5/2+5/3	461	461	-	-	-	3.9	2.5	-	6.4	50.3	7.8	2.5	10.3
6/1	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	194	194	-	-	-	1.5	0.6	-	2.1	38.3	4.1	0.6	4.7
7/2	407	407	-	-	-	3.4	2.1	-	5.5	48.9	9.4	2.1	11.5
			C1	PRC for Signalled Lanes (%):	6.7	Total Delay for Signalled Lanes (pcuHr):		24.08	Cycle Time (s):		90		
				PRC Over All Lanes (%):	6.7	Total Delay Over All Lanes(pcuHr):		24.08					

Full Input Data And Results

Scenario 3: 'New Scenario' (FG3: 'Am construction', Plan 1: 'Network Control Plan 1')

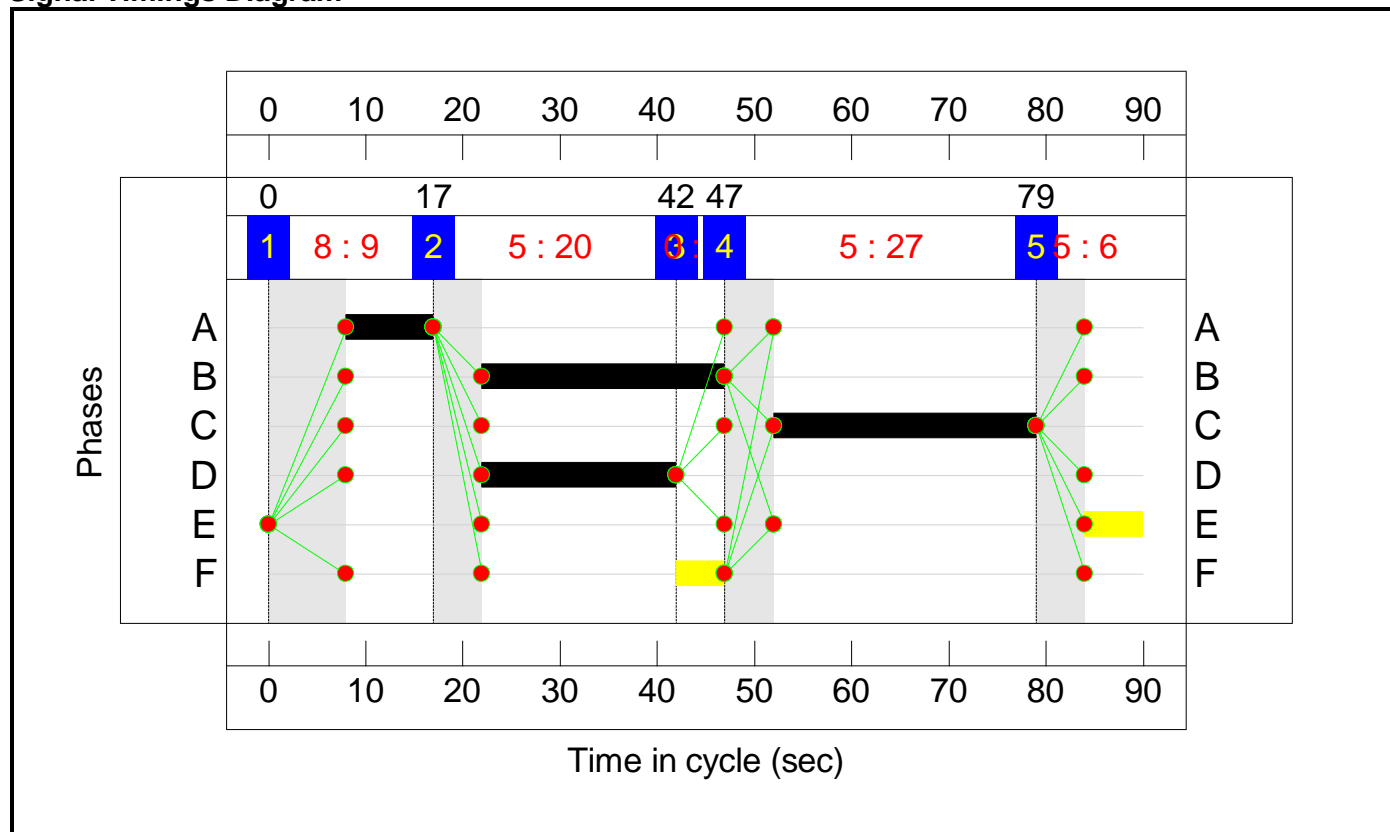
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	9	20	5	27	6
Change Point	0	17	42	47	79


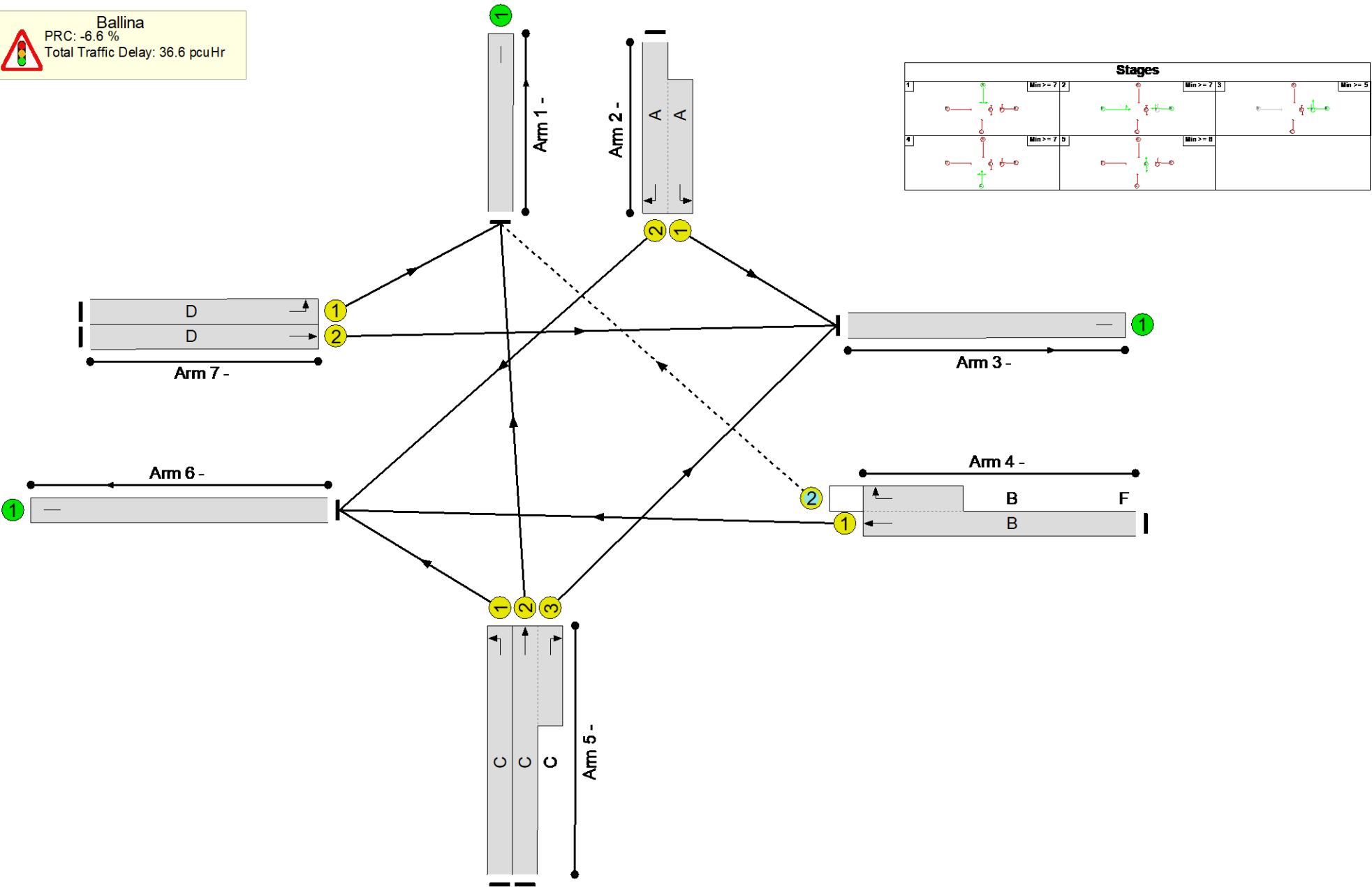
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

Ballina
 PRC: -6.6 %
 Total Traffic Delay: 36.6 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 (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	95.9%
Ballina	-	-	N/A	-	-		-	-	-	-	-	-	95.9%
1/1		U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
2/2+2/1	Left Right	U	N/A	N/A	A		1	9	-	275	1600:1300	178+144	95.1 : 73.4%
3/1		U	N/A	N/A	-		-	-	-	531	Inf	Inf	0.0%
4/1+4/2	Right Ahead	U+O	N/A	N/A	B	F	1	25	5	277	1800:1600	464+102	48.9 : 48.9%
5/1	Left	U	N/A	N/A	C		1	27	-	382	1300	404	94.5%
5/2+5/3	Ahead Right	U	N/A	N/A	C		1	27	-	436	1800:1600	508+87	73.2 : 73.2%
6/1		U	N/A	N/A	-		-	-	-	778	Inf	Inf	0.0%
7/1	Left	U	N/A	N/A	D		1	20	-	291	1300	303	95.9%
7/2	Ahead	U	N/A	N/A	D		1	20	-	361	1800	420	86.0%

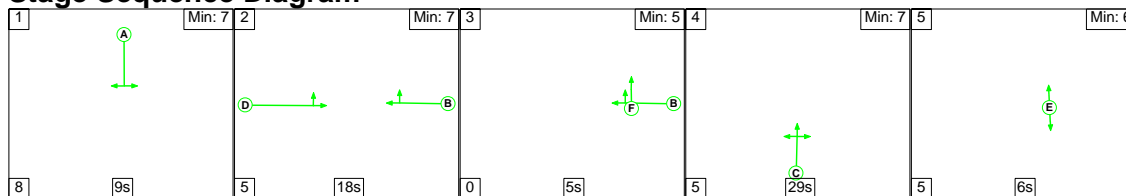
Full Input Data And Results

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	-	-	8	41	1	17.5	18.9	0.2	36.6	-	-	-	-
Ballina	-	-	8	41	1	17.5	18.9	0.2	36.6	-	-	-	-
1/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2+2/1	275	275	-	-	-	3.0	2.6	-	5.6	73.7	4.2	2.6	6.8
3/1	531	531	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	277	277	8	41	1	2.0	0.5	0.2	2.7	34.9	4.6	0.5	5.1
5/1	382	382	-	-	-	3.2	5.7	-	8.9	83.6	9.2	5.7	14.9
5/2+5/3	436	436	-	-	-	3.2	1.3	-	4.6	37.7	8.5	1.3	9.9
6/1	778	778	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	291	291	-	-	-	2.8	6.0	-	8.7	108.1	7.1	6.0	13.1
7/2	361	361	-	-	-	3.3	2.8	-	6.1	61.0	8.6	2.8	11.4
C1			PRC for Signalled Lanes (%):		-6.6	Total Delay for Signalled Lanes (pcuHr):		36.60	Cycle Time (s):		90		
			PRC Over All Lanes (%):		-6.6	Total Delay Over All Lanes(pcuHr):		36.60					

Full Input Data And Results

Scenario 4: 'New Scenario' (FG4: 'PM construction', Plan 1: 'Network Control Plan 1')

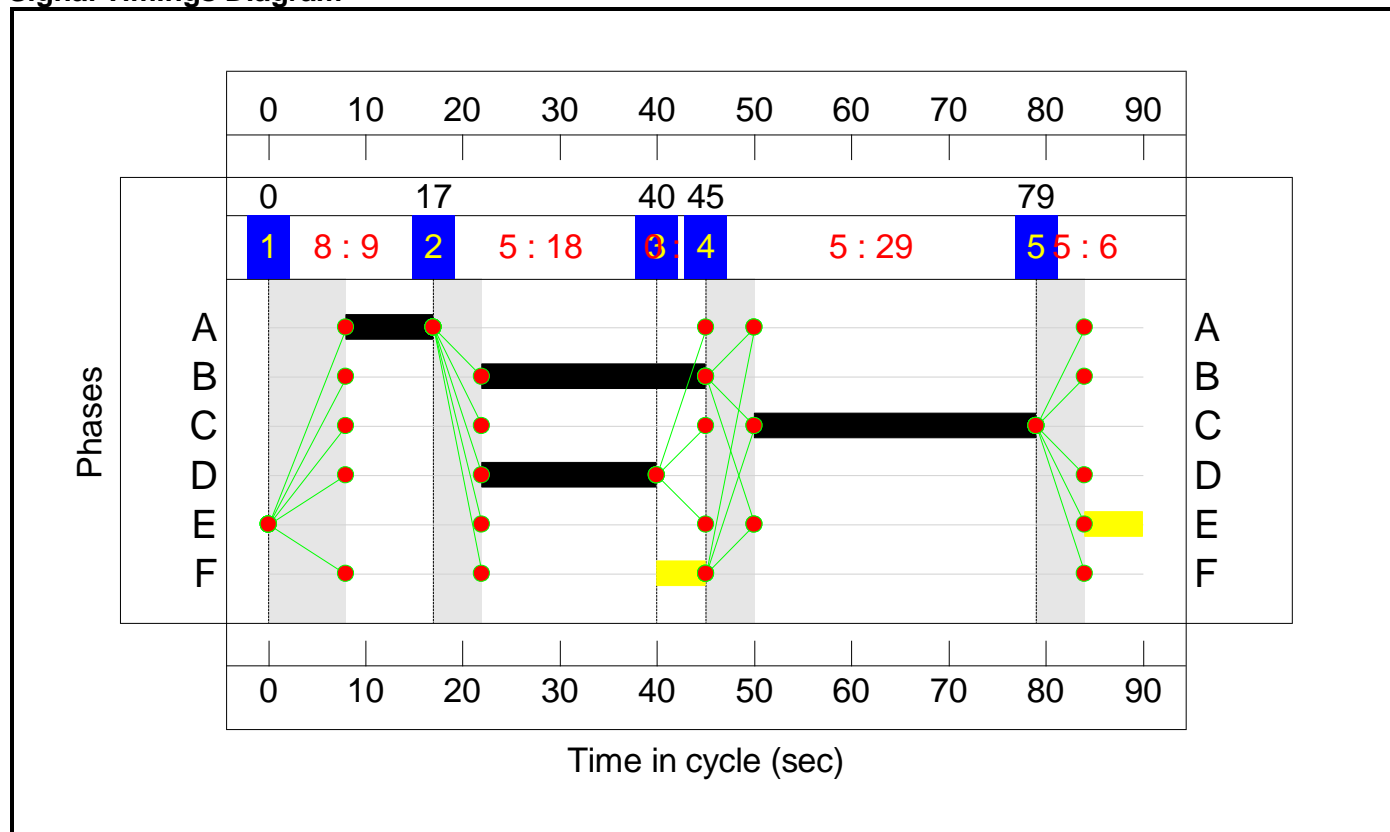
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	9	18	5	29	6
Change Point	0	17	40	45	79

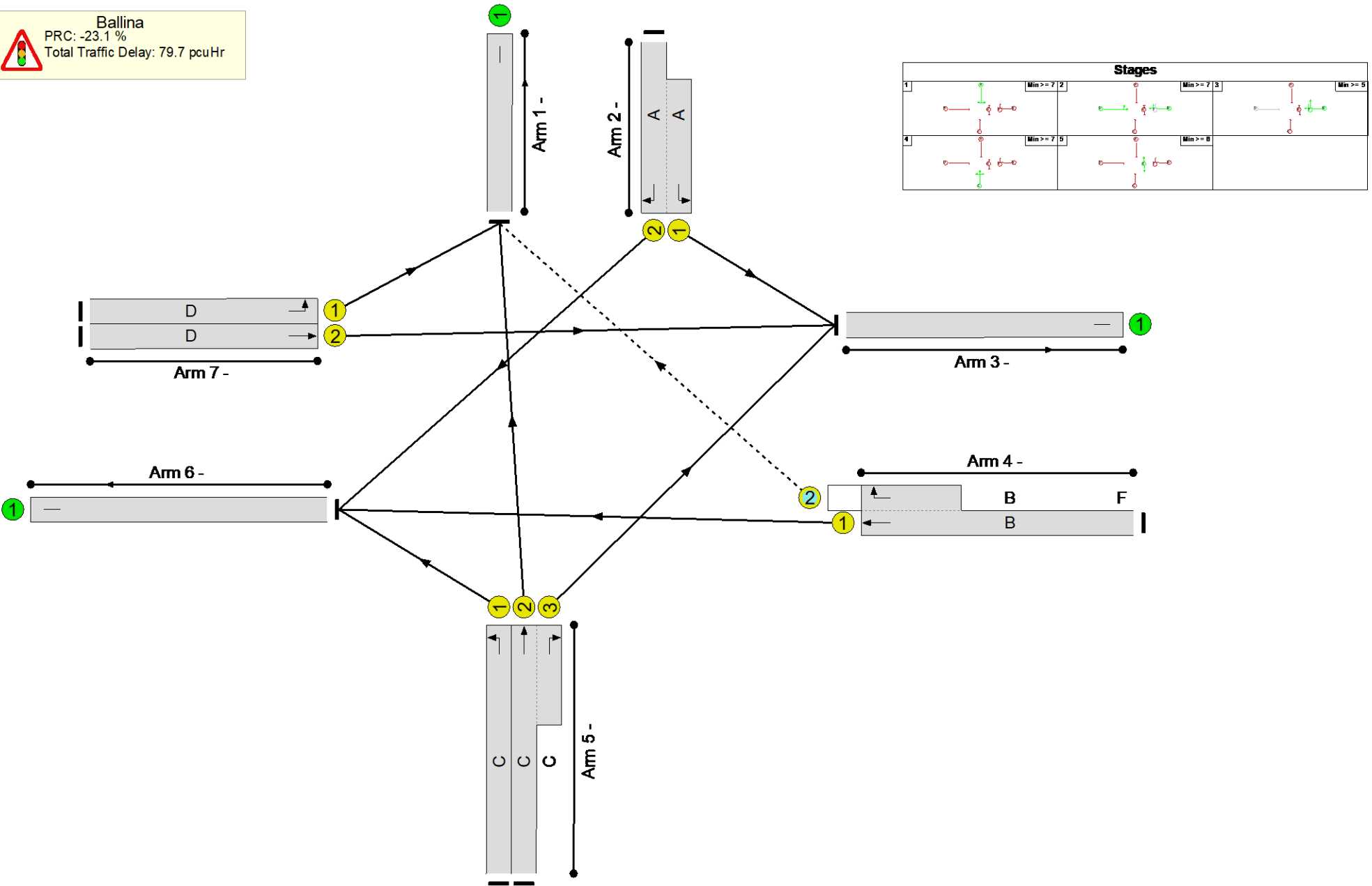
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

Ballina
 PRC: -23.1 %
 Total Traffic Delay: 79.7 pcuHr



Stages

1	Min >= 7 2	Min >= 7 3	Min >= 5
4	Min >= 7 5	Min >= 8	

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	-	-		-	-	-	-	-	-	110.8%
Ballina	-	-	N/A	-	-		-	-	-	-	-	-	110.8%
1/1		U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
2/2+2/1	Left Right	U	N/A	N/A	A		1	9	-	314	1600:1300	178+144	101.3 : 92.8%
3/1		U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
4/1+4/2	Right Ahead	U+O	N/A	N/A	B	F	1	23	5	334	1800:1600	419+98	61.1 : 79.8%
5/1	Left	U	N/A	N/A	C		1	29	-	480	1300	433	110.8%
5/2+5/3	Ahead Right	U	N/A	N/A	C		1	29	-	461	1800:1600	474+226	65.8 : 65.8%
6/1		U	N/A	N/A	-		-	-	-	916	Inf	Inf	0.0%
7/1	Left	U	N/A	N/A	D		1	18	-	194	1300	274	70.7%
7/2	Ahead	U	N/A	N/A	D		1	18	-	407	1800	380	107.1%

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	-	-	0	53	25	21.6	57.7	0.4	79.7	-	-	-	-
Ballina	-	-	0	53	25	21.6	57.7	0.4	79.7	-	-	-	-
1/1	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2+2/1	314	312	-	-	-	3.6	8.2	-	11.7	134.5	4.6	8.2	12.7
3/1	663	663	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	334	334	0	53	25	2.6	0.9	0.4	3.8	41.3	5.4	0.9	6.3
5/1	480	433	-	-	-	5.6	27.7	-	33.2	249.3	13.3	27.7	40.9
5/2+5/3	461	461	-	-	-	3.0	1.0	-	4.0	31.0	6.5	1.0	7.5
6/1	867	867	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	194	194	-	-	-	1.8	1.2	-	2.9	54.7	4.5	1.2	5.6
7/2	407	380	-	-	-	5.1	18.9	-	24.0	212.3	10.9	18.9	29.7
C1			PRC for Signalled Lanes (%): -23.1			Total Delay for Signalled Lanes (pcuHr): 79.71			Cycle Time (s): 90				
			PRC Over All Lanes (%): -23.1			Total Delay Over All Lanes(pcuHr): 79.71							