

Junctions 9	
ARCADY 9 - Roundabout Module	
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Report generation date: 20/02/2020 15:30:18

-
- »2020 Base, AM
 - »2020 Base, PM
 - »2026 Base + Elm Grove, AM
 - »2026 Base + Elm Grove, PM
 - »2026 Base + Elm Grove + Prop Dev, AM
 - »2026 Base + Elm Grove + Prop Dev, PM
 - »2026 Base + Elm Grove + Prop Dev + H2.2, AM
 - »2026 Base + Elm Grove + Prop Dev + H2.2, PM
 - »Sensitivity Test: 2026 Baseline, AM
 - »Sensitivity Test: 2026 Baseline, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity
	2020 Base											
Arm A	D1	1.0	5.70	0.49	A	49 % [Arm C]	D2	1.3	7.05	0.56	A	41 % [Arm A]
Arm B		0.5	3.93	0.35	A			0.4	3.89	0.29	A	
Arm C		1.1	5.76	0.51	A			0.3	3.41	0.26	A	
Arm D		0.7	4.46	0.40	A			1.3	5.67	0.57	A	
	2026 Base + Elm Grove											
Arm A	D3	1.0	5.82	0.50	A	48 % [Arm C]	D4	1.4	7.47	0.58	A	37 % [Arm A]
Arm B		0.6	3.96	0.36	A			0.4	4.01	0.30	A	
Arm C		1.1	5.83	0.52	A			0.4	3.49	0.26	A	
Arm D		0.7	4.65	0.43	A			1.4	5.89	0.59	A	
	2026 Base + Elm Grove + Prop Dev											
Arm A	D5	1.0	5.90	0.51	A	48 % [Arm C]	D6	1.5	7.72	0.59	A	35 % [Arm A]
Arm B		0.6	3.99	0.36	A			0.4	4.06	0.30	A	
Arm C		1.1	5.88	0.52	A			0.4	3.52	0.26	A	
Arm D		0.8	4.76	0.44	A			1.5	5.98	0.60	A	
	2026 Base + Elm Grove + Prop Dev + H2.2											
Arm A	D7	1.1	6.38	0.53	A	51 % [Arm A]	D8	1.5	7.95	0.61	A	33 % [Arm A]
Arm B		0.6	4.00	0.36	A			0.4	4.10	0.30	A	
Arm C		0.9	5.48	0.48	A			0.4	3.55	0.27	A	
Arm D		0.9	5.39	0.48	A			1.5	6.05	0.60	A	
	Sensitivity Test: 2026 Baseline											
Arm A	D9	1.6	9.12	0.62	A	-2 % [Arm D]	D10	164.3	533.65	1.31	F	-22 % [Arm A]
Arm B		0.6	4.24	0.38	A			2.6	12.60	0.72	B	
Arm C		1.2	6.40	0.55	A			1.4	7.20	0.59	A	
Arm D		13.5	40.84	0.95	E			8.4	28.17	0.91	D	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. 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	Junction 3 Westbury Rd/ Philipps Way Roundabout
Location	
Site number	
Date	20/02/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-IQT85C8\beth1
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

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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)	Run automatically
D1	2020 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2020 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2026 Base + Elm Grove	AM	ONE HOUR	07:45	09:15	15	✓
D4	2026 Base + Elm Grove	PM	ONE HOUR	16:45	18:15	15	✓
D5	2026 Base + Elm Grove + Prop Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026 Base + Elm Grove + Prop Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2026 Base + Elm Grove + Prop Dev + H2.2	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 Base + Elm Grove + Prop Dev + H2.2	PM	ONE HOUR	16:45	18:15	15	✓
D9	Sensitivity Test: 2026 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D10	Sensitivity Test: 2026 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2020 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.05	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	49	Arm C

Arms

Arms

Arm	Name	Description
A	Westbury Road (East)	
B	Phillips Way (South)	
C	Westbury Road (West)	
D	Phillips Way (North)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	2.90	11.18	10.9	19.4	39.7	35.0	
B	3.80	7.68	22.7	17.3	39.7	23.0	
C	3.30	6.50	23.3	26.0	39.7	13.5	
D	4.19	6.34	10.1	30.3	39.7	16.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.612	1577
B	0.696	1943
C	0.681	1788
D	0.674	1762

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2020 Base	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	558	100.000
B		ONE HOUR	✓	453	100.000
C		ONE HOUR	✓	601	100.000
D		ONE HOUR	✓	494	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	5	230	323
	B	13	0	214	226
	C	282	162	0	157
	D	271	211	12	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	5	5
	B	15	0	6	4
	C	6	4	0	3
	D	4	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.49	5.70	1.0	A	512	768
B	0.35	3.93	0.5	A	416	624
C	0.51	5.76	1.1	A	551	827
D	0.40	4.46	0.7	A	453	680

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	420	105	289	1328	0.316	418	424	0.0	0.5	3.950	A
B	341	85	424	1552	0.220	340	283	0.0	0.3	2.967	A
C	452	113	421	1421	0.318	451	342	0.0	0.5	3.705	A
D	372	93	343	1461	0.255	371	529	0.0	0.3	3.298	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	502	125	346	1293	0.388	501	508	0.5	0.6	4.540	A
B	407	102	507	1494	0.273	407	339	0.3	0.4	3.312	A
C	540	135	505	1364	0.396	540	409	0.5	0.7	4.362	A
D	444	111	410	1414	0.314	444	634	0.3	0.5	3.706	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	614	154	423	1246	0.493	613	622	0.6	1.0	5.673	A
B	499	125	621	1415	0.352	498	415	0.4	0.5	3.924	A
C	662	165	618	1287	0.514	660	501	0.7	1.0	5.729	A
D	544	136	502	1352	0.402	543	776	0.5	0.7	4.448	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	614	154	424	1246	0.493	614	623	1.0	1.0	5.700	A
B	499	125	622	1414	0.353	499	416	0.5	0.5	3.932	A
C	662	165	619	1286	0.514	662	502	1.0	1.1	5.763	A
D	544	136	503	1351	0.403	544	777	0.7	0.7	4.461	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	502	125	347	1293	0.388	503	510	1.0	0.6	4.566	A
B	407	102	509	1492	0.273	408	341	0.5	0.4	3.320	A
C	540	135	506	1363	0.396	542	411	1.1	0.7	4.392	A
D	444	111	412	1413	0.314	445	636	0.7	0.5	3.720	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	420	105	290	1327	0.317	421	427	0.6	0.5	3.975	A
B	341	85	426	1550	0.220	341	285	0.4	0.3	2.981	A
C	452	113	424	1419	0.319	453	344	0.7	0.5	3.731	A
D	372	93	345	1459	0.255	372	532	0.5	0.3	3.315	A

2020 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	41	Arm 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)	Run automatically
D2	2020 Base	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	589	100.000
B		ONE HOUR	✓	340	100.000
C		ONE HOUR	✓	330	100.000
D		ONE HOUR	✓	780	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	8	331	250
	B	9	0	215	116
	C	195	103	0	32
	D	323	303	154	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	2	4
	B	11	0	5	5
	C	5	7	0	3
	D	3	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.56	7.05	1.3	A	540	811
B	0.29	3.89	0.4	A	312	468
C	0.26	3.41	0.3	A	303	454
D	0.57	5.67	1.3	A	716	1074

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	111	420	1279	0.347	441	395	0.0	0.5	4.289	A
B	256	64	551	1474	0.174	255	310	0.0	0.2	2.952	A
C	248	62	281	1506	0.165	248	525	0.0	0.2	2.859	A
D	587	147	230	1569	0.374	585	298	0.0	0.6	3.648	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	529	132	503	1228	0.431	529	473	0.5	0.8	5.138	A
B	306	76	660	1400	0.218	305	372	0.2	0.3	3.288	A
C	297	74	337	1469	0.202	296	628	0.2	0.3	3.070	A
D	701	175	276	1537	0.456	700	357	0.6	0.8	4.297	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	648	162	615	1160	0.559	647	579	0.8	1.2	6.986	A
B	374	94	807	1300	0.288	374	455	0.3	0.4	3.884	A
C	363	91	412	1418	0.256	363	769	0.3	0.3	3.412	A
D	859	215	338	1494	0.575	857	437	0.8	1.3	5.632	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	648	162	617	1159	0.559	648	580	1.2	1.3	7.048	A
B	374	94	809	1299	0.288	374	456	0.4	0.4	3.894	A
C	363	91	413	1417	0.256	363	771	0.3	0.3	3.414	A
D	859	215	338	1494	0.575	859	438	1.3	1.3	5.669	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	529	132	505	1227	0.431	531	475	1.3	0.8	5.188	A
B	306	76	663	1398	0.219	306	373	0.4	0.3	3.301	A
C	297	74	338	1468	0.202	297	631	0.3	0.3	3.075	A
D	701	175	276	1537	0.456	703	359	1.3	0.8	4.329	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	111	422	1277	0.347	444	397	0.8	0.5	4.328	A
B	256	64	554	1471	0.174	256	312	0.3	0.2	2.964	A
C	248	62	283	1505	0.165	249	528	0.3	0.2	2.867	A
D	587	147	231	1568	0.374	588	300	0.8	0.6	3.678	A

2026 Base + Elm Grove, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.14	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	48	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2026 Base + Elm Grove	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	561	100.000
B		ONE HOUR	✓	456	100.000
C		ONE HOUR	✓	603	100.000
D		ONE HOUR	✓	524	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	5	230	326
	B	13	0	214	229
	C	282	162	0	159
	D	287	224	13	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	5	5
	B	15	0	6	4
	C	6	4	0	3
	D	4	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.50	5.82	1.0	A	515	772
B	0.36	3.96	0.6	A	418	628
C	0.52	5.83	1.1	A	553	830
D	0.43	4.65	0.7	A	481	721

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	422	106	299	1321	0.320	420	436	0.0	0.5	3.988	A
B	343	86	426	1550	0.221	342	293	0.0	0.3	2.978	A
C	454	113	426	1418	0.320	452	343	0.0	0.5	3.722	A
D	394	99	343	1461	0.270	393	535	0.0	0.4	3.367	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	504	126	358	1286	0.392	504	523	0.5	0.6	4.599	A
B	410	102	511	1491	0.275	410	351	0.3	0.4	3.327	A
C	542	136	510	1360	0.398	541	410	0.5	0.7	4.391	A
D	471	118	410	1414	0.333	471	641	0.4	0.5	3.812	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	618	154	438	1237	0.499	616	639	0.6	1.0	5.786	A
B	502	126	625	1412	0.356	501	430	0.4	0.5	3.950	A
C	664	166	624	1283	0.518	662	502	0.7	1.1	5.788	A
D	577	144	502	1352	0.427	576	785	0.5	0.7	4.635	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	618	154	439	1237	0.500	618	641	1.0	1.0	5.816	A
B	502	126	626	1411	0.356	502	430	0.5	0.6	3.959	A
C	664	166	625	1282	0.518	664	503	1.1	1.1	5.825	A
D	577	144	503	1351	0.427	577	786	0.7	0.7	4.651	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	504	126	360	1285	0.393	506	524	1.0	0.7	4.627	A
B	410	102	513	1490	0.275	411	352	0.6	0.4	3.339	A
C	542	136	512	1359	0.399	544	412	1.1	0.7	4.422	A
D	471	118	412	1413	0.333	472	643	0.7	0.5	3.828	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	422	106	301	1320	0.320	423	439	0.7	0.5	4.016	A
B	343	86	429	1548	0.222	344	295	0.4	0.3	2.989	A
C	454	113	428	1416	0.321	455	345	0.7	0.5	3.746	A
D	394	99	345	1459	0.270	395	538	0.5	0.4	3.383	A

2026 Base + Elm Grove, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.64	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	Arm 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)	Run automatically
D4	2026 Base + Elm Grove	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	607	100.000
B		ONE HOUR	✓	349	100.000
C		ONE HOUR	✓	332	100.000
D		ONE HOUR	✓	802	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	8	331	268
	B	9	0	215	125
	C	195	103	0	34
	D	332	312	158	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	2	4
	B	11	0	5	5
	C	5	7	0	3
	D	3	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.58	7.47	1.4	A	557	835
B	0.30	4.01	0.4	A	320	480
C	0.26	3.49	0.4	A	305	457
D	0.59	5.89	1.4	A	736	1104

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	457	114	430	1272	0.359	455	402	0.0	0.6	4.391	A
B	263	66	567	1463	0.180	262	317	0.0	0.2	2.996	A
C	250	62	301	1493	0.167	249	528	0.0	0.2	2.893	A
D	604	151	230	1569	0.385	601	320	0.0	0.6	3.710	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	546	136	514	1221	0.447	545	481	0.6	0.8	5.316	A
B	314	78	679	1387	0.226	313	380	0.2	0.3	3.354	A
C	298	75	361	1453	0.205	298	632	0.2	0.3	3.118	A
D	721	180	276	1537	0.469	720	383	0.6	0.9	4.399	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	668	167	629	1151	0.581	666	589	0.8	1.4	7.390	A
B	384	96	831	1284	0.299	384	465	0.3	0.4	3.996	A
C	366	91	441	1398	0.261	365	773	0.3	0.4	3.484	A
D	883	221	338	1494	0.591	881	469	0.9	1.4	5.850	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	668	167	631	1150	0.581	668	590	1.4	1.4	7.467	A
B	384	96	833	1282	0.300	384	466	0.4	0.4	4.009	A
C	366	91	443	1398	0.262	366	775	0.4	0.4	3.487	A
D	883	221	338	1494	0.591	883	470	1.4	1.4	5.894	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	546	136	517	1220	0.447	548	483	1.4	0.8	5.378	A
B	314	78	683	1384	0.227	314	381	0.4	0.3	3.365	A
C	298	75	363	1452	0.206	299	635	0.4	0.3	3.125	A
D	721	180	276	1537	0.469	723	385	1.4	0.9	4.437	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	457	114	432	1271	0.360	458	404	0.8	0.6	4.433	A
B	263	66	571	1460	0.180	263	319	0.3	0.2	3.007	A
C	250	62	303	1492	0.168	250	531	0.3	0.2	2.902	A
D	604	151	231	1568	0.385	605	322	0.9	0.6	3.739	A

2026 Base + Elm Grove + Prop Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.21	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	48	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 Base + Elm Grove + Prop Dev	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	569	100.000
B		ONE HOUR	✓	456	100.000
C		ONE HOUR	✓	603	100.000
D		ONE HOUR	✓	540	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	5	230	334
	B	13	0	214	229
	C	282	162	0	159
	D	303	224	13	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	5	5
	B	15	0	6	4
	C	6	4	0	3
	D	4	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.51	5.90	1.0	A	522	783
B	0.36	3.99	0.6	A	418	628
C	0.52	5.88	1.1	A	553	830
D	0.44	4.76	0.8	A	496	743

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	428	107	299	1321	0.324	426	448	0.0	0.5	4.014	A
B	343	86	432	1546	0.222	342	293	0.0	0.3	2.988	A
C	454	113	432	1414	0.321	452	343	0.0	0.5	3.738	A
D	407	102	343	1461	0.278	405	541	0.0	0.4	3.406	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	512	128	358	1286	0.398	511	537	0.5	0.7	4.642	A
B	410	102	518	1486	0.276	410	351	0.3	0.4	3.343	A
C	542	136	517	1356	0.400	541	410	0.5	0.7	4.418	A
D	485	121	410	1414	0.343	485	648	0.4	0.5	3.870	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	626	157	438	1237	0.506	625	657	0.7	1.0	5.868	A
B	502	126	634	1406	0.357	501	430	0.4	0.6	3.977	A
C	664	166	633	1277	0.520	662	502	0.7	1.1	5.845	A
D	595	149	502	1352	0.440	594	793	0.5	0.8	4.741	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	626	157	439	1236	0.507	626	658	1.0	1.0	5.900	A
B	502	126	635	1405	0.357	502	430	0.6	0.6	3.986	A
C	664	166	634	1276	0.520	664	503	1.1	1.1	5.882	A
D	595	149	503	1351	0.440	595	795	0.8	0.8	4.760	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	512	128	360	1285	0.398	513	539	1.0	0.7	4.671	A
B	410	102	520	1485	0.276	411	352	0.6	0.4	3.352	A
C	542	136	519	1354	0.400	544	412	1.1	0.7	4.451	A
D	485	121	412	1413	0.344	486	651	0.8	0.5	3.888	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	428	107	301	1320	0.324	429	451	0.7	0.5	4.043	A
B	343	86	435	1544	0.222	344	295	0.4	0.3	2.999	A
C	454	113	434	1412	0.321	455	345	0.7	0.5	3.765	A
D	407	102	345	1459	0.279	407	544	0.5	0.4	3.425	A

2026 Base + Elm Grove + Prop Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.77	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	35	Arm 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)	Run automatically
D6	2026 Base + Elm Grove + Prop Dev	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	621	100.000
B		ONE HOUR	✓	349	100.000
C		ONE HOUR	✓	332	100.000
D		ONE HOUR	✓	810	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	8	331	282
	B	9	0	215	125
	C	195	103	0	34
	D	340	312	158	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	2	4
	B	11	0	5	5
	C	5	7	0	3
	D	3	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.59	7.72	1.5	A	570	855
B	0.30	4.06	0.4	A	320	480
C	0.26	3.52	0.4	A	305	457
D	0.60	5.98	1.5	A	743	1115

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	468	117	430	1272	0.368	465	408	0.0	0.6	4.449	A
B	263	66	578	1456	0.181	262	317	0.0	0.2	3.015	A
C	250	62	312	1486	0.168	249	528	0.0	0.2	2.909	A
D	610	152	230	1569	0.389	607	331	0.0	0.6	3.734	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	558	140	514	1221	0.457	557	488	0.6	0.8	5.417	A
B	314	78	692	1378	0.228	313	380	0.2	0.3	3.381	A
C	298	75	373	1444	0.207	298	632	0.2	0.3	3.141	A
D	728	182	276	1537	0.474	727	396	0.6	0.9	4.439	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	684	171	629	1151	0.594	681	598	0.8	1.4	7.630	A
B	384	96	846	1273	0.302	384	465	0.3	0.4	4.043	A
C	366	91	457	1388	0.263	365	773	0.3	0.4	3.519	A
D	892	223	338	1494	0.597	890	484	0.9	1.5	5.935	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	684	171	631	1150	0.595	684	599	1.4	1.5	7.719	A
B	384	96	849	1272	0.302	384	466	0.4	0.4	4.057	A
C	366	91	458	1387	0.264	366	775	0.4	0.4	3.522	A
D	892	223	338	1493	0.597	892	486	1.5	1.5	5.982	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	558	140	517	1219	0.458	561	490	1.5	0.9	5.484	A
B	314	78	696	1375	0.228	314	381	0.4	0.3	3.393	A
C	298	75	375	1443	0.207	299	635	0.4	0.3	3.149	A
D	728	182	276	1537	0.474	730	398	1.5	0.9	4.476	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	468	117	432	1271	0.368	469	410	0.9	0.6	4.494	A
B	263	66	582	1453	0.181	263	319	0.3	0.2	3.028	A
C	250	62	314	1484	0.168	250	531	0.3	0.2	2.916	A
D	610	152	231	1568	0.389	611	333	0.9	0.6	3.766	A

2026 Base + Elm Grove + Prop Dev + H2.2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	51	Arm 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)	Run automatically
D7	2026 Base + Elm Grove + Prop Dev + H2.2	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	573	100.000
B		ONE HOUR	✓	456	100.000
C		ONE HOUR	✓	554	100.000
D		ONE HOUR	✓	554	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	5	230	338
	B	13	0	214	229
	C	317	224	0	13
	D	317	224	13	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	5	5
	B	15	0	6	4
	C	6	4	0	3
	D	4	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.53	6.38	1.1	A	526	789
B	0.36	4.00	0.6	A	418	628
C	0.48	5.48	0.9	A	508	763
D	0.48	5.39	0.9	A	508	763

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	431	108	346	1293	0.334	429	485	0.0	0.5	4.158	A
B	343	86	435	1544	0.222	342	340	0.0	0.3	2.993	A
C	417	104	435	1406	0.297	415	343	0.0	0.4	3.629	A
D	417	104	415	1411	0.296	415	435	0.0	0.4	3.609	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	515	129	414	1252	0.411	514	581	0.5	0.7	4.876	A
B	410	102	522	1484	0.276	410	407	0.3	0.4	3.350	A
C	498	125	521	1347	0.370	497	410	0.4	0.6	4.233	A
D	498	125	497	1355	0.368	497	521	0.4	0.6	4.194	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	631	158	506	1196	0.528	629	711	0.7	1.1	6.337	A
B	502	126	638	1403	0.358	501	498	0.4	0.6	3.992	A
C	610	152	637	1268	0.481	609	502	0.6	0.9	5.446	A
D	610	152	609	1279	0.477	609	637	0.6	0.9	5.361	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	631	158	508	1195	0.528	631	712	1.1	1.1	6.380	A
B	502	126	640	1402	0.358	502	499	0.6	0.6	4.000	A
C	610	152	639	1267	0.481	610	503	0.9	0.9	5.475	A
D	610	152	610	1278	0.477	610	639	0.9	0.9	5.386	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	515	129	416	1251	0.412	517	583	1.1	0.7	4.913	A
B	410	102	524	1482	0.277	411	408	0.6	0.4	3.363	A
C	498	125	523	1346	0.370	499	412	0.9	0.6	4.258	A
D	498	125	499	1354	0.368	499	523	0.9	0.6	4.219	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	431	108	348	1292	0.334	432	488	0.7	0.5	4.191	A
B	343	86	438	1542	0.223	344	342	0.4	0.3	3.007	A
C	417	104	437	1404	0.297	418	345	0.6	0.4	3.654	A
D	417	104	418	1410	0.296	418	437	0.6	0.4	3.631	A

2026 Base + Elm Grove + Prop Dev + H2.2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	5.89	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	Arm 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)	Run automatically
D8	2026 Base + Elm Grove + Prop Dev + H2.2	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	633	100.000
B		ONE HOUR	✓	349	100.000
C		ONE HOUR	✓	332	100.000
D		ONE HOUR	✓	816	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	8	331	294
	B	9	0	215	125
	C	195	103	0	34
	D	346	312	158	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	2	4
	B	11	0	5	5
	C	5	7	0	3
	D	3	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.61	7.95	1.5	A	581	871
B	0.30	4.10	0.4	A	320	480
C	0.27	3.55	0.4	A	305	457
D	0.60	6.05	1.5	A	749	1123

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	477	119	430	1272	0.375	474	412	0.0	0.6	4.499	A
B	263	66	587	1449	0.181	262	317	0.0	0.2	3.030	A
C	250	62	321	1480	0.169	249	528	0.0	0.2	2.924	A
D	614	154	230	1569	0.392	612	340	0.0	0.6	3.753	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	569	142	514	1220	0.466	568	494	0.6	0.9	5.509	A
B	314	78	703	1371	0.229	313	380	0.2	0.3	3.405	A
C	298	75	384	1437	0.208	298	632	0.2	0.3	3.161	A
D	734	183	276	1537	0.477	733	407	0.6	0.9	4.469	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	697	174	629	1150	0.606	694	604	0.9	1.5	7.848	A
B	384	96	859	1264	0.304	384	465	0.3	0.4	4.085	A
C	366	91	470	1379	0.265	365	773	0.3	0.4	3.550	A
D	898	225	338	1494	0.602	896	497	0.9	1.5	6.006	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	697	174	631	1150	0.606	697	606	1.5	1.5	7.947	A
B	384	96	862	1262	0.304	384	466	0.4	0.4	4.099	A
C	366	91	471	1378	0.265	366	775	0.4	0.4	3.553	A
D	898	225	338	1493	0.602	898	499	1.5	1.5	6.050	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	569	142	517	1219	0.467	572	496	1.5	0.9	5.581	A
B	314	78	707	1368	0.229	314	381	0.4	0.3	3.420	A
C	298	75	386	1436	0.208	299	635	0.4	0.3	3.169	A
D	734	183	276	1537	0.477	736	409	1.5	0.9	4.508	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	477	119	432	1270	0.375	478	415	0.9	0.6	4.547	A
B	263	66	591	1447	0.182	263	319	0.3	0.2	3.044	A
C	250	62	323	1478	0.169	250	531	0.3	0.2	2.933	A
D	614	154	231	1568	0.392	615	342	0.9	0.6	3.785	A

Sensitivity Test: 2026 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	20.39	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-2	Arm D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	Sensitivity Test: 2026 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	591	100.000
B		ONE HOUR	✓	479	100.000
C		ONE HOUR	✓	635	100.000
D		ONE HOUR	✓	1150	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	5	244	342
	B	14	0	226	239
	C	298	171	0	166
	D	631	491	28	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	5	5
	B	15	0	6	4
	C	6	4	0	3
	D	4	4	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.62	9.12	1.6	A	542	813
B	0.38	4.24	0.6	A	440	659
C	0.55	6.40	1.2	A	583	874
D	0.95	40.84	13.5	E	1055	1583

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	445	111	516	1190	0.374	443	706	0.0	0.6	4.802	A
B	361	90	460	1527	0.236	359	499	0.0	0.3	3.081	A
C	478	120	446	1404	0.340	476	373	0.0	0.5	3.870	A
D	866	216	362	1447	0.598	860	560	0.0	1.5	6.071	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	531	133	618	1128	0.471	530	845	0.6	0.9	6.008	A
B	431	108	551	1464	0.294	430	597	0.3	0.4	3.480	A
C	571	143	534	1344	0.425	570	447	0.5	0.7	4.646	A
D	1034	258	434	1398	0.739	1029	670	1.5	2.7	9.608	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	651	163	744	1052	0.619	648	1019	0.9	1.6	8.849	A
B	527	132	672	1379	0.382	527	719	0.4	0.6	4.218	A
C	699	175	653	1263	0.554	697	546	0.7	1.2	6.343	A
D	1266	317	530	1332	0.950	1232	820	2.7	11.2	29.297	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	651	163	756	1045	0.623	651	1033	1.6	1.6	9.124	A
B	527	132	676	1377	0.383	527	730	0.6	0.6	4.236	A
C	699	175	655	1262	0.554	699	548	1.2	1.2	6.400	A
D	1266	317	532	1331	0.951	1257	822	11.2	13.5	40.836	E

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	531	133	640	1115	0.477	534	872	1.6	0.9	6.229	A
B	431	108	556	1460	0.295	431	618	0.6	0.4	3.500	A
C	571	143	537	1342	0.425	573	450	1.2	0.7	4.693	A
D	1034	258	436	1397	0.740	1076	674	13.5	3.0	12.580	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	445	111	522	1186	0.375	446	714	0.9	0.6	4.874	A
B	361	90	464	1524	0.237	361	505	0.4	0.3	3.097	A
C	478	120	449	1402	0.341	479	376	0.7	0.5	3.905	A
D	866	216	364	1446	0.599	872	564	3.0	1.5	6.330	A

Sensitivity Test: 2026 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Westbury Rd/ Phillips Way	Standard Roundabout		A, B, C, D	187.53	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-22	Arm 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)	Run automatically
D10	Sensitivity Test: 2026 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1176	100.000
B		ONE HOUR	✓	680	100.000
C		ONE HOUR	✓	660	100.000
D		ONE HOUR	✓	1035	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	16	661	499
	B	18	0	430	232
	C	390	206	0	64
	D	429	402	204	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	2	4
	B	11	0	5	5
	C	5	7	0	3
	D	3	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.31	533.65	164.3	F	1079	1619
B	0.72	12.60	2.6	B	624	936
C	0.59	7.20	1.4	A	606	908
D	0.91	28.17	8.4	D	950	1425

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	885	221	608	1163	0.761	873	627	0.0	3.0	11.976	B
B	512	128	1014	1159	0.442	509	467	0.0	0.8	5.511	A
C	497	124	558	1320	0.377	494	965	0.0	0.6	4.350	A
D	779	195	460	1408	0.553	774	592	0.0	1.2	5.638	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	1057	264	727	1090	0.970	1019	750	3.0	12.5	38.420	E
B	611	153	1188	1041	0.587	609	559	0.8	1.4	8.284	A
C	593	148	656	1253	0.473	592	1140	0.6	0.9	5.436	A
D	930	233	551	1344	0.692	927	698	1.2	2.2	8.536	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	1295	324	881	996	1.300	993	911	12.5	87.9	192.619	F
B	749	187	1200	1033	0.725	744	674	1.4	2.5	12.271	B
C	727	182	695	1227	0.592	725	1249	0.9	1.4	7.138	A
D	1140	285	674	1258	0.906	1118	746	2.2	7.5	22.897	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	1295	324	892	989	1.309	989	920	87.9	164.3	452.964	F
B	749	187	1200	1033	0.724	748	682	2.5	2.6	12.602	B
C	727	182	695	1227	0.592	727	1253	1.4	1.4	7.196	A
D	1140	285	676	1257	0.907	1136	746	7.5	8.4	28.168	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	1057	264	745	1079	0.979	1073	764	164.3	160.4	533.653	F
B	611	153	1246	1001	0.611	615	571	2.6	1.6	9.417	A
C	593	148	681	1236	0.480	595	1180	1.4	0.9	5.637	A
D	930	233	554	1342	0.693	955	723	8.4	2.3	9.829	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	885	221	614	1159	0.764	1152	633	160.4	93.7	398.476	F
B	512	128	1291	971	0.527	514	475	1.6	1.1	7.913	A
C	497	124	678	1239	0.401	498	1127	0.9	0.7	4.865	A
D	779	195	463	1406	0.554	783	712	2.3	1.3	5.824	A