TRL LIMITED

(C) COPYRIGHT 2006

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"T:\Projects\402\03620 - Clean Power Properties Ltd\00004 - Micheldever EIA\Tech\T&T\Wking\PICADY\
A303 EASTBOUND SLIPS AM.vpi"
(drive-on-the-left) at 09:49:11 on Thursday, 28 June 2012

RUN INFORMATION
****

RUN TITLE: AM PEAK TESTS - A303 Eastbound Slips
LOCATION: Overton Road
DATE: 26/06/12
CLIENT:
ENUMERATOR: cbyrtus [BRA1274D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA

```
                                                MINOR ROAD (ARM D)
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                    MAJOR ROAD (ARM C) -------------------- MAJOR ROAD (ARM A)
                                            I
                                            I
                                            I
                                            I
                                            I
                                            I
                                        MINOR ROAD (ARM B)
```

ARM A IS Overton Road North
ARM B IS A303 Eastbound On Slip
ARM C IS Overton Road South
ARM D IS A303 Eastbound Off Slip

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	MINOR ROAD D
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.84 M.	(W) 7.76 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.	(WA-D) 2.20 M.
- VISIBILITY	(VC-B) 200.0 M.	(VA-D) 200.0 M.
- BLOCKS TRAFFIC	YES	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 27.0 M.
- VISIBILITY TO RIGHT	(VB-A) 22.0 M.	(VD-C) 24.0 M.
- LANE 1 WIDTH	(WB-C) 3.89 M.	(WD-A) 3.21 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 3.21 M.

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
694.62	0.25	0.25	0.10	0.10

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
542.15	0.23	0.23	0.09	0.09

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
0.14	0.14	0.33	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
652.48	0.23	0.23	0.09	0.09

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
508.61	0.22	0.22	0.09	0.09

Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
0.14	0.14	0.31	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.25	0.25	0.25	0.25

A-D Stream

Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For Opposing

Stream A-D	Stream C-A	Stream C-D	Stream B-A	Stream B-D
689.79	0.25	0.25	0.25	0.25

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: AM PEAK 2013 BASE

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
08.00 - 09.00	ARM A	0.000	0.355	0.645	0.000
		0.0	44.0	80.0	0.0
		(0.0)	(11.0)	(11.0)	(0.0)
	ARM B	0.000	0.000	1.000	0.000
		0.0	0.0	9.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.299	0.701	0.000	0.000
		82.0	192.0	0.0	0.0
		(9.0)	(4.0)	(0.0)	(0.0)
	ARM D	0.636	0.073	0.291	0.000
		35.0	4.0	16.0	0.0
		(17.0)	(0.0)	(31.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR DEMAND SET AM PEAK 2013 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-ACD	0.15	11.04	0.014		0.00	0.01	0.2		0.09
A-BCD	0.00	10.12	0.000		0.00	0.00	0.0		0.00
A-B	0.73								
A-C	1.34								
D-A	0.59	8.88	0.066		0.00	0.07	1.0		0.12
D-BC	0.33	6.28	0.053		0.00	0.06	0.8		0.17
C-ABD	3.64	11.26	0.324		0.00	0.52	7.7		0.13
C-D	0.00								
C-A	0.93								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-ACD	0.15	11.04	0.014		0.01	0.01	0.2		0.09
A-BCD	0.00	10.12	0.000		0.00	0.00	0.0		0.00
A-B	0.73								
A-C	1.34								
D-A	0.59	8.88	0.066		0.07	0.07	1.1		0.12
D-BC	0.33	6.28	0.053		0.06	0.06	0.8		0.17
C-ABD	3.65	11.26	0.324		0.52	0.52	7.9		0.13
C-D	0.00								
C-A	0.92								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-ACD	0.15	11.04	0.014		0.01	0.01	0.2		0.09
A-BCD	0.00	10.12	0.000		0.00	0.00	0.0		0.00
A-B	0.73								
A-C	1.34								
D-A	0.59	8.88	0.066		0.07	0.07	1.1		0.12
D-BC	0.33	6.28	0.053		0.06	0.06	0.8		0.17
C-ABD	3.65	11.26	0.324		0.52	0.52	7.9		0.13
C-D	0.00								
C-A	0.92								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-ACD	0.15	11.04	0.014		0.01	0.01	0.2		0.09
A-BCD	0.00	10.12	0.000		0.00	0.00	0.0		0.00
A-B	0.73								
A-C	1.34								
D-A	0.59	8.88	0.066		0.07	0.07	1.1		0.12
D-BC	0.33	6.28	0.053		0.06	0.06	0.8		0.17
C-ABD	3.65	11.26	0.324		0.52	0.53	7.9		0.13
C-D	0.00								
C-A	0.92								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUE FOR STREAM D-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.5	*
08.30	0.5	*
08.45	0.5	*
09.00	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-ACD	9.0	9.0	0.8	0.09	0.8	0.09
A-BCD	0.0	0.0	0.0	0.00	0.0	0.00
A-B	44.1	44.1				
A-C	80.1	80.1				
D-A	35.1	35.1	4.2	0.12	4.2	0.12
D-BC	20.1	20.1	3.3	0.17	3.3	0.17
C-ABD	218.9	218.9	31.4	0.14	31.4	0.14
C-D	0.0	0.0				
C-A	55.3	55.3				
ALL	462.6	462.6	39.7	0.09	39.7	0.09

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
694.62	0.25	0.25	0.10	0.10

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
542.15	0.23	0.23	0.09	0.09

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
0.14	0.14	0.33	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
652.48	0.23	0.23	0.09	0.09

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
508.61	0.22	0.22	0.09	0.09

Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
0.14	0.14	0.31	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.25	0.25	0.25	0.25

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-A	Slope For Opposing Stream B-D
689.79	0.25	0.25	0.25	0.25

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: AM PEAK 2017 BASE

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
08.00 - 09.00	ARM A	0.000	0.354	0.646	0.000
		0.0	46.0	84.0	0.0
		(0.0)	(11.0)	(11.0)	(0.0)
	ARM B	0.000	0.000	1.000	0.000
		0.0	0.0	9.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.301	0.699	0.000	0.000
		86.0	200.0	0.0	0.0
		(8.0)	(4.0)	(0.0)	(0.0)
	ARM D	0.643	0.071	0.286	0.000
		36.0	4.0	16.0	0.0
		(17.0)	(0.0)	(31.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET AM PEAK 2017 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-ACD	0.15	11.02	0.014		0.00	0.01	0.2		0.09
A-BCD	0.00	10.10	0.000		0.00	0.00	0.0		0.00
A-B	0.77								
A-C	1.40								
D-A	0.60	8.87	0.067		0.00	0.07	1.0		0.12
D-BC	0.33	6.26	0.053		0.00	0.06	0.8		0.17
C-ABD	3.82	11.28	0.339		0.00	0.56	8.2		0.13
C-D	0.00								
C-A	0.95								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-ACD	0.15	11.01	0.014		0.01	0.01	0.2		0.09
A-BCD	0.00	10.10	0.000		0.00	0.00	0.0		0.00
A-B	0.77								
A-C	1.40								
D-A	0.60	8.86	0.067		0.07	0.07	1.1		0.12
D-BC	0.33	6.26	0.053		0.06	0.06	0.8		0.17
C-ABD	3.83	11.29	0.339		0.56	0.56	8.5		0.13
C-D	0.00								
C-A	0.94								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-ACD	0.15	11.01	0.014		0.01	0.01	0.2		0.09
A-BCD	0.00	10.10	0.000		0.00	0.00	0.0		0.00
A-B	0.77								
A-C	1.40								
D-A	0.60	8.86	0.067		0.07	0.07	1.1		0.12
D-BC	0.33	6.26	0.053		0.06	0.06	0.8		0.17
C-ABD	3.83	11.29	0.339		0.56	0.56	8.5		0.13
C-D	0.00								
C-A	0.94								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-ACD	0.15	11.01	0.014		0.01	0.01	0.2		0.09
A-BCD	0.00	10.10	0.000		0.00	0.00	0.0		0.00
A-B	0.77								
A-C	1.40								
D-A	0.60	8.86	0.067		0.07	0.07	1.1		0.12
D-BC	0.33	6.26	0.053		0.06	0.06	0.8		0.17
C-ABD	3.83	11.29	0.339		0.56	0.56	8.5		0.13
C-D	0.00								
C-A	0.94								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.0	
08.30	0.0	
08.45	0.0	
09.00	0.0	

QUEUE FOR STREAM D-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.1	
08.30	0.1	
08.45	0.1	
09.00	0.1	

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.1	
08.30	0.1	
08.45	0.1	
09.00	0.1	

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.6	*
08.30	0.6	*
08.45	0.6	*
09.00	0.6	*

TRL LIMITED

(C) COPYRIGHT 2006

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"C:\Documents and Settings\CByrtus.SLR\Desktop\PICADY\A303 EASTBOUND SLIPS PM.vpi"
(drive-on-the-left) at 14:45:33 on Wednesday, 27 June 2012

RUN INFORMATION

RUN TITLE: PM PEAK TESTS - A303 Eastbound Slips
LOCATION: Overton Road
DATE: 26/06/12
CLIENT:
ENUMERATOR: cbyrtus [BRA1274D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

```
                                                MINOR ROAD (ARM D)
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                    MAJOR ROAD (ARM C) --------------------- MAJOR ROAD (ARM A)
                                            I
                                            I
                                            I
                                            I
                                            I
                                            I
                                        MINOR ROAD (ARM B)
```

ARM A IS Overton Road North
ARM B IS A303 Eastbound On Slip
ARM C IS Overton Road South
ARM D IS A303 Eastbound Off Slip

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	MINOR ROAD D
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.84 M.	(W) 7.76 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.	(WA-D) 2.20 M.
- VISIBILITY	(VC-B) 200.0 M.	(VA-D) 200.0 M.
- BLOCKS TRAFFIC	YES	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 29.0 M.	(VD-A) 27.0 M.
- VISIBILITY TO RIGHT	(VB-A) 22.0 M.	(VD-C) 24.0 M.
- LANE 1 WIDTH	(WB-C) 3.89 M.	(WD-A) 3.21 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.	(WD-C) 3.21 M.

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
694.62	0.25	0.25	0.10	0.10

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
542.15	0.23	0.23	0.09	0.09

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
0.14	0.14	0.33	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
652.48	0.23	0.23	0.09	0.09

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
508.61	0.22	0.22	0.09	0.09

Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
0.14	0.14	0.31	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.25	0.25	0.25	0.25

A-D Stream

Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For Opposing

Stream A-D	Stream C-A	Stream C-D	Stream B-A	Stream B-D
689.79	0.25	0.25	0.25	0.25

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: PM PEAK 2013 BASE

TIME PERIOD BEGINS 17.00 AND ENDS 18.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
17.00 - 18.00	ARM A	0.000	0.275	0.725	0.000
		0.0	41.0	108.0	0.0
		(0.0)	(10.0)	(0.0)	(0.0)
	ARM B	0.211	0.000	0.789	0.000
		4.0	0.0	15.0	0.0
		(0.0)	(0.0)	(20.0)	(0.0)
	ARM C	0.435	0.565	0.000	0.000
		83.0	108.0	0.0	0.0
		(0.0)	(3.0)	(0.0)	(0.0)
	ARM D	0.500	0.105	0.395	0.000
		19.0	4.0	15.0	0.0
		(16.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR DEMAND SET PM PEAK 2013 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-ACD	0.32	8.80	0.036		0.00	0.04	0.5		0.12
A-BCD	0.00	10.13	0.000		0.00	0.00	0.0		0.00
A-B	0.68								
A-C	1.80								
D-A	0.31	8.99	0.035		0.00	0.04	0.5		0.12
D-BC	0.32	7.82	0.040		0.00	0.04	0.6		0.13
C-ABD	2.04	11.37	0.180		0.00	0.24	3.6		0.11
C-D	0.00								
C-A	1.14								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-ACD	0.32	8.80	0.036		0.04	0.04	0.6		0.12
A-BCD	0.00	10.13	0.000		0.00	0.00	0.0		0.00
A-B	0.68								
A-C	1.80								
D-A	0.31	8.99	0.035		0.04	0.04	0.5		0.12
D-BC	0.32	7.82	0.040		0.04	0.04	0.6		0.13
C-ABD	2.04	11.38	0.180		0.24	0.24	3.7		0.11
C-D	0.00								
C-A	1.14								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-ACD	0.32	8.80	0.036		0.04	0.04	0.6		0.12
A-BCD	0.00	10.13	0.000		0.00	0.00	0.0		0.00
A-B	0.68								
A-C	1.80								
D-A	0.31	8.99	0.035		0.04	0.04	0.5		0.12
D-BC	0.32	7.82	0.040		0.04	0.04	0.6		0.13
C-ABD	2.04	11.38	0.180		0.24	0.24	3.7		0.11
C-D	0.00								
C-A	1.14								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-ACD	0.32	8.80	0.036		0.04	0.04	0.6		0.12
A-BCD	0.00	10.13	0.000		0.00	0.00	0.0		0.00
A-B	0.68								
A-C	1.80								
D-A	0.31	8.99	0.035		0.04	0.04	0.5		0.12
D-BC	0.32	7.82	0.040		0.04	0.04	0.6		0.13
C-ABD	2.04	11.38	0.180		0.24	0.24	3.7		0.11
C-D	0.00								
C-A	1.14								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM D-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-ACD	19.2	19.2	2.2	0.12	2.2	0.12
A-BCD	0.0	0.0	0.0	0.00	0.0	0.00
A-B	40.9	40.9				
A-C	107.9	107.9				
D-A	18.9	18.9	2.2	0.11	2.2	0.11
D-BC	18.9	18.9	2.5	0.13	2.5	0.13
C-ABD	122.6	122.6	14.6	0.12	14.6	0.12
C-D	0.0	0.0				
C-A	68.2	68.2				
ALL	396.6	396.6	21.5	0.05	21.5	0.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
694.62	0.25	0.25	0.10	0.10

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
542.15	0.23	0.23	0.09	0.09

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
0.14	0.14	0.33	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
652.48	0.23	0.23	0.09	0.09

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
508.61	0.22	0.22	0.09	0.09

Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
0.14	0.14	0.31	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.25	0.25	0.25	0.25

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-A	Slope For Opposing Stream B-D
689.79	0.25	0.25	0.25	0.25

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: PM PEAK 2017 BASE

TIME PERIOD BEGINS 17.00 AND ENDS 18.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
17.00 - 18.00	ARM A	0.000	0.276	0.724	0.000
		0.0	43.0	113.0	0.0
		(0.0)	(9.0)	(0.0)	(0.0)
	ARM B	0.211	0.000	0.789	0.000
		4.0	0.0	15.0	0.0
		(0.0)	(0.0)	(20.0)	(0.0)
	ARM C	0.435	0.565	0.000	0.000
		87.0	113.0	0.0	0.0
		(0.0)	(3.0)	(0.0)	(0.0)
	ARM D	0.500	0.105	0.395	0.000
		19.0	4.0	15.0	0.0
		(16.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET PM PEAK 2017 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-ACD	0.32	8.77	0.036		0.00	0.04	0.5		0.12
A-BCD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
A-B	0.72								
A-C	1.88								
D-A	0.31	8.98	0.035		0.00	0.04	0.5		0.12
D-BC	0.32	7.79	0.040		0.00	0.04	0.6		0.13
C-ABD	2.15	11.39	0.189		0.00	0.26	3.8		0.11
C-D	0.00								
C-A	1.18								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-ACD	0.32	8.77	0.036		0.04	0.04	0.6		0.12
A-BCD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
A-B	0.72								
A-C	1.88								
D-A	0.31	8.98	0.035		0.04	0.04	0.5		0.12
D-BC	0.32	7.79	0.040		0.04	0.04	0.6		0.13
C-ABD	2.15	11.39	0.189		0.26	0.26	3.9		0.11
C-D	0.00								
C-A	1.18								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-ACD	0.32	8.77	0.036		0.04	0.04	0.6		0.12
A-BCD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
A-B	0.72								
A-C	1.88								
D-A	0.31	8.98	0.035		0.04	0.04	0.5		0.12
D-BC	0.32	7.79	0.040		0.04	0.04	0.6		0.13
C-ABD	2.15	11.39	0.189		0.26	0.26	3.9		0.11
C-D	0.00								
C-A	1.18								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-ACD	0.32	8.77	0.036		0.04	0.04	0.6		0.12
A-BCD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
A-B	0.72								
A-C	1.88								
D-A	0.31	8.98	0.035		0.04	0.04	0.5		0.12
D-BC	0.32	7.79	0.040		0.04	0.04	0.6		0.13
C-ABD	2.15	11.39	0.189		0.26	0.26	3.9		0.11
C-D	0.00								
C-A	1.18								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM D-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.3
17.30	0.3
17.45	0.3
18.00	0.3

TRL LIMITED

(C) COPYRIGHT 2006

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"C:\Documents and Settings\CByrtus.SLR\Desktop\PICADY\A303 WESTBOUND SLIPS PM.vpi"
(drive-on-the-left) at 11:48:26 on Wednesday, 27 June 2012

RUN INFORMATION

RUN TITLE: PM PEAK TESTS - A303 Westbound Slips
LOCATION: Overton Road
DATE: 26/06/12
CLIENT:
ENUMERATOR: cbyrtus [BRA1274D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

```
                                                MINOR ROAD (ARM D)
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                    MAJOR ROAD (ARM C) --------------------- MAJOR ROAD (ARM A)
                                            I
                                            I
                                            I
                                            I
                                            I
                                            I
                                        MINOR ROAD (ARM B)
```

ARM A IS Overton Road North
ARM B IS A303 Westbound Off Slip
ARM C IS Overton Road South
ARM D IS A303 Westbound On Slip

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	MINOR ROAD D
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 8.13 M.	(W) 8.20 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.	(WA-D) 2.20 M.
- VISIBILITY	(VC-B) 200.0 M.	(VA-D) 200.0 M.
- BLOCKS TRAFFIC	YES	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 21.0 M.	(VD-A) 29.0 M.
- VISIBILITY TO RIGHT	(VB-A) 21.0 M.	(VD-C) 23.0 M.
- LANE 1 WIDTH	(WB-C) 2.92 M.	(WD-A) 4.54 M.
- LANE 2 WIDTH	(WB-A) 2.92 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
632.05	0.22	0.22	0.09	0.09

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
490.77	0.20	0.20	0.08	0.08

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
0.13	0.13	0.29	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
736.85	0.26	0.26	0.10	0.10

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
575.12	0.24	0.24	0.09	0.09

Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
0.15	0.15	0.34	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.24	0.24	0.24	0.24

A-D Stream

Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For Opposing

Stream A-D	Stream C-A	Stream C-D	Stream B-A	Stream B-D
689.79	0.24	0.24	0.24	0.24

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: AM PEAK 2013 BASE

TIME PERIOD BEGINS 17.00 AND ENDS 18.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
17.00 - 18.00	ARM A	0.000	0.000	0.620	0.380
		0.0	0.0	85.0	52.0
		(0.0)	(0.0)	(2.0)	(4.0)
	ARM B	0.250	0.000	0.090	0.660
		47.0	0.0	17.0	124.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.779	0.000	0.000	0.221
		60.0	0.0	0.0	17.0
		(3.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.966	0.000	0.034	0.000
		85.0	0.0	3.0	0.0
		(0.0)	(0.0)	(2.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR DEMAND SET AM PEAK 2013 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	0.28	9.20	0.031		0.00	0.03	0.5		0.11
B-AD	2.85	7.65	0.372		0.00	0.58	8.2		0.20
A-BCD	1.19	11.17	0.106		0.00	0.14	2.1		0.10
A-B	0.00								
A-C	1.48								
D-ABC	1.47	11.41	0.129		0.00	0.15	2.1		0.10
C-ABD	0.00	10.07	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	0.28	9.19	0.031		0.03	0.03	0.5		0.11
B-AD	2.85	7.65	0.372		0.58	0.59	8.8		0.21
A-BCD	1.19	11.17	0.106		0.14	0.14	2.1		0.10
A-B	0.00								
A-C	1.48								
D-ABC	1.47	11.40	0.129		0.15	0.15	2.2		0.10
C-ABD	0.00	10.07	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	0.28	9.19	0.031		0.03	0.03	0.5		0.11
B-AD	2.85	7.65	0.372		0.59	0.59	8.8		0.21
A-BCD	1.19	11.17	0.106		0.14	0.14	2.1		0.10
A-B	0.00								
A-C	1.48								
D-ABC	1.47	11.40	0.129		0.15	0.15	2.2		0.10
C-ABD	0.00	10.07	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	0.28	9.19	0.031		0.03	0.03	0.5		0.11
B-AD	2.85	7.65	0.372		0.59	0.59	8.8		0.21
A-BCD	1.19	11.17	0.106		0.14	0.14	2.1		0.10
A-B	0.00								
A-C	1.48								
D-ABC	1.47	11.40	0.129		0.15	0.15	2.2		0.10
C-ABD	0.00	10.07	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.00								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.6	*
17.45	0.6	*
18.00	0.6	*

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	17.0	17.0	1.9	0.11	1.9	0.11
B-AD	170.8	170.8	34.6	0.20	34.6	0.20
A-BCD	71.2	71.2	8.4	0.12	8.4	0.12
A-B	0.0	0.0				
A-C	89.0	89.0				
D-ABC	88.2	88.2	8.8	0.10	8.8	0.10
C-ABD	0.0	0.0	0.0	0.00	0.0	0.00
C-D	17.0	17.0				
C-A	59.8	59.8				
ALL	513.0	513.0	53.6	0.10	53.7	0.10

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
632.05	0.22	0.22	0.09	0.09

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
490.77	0.20	0.20	0.08	0.08

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
0.13	0.13	0.29	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
736.85	0.26	0.26	0.10	0.10

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
575.12	0.24	0.24	0.09	0.09

Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
0.15	0.15	0.34	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.24	0.24	0.24	0.24

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-A	Slope For Opposing Stream B-D
689.79	0.24	0.24	0.24	0.24

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: AM PEAK 2017 BASE

TIME PERIOD BEGINS 17.00 AND ENDS 18.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
17.00 - 18.00	ARM A	0.000	0.000	0.622	0.378
		0.0	0.0	89.0	54.0
		(0.0)	(0.0)	(2.0)	(4.0)
	ARM B	0.250	0.000	0.087	0.663
		49.0	0.0	17.0	130.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.788	0.000	0.000	0.213
		63.0	0.0	0.0	17.0
		(3.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.967	0.000	0.033	0.000
		89.0	0.0	3.0	0.0
		(2.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET AM PEAK 2017 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	0.28	9.20	0.031		0.00	0.03	0.5		0.11
B-AD	2.99	7.68	0.389		0.00	0.62	8.7		0.21
A-BCD	1.04	11.02	0.094		0.00	0.12	1.8		0.10
A-B	0.00								
A-C	1.34								
D-ABC	1.53	11.19	0.137		0.00	0.16	2.3		0.10
C-ABD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.05								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	0.28	9.18	0.031		0.03	0.03	0.5		0.11
B-AD	2.99	7.68	0.389		0.62	0.63	9.4		0.21
A-BCD	1.04	11.01	0.094		0.12	0.12	1.8		0.10
A-B	0.00								
A-C	1.34								
D-ABC	1.53	11.18	0.137		0.16	0.16	2.4		0.10
C-ABD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.05								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	0.28	9.18	0.031		0.03	0.03	0.5		0.11
B-AD	2.99	7.68	0.389		0.63	0.63	9.4		0.21
A-BCD	1.04	11.01	0.094		0.12	0.12	1.8		0.10
A-B	0.00								
A-C	1.34								
D-ABC	1.53	11.18	0.137		0.16	0.16	2.4		0.10
C-ABD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.05								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	0.28	9.18	0.031		0.03	0.03	0.5		0.11
B-AD	2.99	7.68	0.389		0.63	0.63	9.5		0.21
A-BCD	1.04	11.01	0.094		0.12	0.12	1.8		0.10
A-B	0.00								
A-C	1.34								
D-ABC	1.53	11.18	0.137		0.16	0.16	2.4		0.10
C-ABD	0.00	10.11	0.000		0.00	0.00	0.0		0.00
C-D	0.28								
C-A	1.05								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.6	*
17.45	0.6	*
18.00	0.6	*

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0

TRL LIMITED

(C) COPYRIGHT 2006

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"C:\Documents and Settings\CByrtus.SLR\Desktop\PICADY\A303 WESTBOUND SLIPS.vpi"
(drive-on-the-left) at 11:08:40 on Wednesday, 27 June 2012

RUN INFORMATION

RUN TITLE: AM PEAK TESTS - A303 Westbound Slips
LOCATION: Overton Road
DATE: 26/06/12
CLIENT:
ENUMERATOR: cbyrtus [BRA1274D]
JOB NUMBER:
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

```
                                                MINOR ROAD (ARM D)
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                                                    I
                    MAJOR ROAD (ARM C) --------------------- MAJOR ROAD (ARM A)
                                            I
                                            I
                                            I
                                            I
                                            I
                                            I
                                        MINOR ROAD (ARM B)
```

ARM A IS Overton Road North
ARM B IS A303 Westbound Off Slip
ARM C IS Overton Road South
ARM D IS A303 Westbound On Slip

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C

ETC.

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	MINOR ROAD D
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 8.13 M.	(W) 8.20 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.20 M.	(WA-D) 2.20 M.
- VISIBILITY	(VC-B) 200.0 M.	(VA-D) 200.0 M.
- BLOCKS TRAFFIC	YES	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 21.0 M.	(VD-A) 29.0 M.
- VISIBILITY TO RIGHT	(VB-A) 21.0 M.	(VD-C) 23.0 M.
- LANE 1 WIDTH	(WB-C) 2.92 M.	(WD-A) 4.54 M.
- LANE 2 WIDTH	(WB-A) 2.92 M.	(WD-C) 0.00 M.

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
632.05	0.22	0.22	0.09	0.09

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
490.77	0.20	0.20	0.08	0.08

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
0.13	0.13	0.29	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
736.85	0.26	0.26	0.10	0.10

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
575.12	0.24	0.24	0.09	0.09

Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
0.15	0.15	0.34	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.24	0.24	0.24	0.24

A-D Stream

Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For Opposing

Stream A-D	Stream C-A	Stream C-D	Stream B-A	Stream B-D
689.79	0.24	0.24	0.24	0.24

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: AM PEAK 2013 BASE

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
08.00 - 09.00	ARM A	0.000	0.000	0.553	0.447
		0.0	0.0	57.0	46.0
		(0.0)	(0.0)	(14.0)	(13.0)
	ARM B	0.268	0.000	0.154	0.577
		33.0	0.0	19.0	71.0
		(12.0)	(0.0)	(11.0)	(0.0)
	ARM C	0.740	0.000	0.000	0.260
		74.0	0.0	0.0	26.0
		(7.0)	(0.0)	(0.0)	(8.0)
	ARM D	0.944	0.000	0.056	0.000
		167.0	0.0	10.0	0.0
		(4.0)	(0.0)	(20.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR DEMAND SET AM PEAK 2013 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	0.32	8.69	0.036		0.00	0.04	0.5		0.12
B-AD	1.73	7.40	0.234		0.00	0.30	4.3		0.18
A-BCD	0.85	10.02	0.085		0.00	0.10	1.5		0.11
A-B	0.00								
A-C	0.87								
D-ABC	2.95	10.81	0.273		0.00	0.37	5.3		0.13
C-ABD	0.00	10.17	0.000		0.00	0.00	0.0		0.00
C-D	0.43								
C-A	1.24								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	0.32	8.69	0.036		0.04	0.04	0.6		0.12
B-AD	1.73	7.40	0.234		0.30	0.30	4.5		0.18
A-BCD	0.85	10.01	0.085		0.10	0.10	1.6		0.11
A-B	0.00								
A-C	0.87								
D-ABC	2.95	10.81	0.273		0.37	0.37	5.6		0.13
C-ABD	0.00	10.17	0.000		0.00	0.00	0.0		0.00
C-D	0.43								
C-A	1.24								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	0.32	8.69	0.036		0.04	0.04	0.6		0.12
B-AD	1.73	7.40	0.234		0.30	0.30	4.6		0.18
A-BCD	0.85	10.01	0.085		0.10	0.10	1.6		0.11
A-B	0.00								
A-C	0.87								
D-ABC	2.95	10.81	0.273		0.37	0.37	5.6		0.13
C-ABD	0.00	10.17	0.000		0.00	0.00	0.0		0.00
C-D	0.43								
C-A	1.24								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	0.32	8.69	0.036		0.04	0.04	0.6		0.12
B-AD	1.73	7.40	0.234		0.30	0.30	4.6		0.18
A-BCD	0.85	10.01	0.085		0.10	0.10	1.6		0.11
A-B	0.00								
A-C	0.87								
D-ABC	2.95	10.81	0.273		0.37	0.37	5.6		0.13
C-ABD	0.00	10.17	0.000		0.00	0.00	0.0		0.00
C-D	0.43								
C-A	1.24								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.3
08.30	0.3
08.45	0.3
09.00	0.3

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.4
08.30	0.4
08.45	0.4
09.00	0.4

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	19.0	19.0	2.2	0.12	2.2	0.12
B-AD	104.0	104.0	18.0	0.17	18.0	0.17
A-BCD	50.9	50.9	6.2	0.12	6.2	0.12
A-B	0.0	0.0				
A-C	52.3	52.3				
D-ABC	177.0	177.0	22.1	0.13	22.1	0.13
C-ABD	0.0	0.0	0.0	0.00	0.0	0.00
C-D	26.1	26.1				
C-A	74.1	74.1				
ALL	503.4	503.4	48.6	0.10	48.6	0.10

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.SLOPES AND INTERCPET

(NB:Streams may be combined, in which case capacity

will be adjusted)

B-C Stream

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
632.05	0.22	0.22	0.09	0.09

B-AD Stream

Intercept For Stream B-AD	Slope For Opposing Stream A-C	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
490.77	0.20	0.20	0.08	0.08

	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream C-B	Slope For Opposing
	0.13	0.13	0.29	

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream D-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-B
736.85	0.26	0.26	0.10	0.10

D-BC Stream

Intercept For Stream D-BC	Slope For Opposing Stream C-A	Slope For Opposing Stream B-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-D
575.12	0.24	0.24	0.09	0.09

	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream A-D	Slope For Opposing
	0.15	0.15	0.34	

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream D-C	Slope For Opposing Stream D-B
689.79	0.24	0.24	0.24	0.24

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing Stream B-A	Slope For Opposing Stream B-D
689.79	0.24	0.24	0.24	0.24

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

Demand set: AM PEAK 2017 BASE

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

LENGTH OF TIME PERIOD - 60 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
08.00 - 09.00	ARM A	0.000	0.000	0.556	0.444
		0.0	0.0	60.0	48.0
		(0.0)	(0.0)	(13.0)	(13.0)
	ARM B	0.268	0.000	0.150	0.583
		34.0	0.0	19.0	74.0
		(12.0)	(0.0)	(11.0)	(0.0)
	ARM C	0.740	0.000	0.000	0.260
		77.0	0.0	0.0	27.0
		(6.0)	(0.0)	(0.0)	(7.0)
	ARM D	0.946	0.000	0.054	0.000
		175.0	0.0	10.0	0.0
		(4.0)	(0.0)	(20.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET AM PEAK 2017 BASE
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	0.32	8.66	0.037		0.00	0.04	0.5		0.12
B-AD	1.80	7.39	0.244		0.00	0.32	4.5		0.18
A-BCD	0.89	10.03	0.088		0.00	0.11	1.6		0.11
A-B	0.00								
A-C	0.91								
D-ABC	3.08	10.81	0.285		0.00	0.39	5.7		0.13
C-ABD	0.00	10.16	0.000		0.00	0.00	0.0		0.00
C-D	0.45								
C-A	1.28								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	0.32	8.65	0.037		0.04	0.04	0.6		0.12
B-AD	1.80	7.39	0.244		0.32	0.32	4.8		0.18
A-BCD	0.89	10.02	0.089		0.11	0.11	1.6		0.11
A-B	0.00								
A-C	0.91								
D-ABC	3.08	10.80	0.285		0.39	0.40	5.9		0.13
C-ABD	0.00	10.16	0.000		0.00	0.00	0.0		0.00
C-D	0.45								
C-A	1.28								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	0.32	8.65	0.037		0.04	0.04	0.6		0.12
B-AD	1.80	7.39	0.244		0.32	0.32	4.8		0.18
A-BCD	0.89	10.02	0.089		0.11	0.11	1.6		0.11
A-B	0.00								
A-C	0.91								
D-ABC	3.08	10.80	0.285		0.40	0.40	6.0		0.13
C-ABD	0.00	10.16	0.000		0.00	0.00	0.0		0.00
C-D	0.45								
C-A	1.28								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	0.32	8.65	0.037		0.04	0.04	0.6		0.12
B-AD	1.80	7.39	0.244		0.32	0.32	4.8		0.18
A-BCD	0.89	10.02	0.089		0.11	0.11	1.6		0.11
A-B	0.00								
A-C	0.91								
D-ABC	3.08	10.80	0.285		0.40	0.40	6.0		0.13
C-ABD	0.00	10.16	0.000		0.00	0.00	0.0		0.00
C-D	0.45								
C-A	1.28								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.3
08.30	0.3
08.45	0.3
09.00	0.3

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.4
08.30	0.4
08.45	0.4
09.00	0.4

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0