

TRL LIMITED

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

FICADY 4.1 ANALYSIS PROGRAM  
RELEASE 4.0 (NOV 2003)

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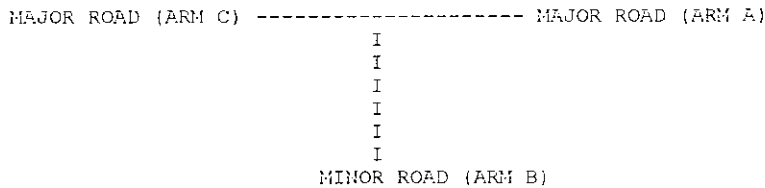
THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:- "g:\05-073 - Gravesend\Trans\Ficady\Jeskyn's Farm AM Peak.vpi" (drive-on-the-left ) at 12:35:36 on W

RUN TITLE  
\*\*\*\*\*  
Jeskyn's Farm Car Park Access

MAJOR/MINOR JUNCTION CAPACITY AND DELAY  
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INPUT DATA  
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ARM A IS Henhurst Road (North)  
ARM B IS Jeskyn's Farm Car Park Access  
ARM C IS Henhurst Road (South)

STREAM LABELLING CONVENTION  
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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  
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DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	( W ) 6.00 M.
CENTRAL RESERVE WIDTH	( WCR ) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	( WC-B ) 2.20 M.
- VISIBILITY	( VC-B ) 160.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	( VB-C ) 90.0 M.
- VISIBILITY TO RIGHT	( VB-A ) 120.0 M.
- LANE 1 WIDTH	( WB-C ) -
- LANE 2 WIDTH	( WB-A ) -
- WIDTH AT 0 M FROM JUNC.	10.00 M.
- WIDTH AT 5 M FROM JUNC.	3.74 M.
- WIDTH AT 10 M FROM JUNC.	2.40 M.
- WIDTH AT 15 M FROM JUNC.	2.40 M.
- WIDTH AT 20 M FROM JUNC.	2.40 M.
- LENGTH OF FLARED SECTION	1 VEH

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 TRAFFIC DEMAND DATA  
 -----

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.  
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	1.69	2.53	1.69
ARM B	15.00	45.00	75.00	0.06	0.09	0.06
ARM C	15.00	45.00	75.00	1.56	2.34	1.56

TIME	TURNING PROPORTIONS			
	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.052	0.948
		( 0.0 )	( 10.0 )	( 10.0 )
	ARM B	0.800	0.000	0.200
		( 10.0 )	( 0.0 )	( 10.0 )
	ARM C	1.000	0.000	0.000
		( 10.0 )	( 10.0 )	( 0.0 )

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-09.00								
B-C	0.01	12.17	0.001		0.0	0.0	0.0	
B-A	0.05	9.56	0.006		0.0	0.0	0.1	
C-A	1.56							
C-B	0.00	9.56	0.000		0.0	0.0	0.0	
A-B	0.09							
A-C	1.60							

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)
09.00-09.15								
B-C	0.01	12.06	0.001		0.0	0.0	0.0	
B-A	0.06	7.93	0.008		0.0	0.0	0.1	
C-A	1.87							
C-B	0.00	9.58	0.000		0.0	0.0	0.0	
A-B	0.10							
A-C	1.91							

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)
09.15-09.30								
B-C	0.02	11.91	0.002		0.0	0.0	0.0	
B-A	0.07	7.74	0.009		0.0	0.0	0.1	
C-A	2.29							
C-B	0.00	9.46	0.000		0.0	0.0	0.0	
A-B	0.13							
A-C	2.34							

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)
09.30-09.45								
B-C	0.02	11.91	0.002		0.0	0.0	0.0	
B-A	0.07	7.74	0.009		0.0	0.0	0.1	
C-A	2.29							
C-B	0.00	9.46	0.000		0.0	0.0	0.0	
A-B	0.13							
A-C	2.34							

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)
09.45-09.00								
B-C	0.01	12.06	0.001		0.0	0.0	0.0	
B-A	0.06	7.93	0.008		0.0	0.0	0.1	
C-A	1.87							
C-B	0.00	9.58	0.000		0.0	0.0	0.0	
A-B	0.10							
A-C	1.91							

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)
08.00-08.15								
B-C	0.01	12.17	0.001		0.0	0.0	0.0	
B-A	0.05	9.05	0.006		0.0	0.0	0.1	
C-A	1.56							
C-B	0.00	9.66	0.000		0.0	0.0	0.0	
A-B	0.09							
A-C	1.60							

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	QUEUEING (MIN)	QUEUEING * (MIN/VEH)	INCLUSIVE QUEUEING (MIN)	INCLUSIVE QUEUEING * (MIN/VEH)
B-C	1.4	0.9	0.1	0.08	0.1	0.08
B-A	5.5	3.7	0.7	0.13	0.7	0.13
C-A	171.4	114.3				
C-B	0.0	0.0	0.0	0.00	0.0	0.00
A-B	9.6	6.4				
A-C	175.5	117.0				
ALL	363.4	242.2	0.8	0.00	0.8	0.00

\* 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

\*\*\*\*\* PICADY 4 run completed.

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-----

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Run with file:- "p:\05-073 - Gravesend\Trans\Ficady\Jeskyn's Farm PM Peak.vpi" (drive-on-the-left ) at 12:34:52 on W

RUN TITLE  
\*\*\*\*\*  
Jeskyn's Farm Car Park Access

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

INPUT DATA  
-----

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

ARM A IS Henhurst Road (North)  
ARM B IS Jeskyn's Farm Car Park Access  
ARM C IS Henhurst Road (South)

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
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	( W ) 6.00 M.
CENTRAL RESERVE WIDTH	( WCR ) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	( WC-B ) 3.20 M.
- VISIBILITY	( VC-B ) 160.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	( VB-C ) 90.0 M.
- VISIBILITY TO RIGHT	( VB-A ) 120.0 M.
- LANE 1 WIDTH	( WB-C ) -
- LANE 2 WIDTH	( WB-A ) -
- WIDTH AT 0 M FROM JUNC.	10.00 M.
- WIDTH AT 5 M FROM JUNC.	3.74 M.
- WIDTH AT 10 M FROM JUNC.	2.40 M.
- WIDTH AT 15 M FROM JUNC.	2.40 M.
- WIDTH AT 20 M FROM JUNC.	2.40 M.
- LENGTH OF FLARED SECTION	1 VEH

-----  
 TRAFFIC DEMAND DATA  
 -----

TIME PERIOD BEGINS 07.45 AND ENDS 09.15  
 LENGTH OF TIME PERIOD - 90 MINUTES.  
 LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOE OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOE OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	1.25	1.88	1.25
ARM B	15.00	45.00	75.00	0.17	0.26	0.17
ARM C	15.00	45.00	75.00	1.55	2.32	1.55

TIME	FRM/TO	TURNING PROPORTIONS		
		ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.060	0.940
		( 0.0 )	( 10.0 )	( 10.0 )
	ARM B	0.857	0.000	0.143
		( 10.0 )	( 0.0 )	( 10.0 )
	ARM C	0.992	0.008	0.000
		( 10.0 )	( 10.0 )	( 0.0 )

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA  
 DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.03	12.27	0.002		0.0	0.0	0.0	
B-A	0.15	8.18	0.018		0.0	0.0	0.3	
C-A	1.54							
C-B	0.01	9.79	0.001		0.0	0.0	0.0	
A-B	0.08							
A-C	1.17							

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)
08.00-08.15								
B-C	0.03	12.18	0.002		0.0	0.0	0.0	
B-A	0.18	8.06	0.022		0.0	0.0	0.3	
C-A	1.84							
C-B	0.01	9.71	0.002		0.0	0.0	0.0	
A-B	0.09							
A-C	1.40							

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)
08.15-08.30								
B-C	0.04	12.06	0.003		0.0	0.0	0.0	
B-A	0.22	7.91	0.028		0.0	0.0	0.4	
C-A	2.25							
C-B	0.02	9.63	0.002		0.0	0.0	0.0	
A-B	0.11							
A-C	1.72							

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)
08.30-08.45								
B-C	0.04	12.06	0.003		0.0	0.0	0.0	
B-A	0.22	7.91	0.028		0.0	0.0	0.4	
C-A	2.25							
C-B	0.02	9.63	0.002		0.0	0.0	0.0	
A-B	0.11							
A-C	1.72							

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)
08.45-09.00								
B-C	0.03	12.18	0.002		0.0	0.0	0.0	
B-A	0.18	8.06	0.022		0.0	0.0	0.4	
C-A	1.84							
C-B	0.01	9.71	0.002		0.0	0.0	0.0	
A-B	0.09							
A-C	1.40							

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)
09.00-09.15								
B-C	0.03	12.27	0.002		0.0	0.0	0.0	
B-A	0.15	2.12	0.018		0.0	0.0	0.3	
C-A	1.54							
C-B	0.01	9.78	0.001		0.0	0.0	0.0	
A-B	0.08							
A-C	1.17							

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	VEH/H	QUEUEING DELAY (MIN)	QUEUEING (MIN/VEH)	INCLUSIVE QUEUEING DELAY (MIN)	INCLUSIVE QUEUEING (MIN/VEH)
B-C	2.7	1.8	0.2	0.08	0.2	0.08
B-A	16.5	11.0	2.1	0.13	2.1	0.13
C-A	168.7	112.4				
C-B	1.4	0.9	0.1	0.10	0.1	0.10
A-B	8.2	5.5				
A-C	128.9	85.9				
ALL	326.3	217.6	2.4	0.01	2.4	0.01

\* 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

\*\*\*\*\* FICADY 4 run completed.  
 ===== end of file =====