_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"j:\122000\122374-00\4 Internal Project Data\4-40 Calculations\Transport\Junction Assessments\16.Wimbourne Rd_Ffordd y Mileniwm\With Improvements\Ffordd y Mileniwm_Wimbourne Rd RBT.vai"
(drive-on-the-left) at 16:46:33 on Thursday, 16 July 2009

.FILE PROPERTIES
****

RUN TITLE: Wimbourne Road / Ffordd y Mileniwm
LOCATION:
DATE: 16/07/09
CLIENT:
ENUMERATOR: Ryan.Hopkins [WACCMSJQ2J]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA
****
ARM A - Ffrodd y Mileniwm (E)
ARM B - Wimbourne Road
ARM C - Ffrodd y Mileniwm (W)

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	22.30	20.00	30.00	20.0	0.695	30.462
ARM B	4.45	6.76	15.10	20.00	40.00	25.5	0.676	30.777
ARM C	3.60	7.19	100.00	30.00	40.00	28.0	0.732	35.242

V = approach half-width E = entry width L = effective flare length R = entry radius D = inscribed circle diameter PHI = entry angle

WARNING ARM C Effective flare length is outside normal range.
Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

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

TIME PERIOD BEGINS(16.15)AND ENDS(17.45)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

.DEMAND SET TITLE: PM 2020 With Development

T15

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	15.32	22.99	15.32
ARM B	15.00	45.00	75.00	5.46	8.19	5.46
ARM C	15.00	45.00	75.00	12.10	18.15	12.10

DEMAND SET TITLE: PM 2020 With Development

T33

TURNING PROPORTIONS
TURNING COUNTS

TIME	FROM/TO	ARM A	ARM B	ARM C
16.15 - 17.45		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.060	0.940
		0.0	73.0	1153.0
		(0.0)	(27.0)	(2.0)
	ARM B	0.430	0.000	0.570
		188.0	0.0	249.0
		(6.0)	(0.0)	(3.0)
	ARM C	0.903	0.097	0.000
		874.0	94.0	0.0
		(2.0)	(9.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
16.15-16.30									
ARM A	15.38	28.58	0.538	- -	0.0	1.2	16.7	-	0.075
ARM B	5.48	20.00	0.274	- -	0.0	0.4	5.5	-	0.069
ARM C	12.15	32.55	0.373	- -	0.0	0.6	8.7	-	0.049
16.30-16.45									
ARM A	18.37	28.41	0.647	- -	1.2	1.8	25.9	-	0.099
ARM B	6.55	18.12	0.361	- -	0.4	0.6	8.2	-	0.086
ARM C	14.50	32.20	0.450	- -	0.6	0.8	12.0	-	0.056
16.45-17.00									
ARM A	22.50	28.18	0.798	- -	1.8	3.8	51.7	-	0.168
ARM B	8.02	15.61	0.514	- -	0.6	1.0	14.9	-	0.131
ARM C	17.76	31.73	0.560	- -	0.8	1.3	18.4	-	0.071
17.00-17.15									
ARM A	22.50	28.17	0.799	- -	3.8	3.9	57.3	-	0.176
ARM B	8.02	15.53	0.516	- -	1.0	1.1	15.7	-	0.133
ARM C	17.76	31.72	0.560	- -	1.3	1.3	18.9	-	0.072
17.15-17.30									
ARM A	18.37	28.40	0.647	- -	3.9	1.9	29.5	-	0.102
ARM B	6.55	18.01	0.364	- -	1.1	0.6	8.9	-	0.088
ARM C	14.50	32.18	0.451	- -	1.3	0.8	12.7	-	0.057
17.30-17.45									
ARM A	15.38	28.57	0.538	- -	1.9	1.2	18.2	-	0.076
ARM B	5.48	19.92	0.275	- -	0.6	0.4	5.9	-	0.069
ARM C	12.15	32.54	0.373	- -	0.8	0.6	9.1	-	0.049

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	1.2	*
16.45	1.8	**
17.00	3.8	****
17.15	3.9	****
17.30	1.9	**
17.45	1.2	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.4	
16.45	0.6	*

17.00	1.0	*
17.15	1.1	*
17.30	0.6	*
17.45	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.30	0.6	*
16.45	0.8	*
17.00	1.3	*
17.15	1.3	*
17.30	0.8	*
17.45	0.6	*

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1687.5	1125.0	199.2	0.12	199.2	0.12
B	601.5	401.0	59.1	0.10	59.2	0.10
C	1332.4	888.3	79.8	0.06	79.8	0.06
ALL	3621.4	2414.3	338.1	0.09	338.2	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