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PROPOSED RESIDENTIAL DEVELOPMENT AT BALLYOWEN, GOREY, CO. WEXFORD

Transportation and Traffic Assessment

for

Amil Properties Ltd.

November 2018

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1 INTRODUCTION

1 Introduction

1.1 INTRODUCTION

Roadplan Consulting was commissioned by Martin O'Looney to prepare a Transportation and Traffic Assessment on behalf of Amil Properties Ltd. for a proposed residential development at Ballyowen, Creagh Demesne, Gorey, Co Wexford.

In preparing this report, Roadplan Consulting has made reference to:

- The Wexford County Development Plan 2013-2019.
- The Institute of Highways and Transportation *Guidelines on the Preparation of Traffic Impact Assessments*.
- The *TII Transport Assessment Guidelines.*
- The *TII National Traffic Model*.

1.2 OBJECTIVES

The objective of this report is to examine the traffic implications of the proposed development in terms of how it can integrate with existing traffic in the area. The report will determine and quantify the extent of additional trips generated by the development, and the impact of such trips on the operational performance of the local road network and junctions, in particular the existing Fort Road / Willow Park / Creagh Demesne Crossroads junction, the Fort Road / Pearse Street / John's Street Crossroads Junction and the proposed Fort Road / Residential Access priority junction.

1.3 STUDY METHODOLOGY

The methodology adopted for this report is summarised as follows:

- A scoping document was provided to the Roads Department of Wexford County Council. This document is contained in Appendix A.
- Traffic Count was undertaken by Irish Traffic Surveys Ltd. on Monday 18th of December 2017 during a 12-hour period (07:00 to 19:00). Count information was obtained at the existing Fort Road / Willow Park / Creagh Demesne crossroads junction. A secondary traffic count was undertaken at the existing Fort Road / Pearse Street / John's Street crossroads junction by Irish Traffic Surveys Ltd. on Tuesday 9th of January 2018 during a 12-hour period (07:00 to 19:00).
- Existing Traffic Assessment – A spreadsheet model was created which contains the base year DO-NOTHING traffic count data described above. The traffic count data was used to develop an PICADY model of the existing Fort Road / Willow Park / Creagh Demesne Crossroads junction and the existing Fort Road / Pearse Street / John's Street Crossroads Junction and a PICADY model of the proposed Fort Road / Residential Access priority junction.
- Future Year Assessment – The estimated future year traffic volumes on the study area road network, as a result of the increase in background traffic and the additional development related traffic was used to assess the future operational performance of the junctions both at the year of opening of the development, 5 and 15 years after opening.
- Parking Requirements – Car parking provision for the proposed development was assessed against the parking standards as set out in the Wexford County Development Plan 2013 – 2019.

1.4 STRUCTURE OF REPORT

Following this introduction, the report is set out as follows:

- Chapter 2 provides details of the proposed development;

- Chapter 3 provides an overview of the existing traffic conditions and the local road network, identifying any existing issues related to traffic flow or road infrastructure;
- Chapters 4 and 5 outline the analysis as described in the Study Methodology above. The analysis examines trip generation, distribution and resulting junction operational performance with the development in place;
- Chapter 6 establishes the parking requirements for the development and sets out how these needs are provided for;
- Chapter 7 addresses road safety, pedestrian and public transport; and
- Chapter 8 presents the conclusions and a summary of the report.

2 PROPOSED DEVELOPMENT

2 Proposed Development

2.1 SITE LOCATION

The proposed residential development is located at Fort Rd, Gorey, Co. Wexford. The development is bounded by a Ramsfortpark forest to the east, the Fort Rd to the west, undeveloped lands to the north and residential developments to the south as shown on Figure 2.1 'Site Location Map'.

Figure 2.1: Site Location Map

2.2 EXISTING LAND USE

The existing site is currently a mixture of undeveloped lands and disused buildings.

2.3 DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development consists of new 246 residential units and 61 apartments as shown in table 2.1 *Development Schedule*.

Item	Unit	Quantity
Residential Dwellings	2, 3 & 4 bed	232
Apartments	2 & 3 Bed	65
Crèche	sqm	554

Access to the proposed residential development will be via a proposed access onto the existing Fort Rd. A layout of the proposed development, is shown on the Architect's drawing which is contained in Appendix B – Drawings.

3 EXISTING AND PROPOSED TRAFFIC CONDITIONS

3 Existing and Proposed Traffic Conditions

3.1 EXISTING TRAFFIC FLOWS

Traffic Count was undertaken on the 18th of December 2017 during a 12-hour period (07:00 to 19:00) and on the 9th of January 2018 during a 12-hour period (07:00 to 19:00). The count data is provided in Appendix F – Traffic Counts. Count information was obtained at the following junctions:

- Fort Road / Willow Park / Creagh Demesne Crossroads junction
- Fort Road / Pearse Street / John's Street Crossroads Junction

The traffic flows during the AM and PM peak hours were abstracted from the surveyed data and are shown in the following tables:

Fort Rd/ Willow Park/ Creagh Demesne Crossroads Junction

2017 AM Peak Existing (08:15 – 09:15)

From / To	Fort Rd (north)	Willow Park	Fort Rd (south)	Creagh Demesne	**Totals**
Fort Rd (north)	0	74	203	7	**284**
Willow Park	76	0	33	2	**111**
Fort Rd (south)	154	17	0	6	**177**
Creagh Demesne	12	2	12	0	**26**
Totals	**242**	**93**	**248**	**15**	**598**

2017 PM Peak Existing (17:00 – 18:00)

From / To	Fort Rd (north)	Willow Park	Fort Rd (south)	Creagh Demesne	**Totals**
Fort Rd (north)	0	49	77	3	**129**
Willow Park	30	0	24	1	**55**
Fort Rd (south)	141	38	0	16	**195**
Creagh Demesne	7	1	5	0	**13**
Totals	**178**	**88**	**106**	**20**	**392**

Fort Road/ Pearse Street/ John's Street Crossroads Junction

2017 AM Peak Existing (08:15 – 09:15)

From / To	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	102	0	78	**180**
Pearse St ((east)	7	0	0	18	**25**
Johns Street	96	24	0	37	**157**
Pearse St (west)	44	108	0	0	**152**
Totals	**147**	**234**	**0**	**133**	**514**

2017 PM Peak Existing (17:00 – 18:00)

From / To	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	58	0	47	**105**
Pearse St ((east)	14	0	0	32	**46**
Johns Street	83	37	0	74	**194**
Pearse St (west)	81	73	0	0	**154**
Totals	**178**	**168**	**0**	**153**	**499**

A summary of the count data for the peak hour flows is contained in Appendix C – Traffic Flow Sheets.

3.2 EXISTING ROAD NETWORK

The proposed development is accessed from a proposed priority junction onto the existing Fort Rd.

The Fort Rd has the following characteristics at the location of the proposed development:

- It is a single carriageway road that is approximately 6m wide.
- It travels in a north to south and provides local access to Gorey town.

All roads are governed by a 50kph speed limit.

3.3 ROAD COLLISIONS

Information on road collisions was taken from the Road Safety Authority website and is provided hereunder in Figure 3.4.

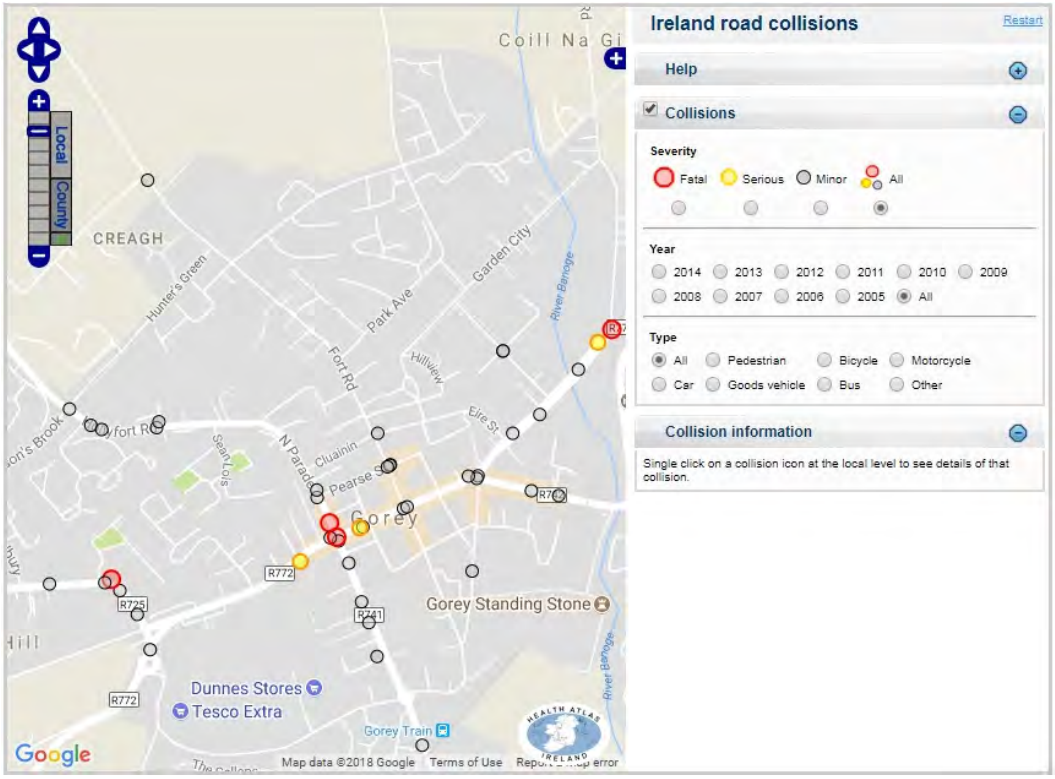

Fig 3.4: Road collisions

There are a number of minor collisions along the Fort Rd in the period of nine years (from 2005 to 2013), but none at the proposed access to the development.

3.4 PROPOSED ROAD NETWORK IMPROVEMENTS

The western section of the Gorey Inner Relief Road has been constructed. The scheme commences at the R725 / Woodbury priority junction and terminates at Ford Road. The eastern section of the Gorey Inner Relief Road has not yet been constructed. The eastern section of the inner relief road runs from Fort Road and will terminate at the R772. There is no definite date for the commencement of construction of the eastern section of the inner relief road. A layout of the proposed road network improvements are shown on Figure 3.1 below.

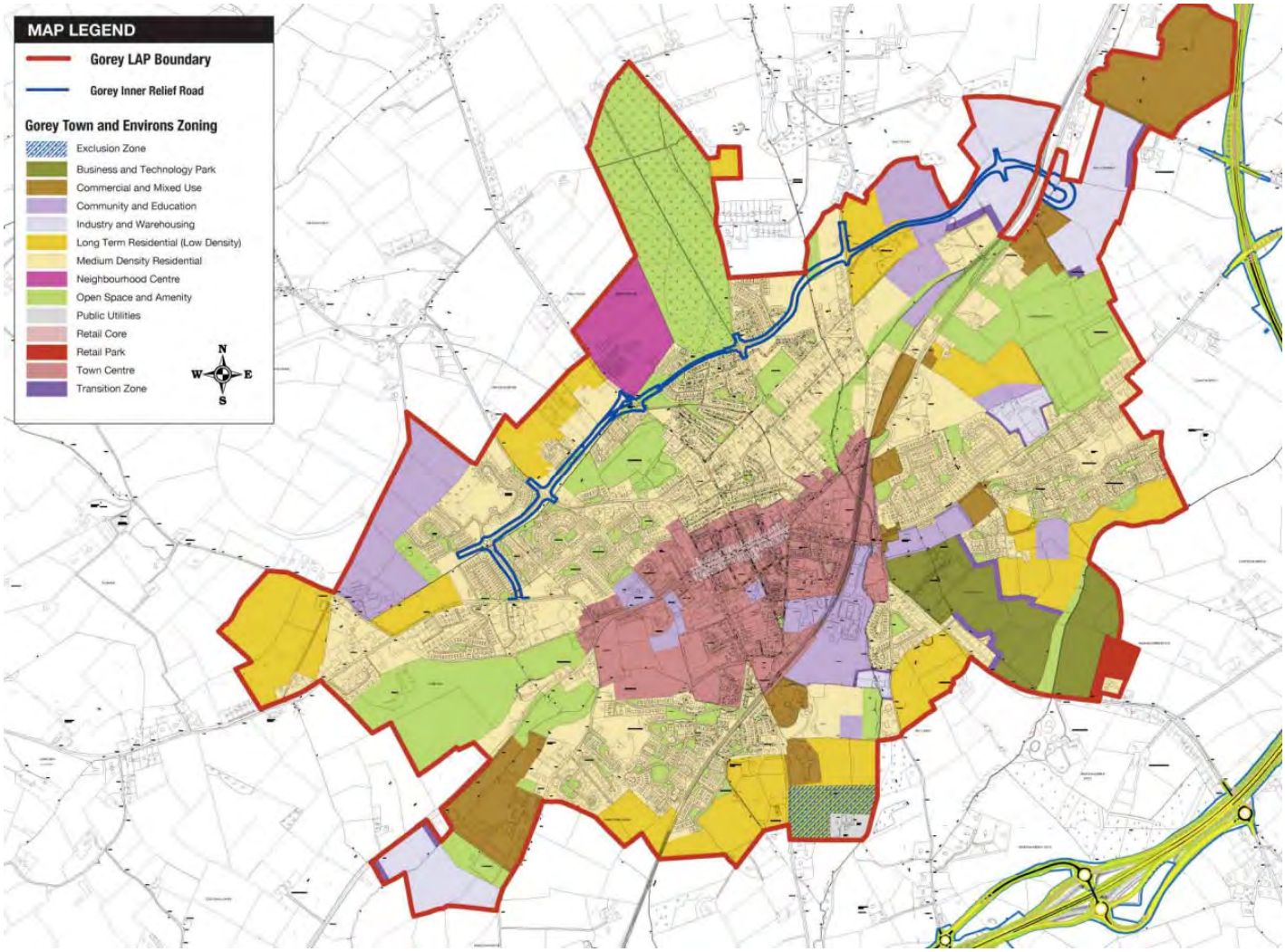

Figure 3.1: Proposed Road Network Improvements

4 TRAFFIC GENERATION & TRIP DISTRIBUTION

4 Traffic Generation and Trip Distribution

4.1 DEVELOPMENT TRIP GENERATION

The TRICS database has been used to predict the trip generation to and from the proposed development for the AM and PM peak periods. Full details of the TRICS information used for the assessments are provided in Appendix D - TRICS information.

4.1.1 Residential Dwellings

The category of "Residential – Houses Privately Owned" has been interrogated as the most appropriate development type category for this part of the development and the trip rates for the AM and PM peak periods are shown below:

Trip rates per number of Units

	Trip rate to development	Trip rate from development
AM Peak	0.164	0.416
PM Peak	0.354	0.228

For the proposed 232 residential dwellings, this would give the following trips to and from the proposed development:

Trip Generation – 232 Residential Dwellings

	Trip rate to development	Trip rate from development
AM Peak	38	97
PM Peak	82	53

4.1.2 Apartments

The category of "Residential – Flats Privately Owned" has been interrogated as the most appropriate development type category for this part of the development and the trip rates for the AM and PM peak periods are shown below:

Trip rates per number of Units

	Trip rate to development	Trip rate from development
AM Peak	0.05	0.15
PM Peak	0.12	0.07

For the proposed 65 apartments, this would give the following trips to and from the proposed development:

Trip Generation – 65 Apartments

	Trip rate to development	Trip rate from development
AM Peak	4	10
PM Peak	8	5

4.1.3 Crèche

The category of "Educational – Nursery" has been interrogated as the most appropriate development type category for this part of the development and the trip rates for the AM and PM peak periods are shown below:

Trip rates per 100 sqm

	Trip rate to development	Trip rate from development
AM Peak	6.629	5.181
PM Peak	5.211	5.861

For the proposed 554sqm Crèche, this would give the following trips to and from the proposed development:

Trip Generation – 554 sqm

	Trip rate to development	Trip rate from development
AM Peak	37	29
PM Peak	29	33

4.1.4 Total Development Trip Generation Summary

To summarise, the combined trips that are predicted to be generated by the proposed residential development are shown in the table below:

Trip Generation – Total Development

	Trip rate to development	Trip rate from development	Total
AM peak	79	136	215
PM peak	119	91	210

4.2 TRIP DISTRIBUTION

Currently a large proportion of traffic turning north from Willow Park onto Fort Road travel via Hunter's Green Estate link road which provided access to the three existing primary schools located to the northwest of Gorey town. In addition, the Hunter's Green Estate link road also provided a route for commuters, living to the north of Gorey town, access to the M11 and the N11 without having to travel via Gorey town centre.

Therefore, for the proposed development it is assumed that 5% of the development traffic will arrive / depart via Fort Road north direction and 95% of the development traffic will arrive / depart via Fort Road south direction.

It is assumed that, the distribution of development traffic at the existing Fort Road / Pearse St / John St crossroads junction will be similar to the current distribution of existing traffic at the junction.

The following diagram shows the proposed traffic distribution percentage for the AM and PM peak hours.

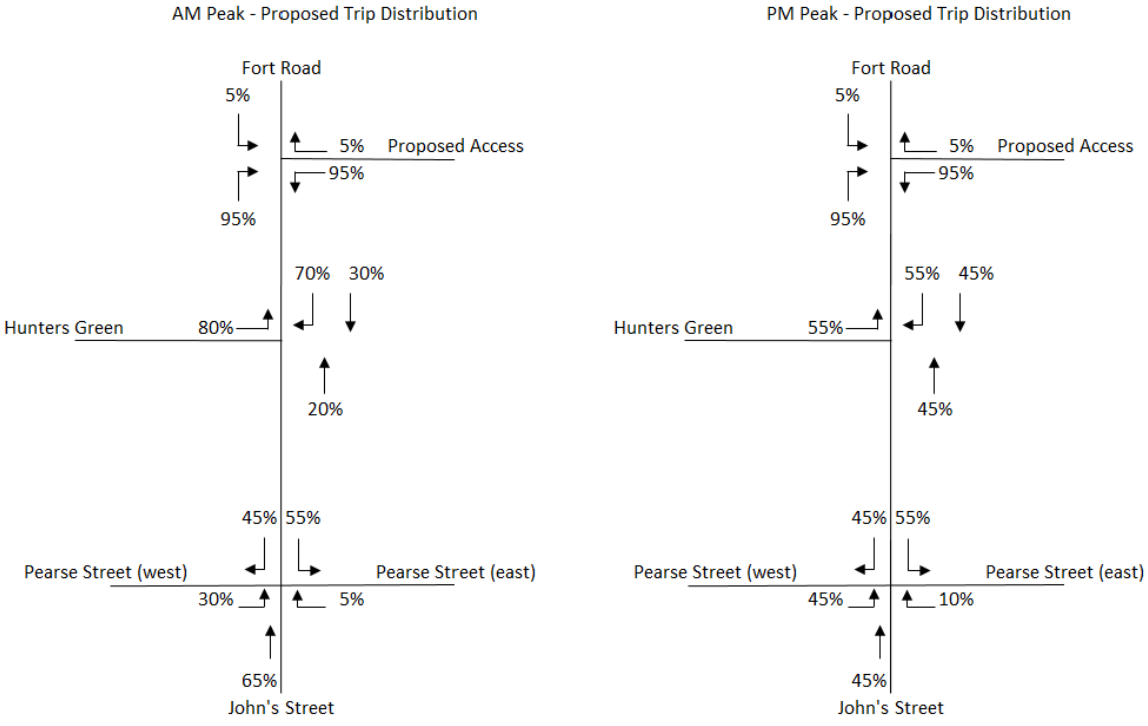

Figure 4.2.1 - AM and PM Peak Trip Distribution Percentage

Using the proposed directional splits shown above and the trips generated by the proposed development outlined in 4.1, the following diagrams show the turning movements of predicted development traffic during the AM and PM peak hours on the road network.

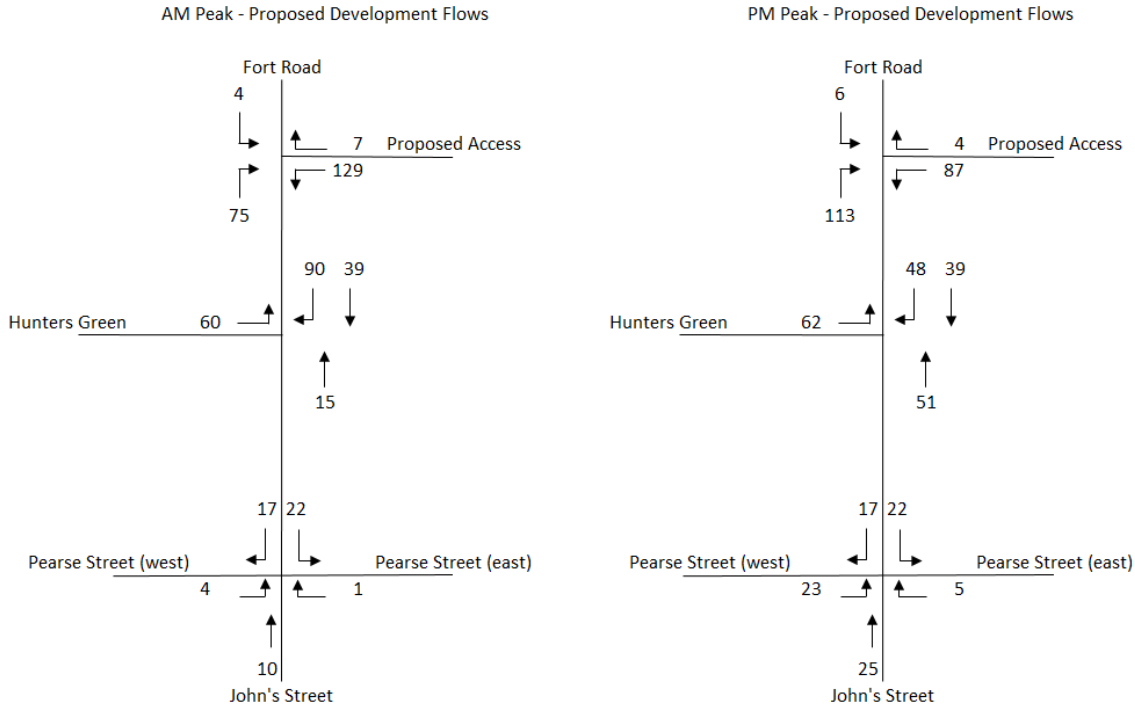

Figure 4.2.2 - AM and PM Peak Development Flows

4.3 SENSITIVITY TESTING OF FUTURE COMMUNITY DEVELOPMENT

There is a proposal for future development of lands adjacent to the residential development. The adjoining CE Community zoned land will provide a nursing home, sheltered accommodation and a medical centre.

A capacity assessment has been undertaken to determine the impact that the possible future will have on the existing Fort Road / Willow Park / Creagh Demesne crossroads junction and the Fort Road / Pearse Street / John's Street crossroads junction in the design year 2036 with the proposed development also operational.

The description and size of the future development is shown in table below.

Item	Unit
Sheltered Housing Units	18 units
Medical Centre	2000sqm
Nursing Home	60 beds

Access to the above development will be via a priority junction onto Fort Road. The proposed access will be located to the south of the proposed access to the residential development.

The TRICS database has been used to predict the trip generation to and from the proposed development for the AM and PM peak periods. Full details of the TRICS information used for the assessments are provided in Appendix D - TRICS information.

4.3.1 Sheltered Accommodation

The category of "Residential – Sheltered Accommodation" has been interrogated as the most appropriate development type category for this part of the development and the trip rates for the AM and PM peak periods are shown below:

Trip rates per number of Units

	Trip rate to development	Trip rate from development
AM Peak	0.09	0.06
PM Peak	0.07	0.06

For the proposed 18 dwellings, this would give the following trips to and from the proposed development:

Trip Generation – 18 Sheltered Accommodation

	Trip rate to development	Trip rate from development
AM Peak	2	1
PM Peak	1	1

4.3.2 Medical Centre

The category of "Health – Clinics" has been interrogated as the most appropriate development type category for this part of the development and the trip rates for the AM and PM peak periods are shown below:

Trip rates per 100 sqm

	Trip rate to development	Trip rate from development
AM Peak	1.672	0.331
PM Peak	0.789	1.514

For the proposed 2000sqm Medical, this would give the following trips to and from the proposed development:

Trip Generation – 2000 sqm

	Trip rate to development	Trip rate from development
AM Peak	33	7
PM Peak	16	30

4.3.3 Nursing Home

The category of "Health – Nursing Homes" has been interrogated as the most appropriate development type category for this part of the development and the trip rates for the AM and PM peak periods are shown below:

Trip rates per Residents

	Trip rate to development	Trip rate from development
AM Peak	0.148	0.082
PM Peak	0.043	0.068

For the proposed 60 bed nursing home, this would give the following trips to and from the proposed development:

Trip Generation – 60 Bed

	Trip rate to development	Trip rate from development
AM Peak	9	5
PM Peak	3	4

4.3.4 Total Development Trip Generation Summary

To summarise, the combined trips that are predicted to be generated by the proposed residential development are shown in the table below:

Trip Generation – Total Development

	Trip rate to development	Trip rate from development	Total
AM peak	44	13	57
PM peak	20	35	55

4.4 SENSITIVITY TESTING OF FUTURE RESIDENTIAL DEVELOPMENT

There are lands adjacent to the proposed development which are zoned residential. Access to this potential future development would be via the proposed Fort Road / Residential Access priority junction.

A capacity assessment has been undertaken to determine the impact that the possible future residential development will have on the existing Fort Road / Willow Park / Creagh Demesne Crossroads junction, the Fort Road / Pearse Street / John's Street Crossroads Junction and the proposed Fort Road / Residential Access priority junction in the design year 2036 with the proposed residential development also operational.

The description and size of the future development is shown in table below:

Item	Unit	Quantity
Residential Dwellings	2, 3 & 4 bed	85

The TRICS database has been used to predict the trip generation to and from the proposed development for the AM and PM peak periods. Full details of the TRICS information used for the assessments are provided in Appendix D - TRICS information.

The category of "Residential – Houses Privately Owned" has been interrogated as the most appropriate development type category for this part of the development and the trip rates for the AM and PM peak periods are shown below:

Trip rates per number of Units

	Trip rate to development	Trip rate from development
AM Peak	0.20	0.66
PM Peak	0.52	0.25

For the proposed 85 residential dwellings, this would give the following trips to and from the proposed development:

Trip Generation – 85 Residential Dwellings

	Trip rate to development	Trip rate from development
AM Peak	17	56
PM Peak	44	21

4.5 FUTURE YEAR TRAFFIC GROWTH

The TII issues a range of forecasts: low growth, medium growth and high growth. The implementation of policies relating to Smarter Travel will also act a deterrent to high growth in car-based travel. Low growth factors are however likely to be equally unrealistic at present in the Gorey area, so we have used medium growth factors in our assessment.

The zone in which the site is located is numbered 669 in the TII National Traffic Model. The growth factors are as follows:

Zone	2017 Existing	2021 development completion	2025 5 years after dev. completion	2035 15 years after dev. completion
669	0%	6.15%	14.39%	22.95%

These percentages have been used to predict the increase in background traffic that will occur in future years. Full summary tables and predicted future traffic flows for 2021, 2026 and 2036 future years are included in Appendix C – Traffic Flow Sheets.

5 OPERATIONAL ASSESSMENTS

5 Operational Assessments

5.1 INTRODUCTION

Traffic generated by the proposed development will have some affect on the local road network surrounding the site. The following junctions were assessed:

- Proposed Fort Road / Development Access Priority Junction
- Fort Rd / Willow Park / Creagh Demesne Crossroads Junction
- Pearse Street / Johns Street Crossroads Junction

5.2 PROPOSED FORT ROAD / DEVELOPMENT ACCESS PRIORITY JUNCTION

Capacity assessments have been undertaken using the computer program PICADY for the AM and PM peak hours.

The following tables summarises the effects that the new residential development will have on proposed junction in 2021, 2026 and 2036 using the existing and predicted traffic flows shown in Appendix C – Traffic Flow Sheets. Full PICADY printouts are provided in Appendix E – PICADY Results.

The parameters shown in the tables are defined as follows:

Ratio of Flow to Capacity (RFC) is a factor indicating the flow on a junction arm relative to its capacity. An RFC of 1.0 means the junction has reached its ultimate capacity and an RFC of 0.85 means that the junction has reached its reserve capacity.

Avg. Queue is the average number of vehicles queued over the time period on the junction approach.

Queue delay is the average number of seconds delay to each vehicle in the time period.

Total Delay is the total number of vehicle hours of delay to all vehicles at the junction over the time period.

5.2.1 Design Year Assessments (2021 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the proposed junction using the predicted traffic flows for 2021.

AM Peak – 2021 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.460
Proposed Access	0.236	0	8	
Fort Rd (south)	0.142	0	8	

PM Peak – 2021 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.438
Proposed Access	0.154	0	7	
Fort Rd (south)	0.216	0	8	

The summary predictions shown in the tables above indicate that there will be no queues and minimal delays in the AM and PM peak hours at the proposed junction in 2021, planned year of opening.

5.2.2 Design Year Assessments (2026 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the proposed junction using the predicted traffic flows for 2026.

AM Peak – 2026 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.458
Proposed Access	0.236	0	8	
Fort Rd (south)	0.140	0	8	

PM Peak – 2026 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.440
Proposed Access	0.154	0	7	
Fort Rd (south)	0.215	0	8	

The summary predictions shown in the tables above indicate that there will be no queues and minimal delays in the AM and PM peak hours at the proposed junction in 2026, five years after development completion.

5.2.3 Design Year Assessments (2036 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the proposed junction using the predicted traffic flows for 2036.

AM Peak – 2036 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.463
Proposed Access	0.237	0	8	
Fort Rd (south)	0.143	0	8	

PM Peak – 2036 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.446
Proposed Access	0.154	0	7	
Fort Rd (south)	0.219	0	8	

The summary predictions shown in the tables above indicate that there will be no queues and minimal delays in the AM and PM peak hours at the proposed junction by 2036, fifteen years after development completion.

5.2.4 Design Year Assessments (2036 Sensitivity Test)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the proposed junction using the predicted traffic flows for 2036 and the predicted sensitivity flows.

AM Peak – 2036 Sensitivity Test

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.688
Proposed Access	0.339	1	9	
Fort Rd (south)	0.177	0	8	

PM Peak – 2036 Sensitivity Test

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	-	-	-	0.640
Proposed Access	0.195	0	7	
Fort Rd (south)	0.304	0	10	

Sensitivity testing of lands adjacent to the proposed development indicate that there will be no queues and some delays in the AM and PM peak hours at the junction by 2036, fifteen years after development completion.

5.3 FORT ROAD / WILLOW PARK / CREAGH DEMESNE CROSSROADS JUNCTION

Capacity assessments have been undertaken using the computer program PICADY for the AM and PM peak hours.

The following tables summarise the existing situation and the effects that the proposed residential development will have on this junction in 2021, 2026 and 2036 using the existing and predicted traffic flows shown in Appendix C – Traffic Flow Sheets. Full PICADY printouts are provided in Appendix E – PICADY Results.

5.3.1 Existing Assessment (2017 Base Flows)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the existing traffic flows.

AM Peak – 2017 Base Flows

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.013	0	5	0.448
Willow Park	0.425	0	11	
Fort Rd (south)	0.052	0	6	
Creagh Demesne	0.087	0	8	

PM Peak – 2017 Base Flows

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.005	0	5	0.212
Willow Park	0.127	0	8	
Fort Rd (south)	0.065	0	6	
Creagh Demesne	0.015	0	7	

The summary predictions shown in the tables above indicate that there are no queues and minimal delays at this junction at present during the busiest peak hours.

5.3.2 Design Year Assessments (2021 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2021 including the proposed development.

AM Peak – 2021 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.013	0	5	0.513
Willow Park	0.472	0	13	
Fort Rd (south)	0.055	0	7	
Creagh Demesne	0.095	0	8	

PM Peak – 2021 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.005	0	5	0.232
Willow Park	0.140	0	8	
Fort Rd (south)	0.067	0	6	
Creagh Demesne	0.016	0	7	

The summary predictions shown in the tables above indicate that there will be no queues and minimal delays in the AM and PM peak hours at the junction in 2021, planned year of opening.

5.3.3 Design Year Assessments (2026 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2026 including the proposed development.

AM Peak – 2026 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.015	0	5	0.590
Willow Park	0.520	1	13	
Fort Rd (south)	0.059	0	7	
Creagh Demesne	0.105	0	8	

PM Peak – 2026 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.005	0	6	0.255
Willow Park	0.152	0	8	
Fort Rd (south)	0.073	0	6	
Creagh Demesne	0.018	0	7	

The summary predictions shown in the tables above indicate that there will be minimal queues and small delays in the AM and PM peak hours at this junction in 2026, five years after development completion.

5.3.4 Design Year Assessments (2036 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2036 including the proposed development.

AM Peak – 2036 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.015	0	5	0.593
Willow Park	0.522	1	14	
Fort Rd (south)	0.057	0	7	
Creagh Demesne	0.105	0	8	

PM Peak – 2036 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.005	0	6	0.258
Willow Park	0.154	0	8	
Fort Rd (south)	0.074	0	6	
Creagh Demesne	0.018	0	7	

The summary predictions shown in the tables above indicate that there will be minimal queues and small delays in the AM and PM peak hours at the junction by 2036, fifteen years after development completion.

5.3.5 Design Year Assessments (2036 Sensitivity Test)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2036 including the proposed development flows and the sensitivity flows.

AM Peak – 2036 Sensitivity Test

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.017	0	6	0.705
Willow Park	0.585	1	15	
Fort Rd (south)	0.069	0	7	
Creagh Demesne	0.118	0	8	

PM Peak – 2036 Sensitivity Test

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Rd (north)	0.007	0	6	0.286
Willow Park	0.168	0	9	
Fort Rd (south)	0.082	0	7	
Creagh Demesne	0.019	0	7	

Sensitivity testing of lands adjacent to the proposed development indicate that there will be small queues and delays in the AM and PM peak hours at the junction by 2036, fifteen years after development completion.

5.4 FORT ROAD / PEARSE ROAD / JOHNS STREET CROSSROADS JUNCTION

Capacity assessments have been undertaken using the computer program PICADY for the AM and PM peak hours.

The following tables summarise the existing situation and the effects that the new concrete plant will have on this junction in 2021, 2026 and 2036 using the existing and predicted traffic flows shown in Appendix C – Traffic Flow Sheets. Full PICADY printouts are provided in Appendix E – PICADY Results.

5.4.1 Existing Assessment (2017 Base Flows)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the existing traffic flows.

AM Peak – 2017 Base Flows

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.156	0	7	0.863
Pearse St (east)	0.109	0	10	
Johns Street	0.039	0	7	
Pearse St (west)	0.564	1	14	

PM Peak – 2017 Base Flows

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.092	0	7	0.760
Pearse St (east)	0.066	0	9	
Johns Street	0.066	0	7	
Pearse St (west)	0.361	1	11	

The summary predictions shown in the tables above indicate that there are minimal queues and small delays at this junction at present during the busiest peak hours.

5.4.2 Design Year Assessments (2021 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2021 including the proposed development.

AM Peak – 2021 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.194	0	8	0.963
Pearse St (east)	0.119	0	10	
Johns Street	0.042	0	7	
Pearse St (west)	0.622	1	16	

PM Peak – 2021 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.131	0	8	1.020
Pearse St (east)	0.082	0	10	
Johns Street	0.070	0	7	
Pearse St (west)	0.438	1	13	

The summary predictions shown in the tables above indicate that there will be minimal queues and small delays in the AM and PM peak hours at the junction in 2021, planned year of opening.

5.4.3 Design Year Assessments (2026 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2026 including the proposed development.

AM Peak – 2026 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.207	0	8	1.228
Pearse St (east)	0.131	0	10	
Johns Street	0.046	0	7	
Pearse St (west)	0.680	1	17	

PM Peak – 2026 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.141	0	8	1.145
Pearse St (east)	0.089	0	10	
Johns Street	0.076	0	7	
Pearse St (west)	0.473	1	14	

The summary predictions shown in the tables above indicate that there will be minimal queues and small delays in the AM and PM peak hours at the junction in 2026, five years after development completion.

5.4.4 Design Year Assessments (2036 With Development)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2036 including the proposed development.

AM Peak – 2036 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.211	0	8	1.265
Pearse St (east)	0.131	0	10	
Johns Street	0.046	0	7	
Pearse St (west)	0.688	1	17	

PM Peak – 2036 with development

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.150	0	8	1.285
Pearse St (east)	0.096	0	10	
Johns Street	0.082	0	7	
Pearse St (west)	0.510	1	14	

The summary predictions shown in the tables above indicate that there will be minimal queues and small delays in the AM and PM peak hours at the junction by 2036, fifteen years after development completion.

5.4.5 Design Year Assessments (2036 Sensitivity Test)

The following tables show the predicted RFC values (Ratio of Flow to Capacity), average queue lengths, average vehicle delay and total delays for the existing junction using the predicted traffic flows for 2036 including the proposed development flows and the sensitivity flows.

AM Peak – 2036 Sensitivity Test

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.235	0	9	1.535
Pearse St (east)	0.143	0	10	
Johns Street	0.055	0	7	
Pearse St (west)	0.749	1	20	

PM Peak – 2036 Sensitivity Test

Approach	Predicted RFC value	Avge Queue (vehicles)	Queue delay (secs./veh.)	Total Delay (veh.hrs.)
Fort Road	0.171	0	8	1.432
Pearse St (east)	0.098	0	11	
Johns Street	0.083	0	7	
Pearse St (west)	0.538	1	16	

Sensitivity testing of lands adjacent to the proposed development indicate that there will be minimal queues and small delays in the AM and PM peak hours at the junction by 2036, fifteen years after development completion.

5.5 CONCLUSIONS

Junction analyses to assess the effects of traffic generated by the proposed development have been undertaken for the existing Fort Road / Willow Park / Creagh Demesne crossroads junction, the existing Fort Road / Pearse Street / Johns Street crossroads junction and the proposed Fort Road / Development Access priority junction. The analysis shows that:

- The existing Fort Road / Willow Park / Creagh Demesne crossroads junction will operate within capacity with small queues and delays when the proposed development is completed in 2021, year of opening, 2026, five years after completion and in 2036, fifteen years after completion.
- Sensitivity testing carried out on lands adjacent to the proposed development indicates that the existing Fort Road / Willow Park / Creagh Demesne crossroads junction will operate within capacity with small queues and delays when the proposed development is operational in 2036.
- The existing Fort Road / Pearse Street / Johns Street crossroads junction will operate within capacity with small queues and delays when the proposed development is completed in 2021, year of opening, 2026, five years after completion and in 2036, fifteen years after completion.
- Sensitivity testing carried out on lands adjacent to the proposed development indicates that the existing Fort Road / Pearse Street / Johns Street crossroads junction will operate within capacity with small queues and delays when the proposed development is operational in 2036.
- The proposed Fort Road / Development Access priority junction will operate within capacity with no queues and minimal delays when the proposed development is completed in 2021, year of opening, 2026, five years after completion and in 2036, fifteen years after completion.
- Sensitivity testing carried out on lands adjacent to the proposed development indicates that the proposed Fort Road / Development Access priority junction will operate within capacity with no queues and minimal delays when the proposed development is operational in 2036.

6 PARKING

6 Parking

6.1 CAR PARKING PROVISION

A total of 590 parking spaces are to be provided within the proposed residential development as shown on the architect's drawing contained in Appendix A – Drawings

6.2 CAR PARKING REQUIREMENTS FROM DEVELOPMENT PLAN

The 'Wexford County Development *Plan 2013-2019*' lists standard provision for car parking and the table below sets out those requirements in relation to the proposed development.

Car parking requirements from the County Development Plan

Table 8.2.3: Parking Standards for Residential Developments			
Location	Requirements	Quantity	Parking
Residential Dwelling	2 spaces per unit	232 dwellings	464
Apartments	1.5 spaces per unit	61 Apartments	98
Creche	1 space per 4 children plus 1 space per employee	90 Children 18 Staff	22 18
		Total	**602**

The Wexford Development Plan indicates that the number of parking spaces required is 602 spaces.

The proposed residential development will provide a total of 464 spaces for the residential dwellings, 122 spaces for the apartments and 18 spaces for the creche.

The Wexford development plan indicates that the number of parking spaces required for the creche is 40 spaces. It is considered that the parking demand for the creche is excessive and lower parking provision should be considered.

The Wicklow Development Plan indicates a parking provision of 1 space per 10 children and 0.5 space per employee. This parking provision is considered adequate for the following reasons:

- The creche will have staggered drop-off / pick-up times for children throughout the day.
- As the creche is located within the residential development and it is assumed that a number of parents will walk to and from the creche which will reduce the dependency of car trips to the creche. Therefore the 18 spaces provided for the creche car park is considered adequate.

7 ROAD SAFETY, PEDESTRIANS, CYCLISTS AND INTERNAL LAYOUT

7 Road Safety, Pedestrians Cyclists and Internal Layout

7.1 ROAD SAFETY

The Wexford County Development Plan 2013 – 2019 sets out sightline requirements for proposed access / egress to public roads outside of a 50kph or 60 kph speed limit. The following are the indicative sightline requirements:

- National Road = 230m
- Regional Roads Class 1 = 220m
- Regional Roads Class 2 = 135m
- Local / Country Roads = 65m

The Fort Road would be considered as a Class 2 Regional Road due to the traffic volumes currently using Fort Road. Therefore, a sightline of 135m at a 3m set-back shall be achieved in both directions.

At the proposed access onto Fort Road a 135m sightline at a 3m set-back can be achieved in both directions. The visibility splay to the north and south of the proposed access is measured from a 3m set-back to the nearside kerb of the road.

7.2 PEDESTRIANS

2m wide footpaths will be provided internally to cater for pedestrian movement within the development. In addition, a 2m wide footpath will be provided along the boundary of the proposed development adjacent to Fort Road and connecting to the existing footpaths at Willow Park. Full details of footpaths provided are provided are shown on the architects drawing which is provided in Appendix B – Drawings.

7.3 CYCLISTS

A 2m wide cycle path will be provided within the proposed development which will cater for cyclist's movement within the development. A 2m wide cycle path will also be provided along the boundary of the development adjacent to Fort Road and will terminate at the existing junction to Willow Park. Full details of cycle paths provided are provided are shown on the architects drawing which is provided in Appendix B – Drawings.

7.4 INTERNAL LAYOUT

Within the development the spine road is 6m wide and all internal access roads are 4.8m wide.

The 4.8m wide internal access roads will act as a shared surface for pedestrians and vehicles. The Design Manual for Urban Roads and Streets indicates that the minimum width for local streets with a shared surface is 4.8m wide.

Parking is provided to the front and rear of each residential dwelling. In addition, on-street parking is provided within the development. The parking bays are 2.5m wide x 5m long. Disabled parking spaces are provided through out the development.

HGV access to the site will be via the proposed access onto the Fort Road. The types of HGV's accessing the site would be emergency vehicles and a bin lorry. The internal layout can facilitate HGV movement within the site.

7.5 PUBLIC TRANSPORT

There are several bus stops servicing surrounding areas locally and inter county. They are located within close proximity to the proposed development and they can be easily accessed by pedestrians walking to and from the development. The closest bus stops are located on Main Street and are within a 15-minute walking distance from the proposed development. Details on bus routes can be found in the table below:

Bus route	Service
2	Dublin Airport – Dublin – Arklow – Gorey – Enniscorthy – Wexford
133	Dublin Airport – City Centre – Ashford – Wicklow
133X	Gorey – Arklow – Dublin

Gorey town has a train station that is located in the southern section of the of Gorey town. It is approximately a 20-minute walk from the proposed development. Irish Rail provides a daily service from Dublin Connolly to Rosslare Europort.

The proposed development will cater for a future bus route. The future bus route is shown on the architects drawing which is provided in Appendix B – Drawings.

8 CONCLUSIONS AND SUMMARY

8 Conclusions

The main conclusions of this study are summarised as follows:

- The development flows to and from the site have been predicted using the TRICS database.

- The existing Fort Road / Willow Park / Creagh Demesne crossroads junction will operate within capacity with small queues and delays when the proposed development is completed in 2021, year of opening, 2026, five years after completion and in 2036, fifteen years after completion.

- Sensitivity testing carried out on lands adjacent to the proposed development indicates that the existing Fort Road / Willow Park / Creagh Demesne crossroads junction will operate within capacity with small queues and delays when the proposed development is operational in 2036.

- The existing Fort Road / Pearse Street / Johns Street crossroads junction will operate within capacity with small queues and delays when the proposed development is completed in 2021, year of opening, 2026, five years after completion and in 2036, fifteen years after completion.

- Sensitivity testing carried out on lands adjacent to the proposed development indicates that the existing Fort Road / Pearse Street / Johns Street crossroads junction will operate within capacity with small queues and delays when the proposed development is operational in 2036.

- The proposed Fort Road / Development Access priority junction will operate within capacity with no queues and minimal delays when the proposed development is completed in 2021, year of opening, 2026, five years after completion and in 2036, fifteen years after completion.

- Sensitivity testing carried out on lands adjacent to the proposed development indicates that the proposed Fort Road / Development Access priority junction will operate within capacity with no queues and minimal delays when the proposed development is operational in 2036.

- The development provides adequate car parking spaces when assessed in accordance with the development plan.

- Sightlines at the proposed access onto Fort Road are in compliance with the Wexford County Development Plan.

- Pedestrian and cycle facilities are provided within the proposed development and along Fort Road.

- The internal roads within the proposed development are in compliance with the Design Manual for Urban Roads & Streets.

APPENDICES

APPENDIX A – SCOPING DOCUMENT

Roadplan Consulting Limited
Traffic & Transport Assessment - Scoping Study

Development: Residential & Commercial Development at Fort Road, Gorey, Wexford		
Local Authority: Wexford County Council	L. A. Contact Name: Noel O' Driscoll	
Prepared By: Richard Frisby	Doc. Number**:** 17149-01-001	Date: 05-12-17

Ref.	Item	Requirements
1	**The Development**	
1.1	Description of proposed development:	Residential and Commercial development at Fort Road, Gorey, Wexford.
1.2	Description of existing land use:	Un-developed lands
1.3	Will existing land use be relocated within or off site?	No
1.4	When will the site become fully operational?	2021
1.5	Are there significant phases to the development?	Phase 1: Residential Development Phase 2: Commercial Development
2	**Traffic**	
2.1	Traffic Surveys proposed:	A 12-hour traffic survey (07:00 – 19:00) will be carried out at the following locations: 1. Fort Road / Willow Park / Creagh Demesne Crossroads Junction. 2. Fort Road / Pearse Street / John's Street Crossroads Junction.
2.2	Proposed traffic generation rates:	TRICS database for residential & commercial developments will be used
2.3	Modal split of the proposed development?	To be determined.
2.4	Traffic distribution and assignment methodology	Existing distribution pattern at the existing Willow Park residential access onto Fort Road will be used.
2.5	Extent of pass-by, multi-purpose trips and internal trips	None.
2.6	Development peak hours: Background traffic peak hours: Critical time of assessment:	To be determined from traffic survey. To be determined from traffic survey. To be determined from traffic survey.

Ref.	Item	Requirements
2.7	Traffic growth factors:	National Traffic Model Growth Factors.
3	**Assessments**	
3.1	Link and Junction assessment methods	DMRB for links and TRL programmes for junctions.
3.2	Assessment years	Year of opening and 5 & 15 years after years of opening.
3.3	Committed developments;	None.
3.4	Sensitivity testing of adjacent zoned areas	None.
3.5	What will be the extent of the assessment?	1. Fort Road / Willow Park / Creagh Demesne Crossroads Junction. 2. Fort Road / Pearse Street / John's Street Crossroads Junction. 3. Fort Road / Proposed Development Access Priority Junction.
4	**Roads and Accesses**	
4.1	Access proposals	Priority T-junction onto Fort Road.
4.2	Are links or junctions congested?	To be determined.
4.3	Design Speeds and Visibility standards:	Visibility standards as set out in DMURS.
4.4	Any proposed roads developments	No.
5	**Safety**	
5.1	Footpath provision	Yes.
5.2	Public transport facilities:	No.
6	**Parking**	
6.1	Parking requirements Disabled parking	As set out in Co. Development Plan for both.
7	**Other**	
7.1	Are there any other special circumstances relevant to this proposal?	No.

APPENDIX B – DRAWINGS

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House Types

- A — 4-bed Detached
- B — 4-bed Detached
- C — 4-bed Semi-detached
- D — 3-bed Semi-detached
- E — 3-bed Semi-detached
- F — 3-bed Terraced
- G — 3-bed Terraced
- H — 2-bed Terraced
- J — 5-bed Detached

Apartment Block Types

- A — 1 no. 2-bed; 1 no. 3-bed Duplex
- B — 1 no. 3-bed; 2 no. 2-bed Duplex
- C — 1 no. 3-bed; 1 no. 2-bed Duplex; 1 no. 3-bed Duplex
- D — 1 no. 2-bed; 1 no. 3-bed Duplex
- E — 1 no. 2-bed; 1 no. 3-bed Duplex
- F — 1 no. 2-bed; 1 no. 3-bed Duplex

Open Space

Please refer to landscaping plan also.

Boundary Treatments:
Please refer to landscaping plan.

Private Open Space, Houses:
- All private open spaces for 2-bed are >60m².
- All private open spaces for 3-bed and over are >75m².

Private Open Space, Apartments:
- All private amenity spaces for 2-bed are >7m².
- All private amenity spaces for 3-bed are >9m².

Communal Open Space, Apartments:
- All communal amenity spaces for 2-bed are >7m².
- All communal amenity spaces for 3-bed are >9m².

- Public
- Communal Amenity Space (Apartments)
- Private

Road and Path Widths

DMURS:

- Residential road widths generally 4.8m (shared surface strategy)
  - corner radii 1-3m
  - foopath widths 2m
- Main/non-residential 6-6.5m
  - corner radii 4.5m
  - footpath widths 2.5m

Site Boundary Outlined in Red

See accompanying planning application documents and area schedule for site area details.

Other

- Light Standard - DW Windsor Kirium Pro Mini
- EVCP Electric Vehicle Charging Point
- Public Bus Route
- Cycle Link
- Bicycle Space
- LTH Proposed Adaptable Accessibility Unit (Lifetime Homes standard)
- Raised Speed Table Junction

Levels

Levels are relative to Ordnance Survey benchmark of 54.74 at house southeast of site.

REV	DATE	REV BY	DESCRIPTION
B	26.11.18	LM	REVIEW LEVELS, RSA, GENERAL
A	8.8.18	LM	GENERAL MINOR

STATUS	PRELIMINARY
PROJECT	CREAGH HOUSING SHD
PROJECT ADDRESS	CREAGH, GOREY, CO. WEXFORD
DWG TITLE	SITE LAYOUT GENERAL ARRANGEMENT
DWG NO	PR-010
REV	B
JOB NO	1725
SCALE @ A0	1:500
DATE	18.7.2018
DRN	Liam Minogue

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DRAFT

APPENDIX C – TRAFFIC FLOW SHEETS

AM Peak Hour (08:15-09:15) Proposed Junction

Base year AM

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	24	**24**
Proposed Access	0	0	0	**0**
Fort Rd (s)	20	0	0	**20**
Totals	**20**	**0**	**24**	**44**

Development flows

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	4	0	**4**
Proposed Access	7	0	129	**136**
Fort Rd (s)	0	75	0	**75**
Totals	**7**	**79**	**129**	**215**

Residential Sensitivity flows

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	1	0	**1**
Proposed Access	3	0	53	**56**
Fort Rd (s)	0	16	0	**16**
Totals	**3**	**17**	**53**	**73**

Community Sensitivity Flows

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	2	**2**
Proposed Access	0	0	0	**0**
Fort Rd (s)	1	0	0	**1**
Totals	**1**	**0**	**2**	**3**

2021 year flows without development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	25	**25**
Proposed Access	0	0	0	**0**
Fort Rd (s)	21	0	0	**21**
Totals	**21**	**0**	**25**	**47**

2021 year flows with development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	4	25	**29**
Proposed Access	7	0	129	**136**
Fort Rd (s)	21	75	0	**96**
Totals	**28**	**79**	**154**	**262**

2026 year flows without development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	27	**27**
Proposed Access	0	0	0	**0**
Fort Rd (s)	23	0	0	**23**
Totals	**23**	**0**	**27**	**50**

2026 year flows with development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	4	27	**31**
Proposed Access	7	0	129	**136**
Fort Rd (s)	23	75	0	**98**
Totals	**30**	**79**	**156**	**265**

2036 year flows without development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	27	**27**
Proposed Access	0	0	0	**0**
Fort Rd (s)	23	0	0	**23**
Totals	**23**	**0**	**27**	**50**

2036 year flows with development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	4	27	**31**
Proposed Access	7	0	129	**136**
Fort Rd (s)	23	75	0	**98**
Totals	**30**	**79**	**156**	**265**

2036 year Sensitivity Test

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	5	29	**34**
Proposed Access	10	0	182	**192**
Fort Rd (s)	24	91	0	**115**
Totals	**34**	**96**	**211**	**341**

AM Peak Hour (08:15-09:15) Proposed Junction

LV's

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	24	**24**
Proposed Access	0	0	0	**0**
Fort Rd (s)	20	0	0	**20**
Totals	**20**	**0**	**24**	**44**

HGV's

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	0	**0**
Proposed Access	0	0	0	**0**
Fort Rd (s)	0	0	0	**0**
Totals	**0**	**0**	**0**	**0**

% HGV's

	Fort Rd ((n)	Proposed Access	Fort Rd (s)
Fort Rd ((n)	0.00%	0.00%	0.00%
Proposed Access	0.00%	0.00%	0.00%
Fort Rd (s)	0.00%	0.00%	0.00%

PM Peak Hour (08:15-09:15) Proposed Junction

Base year PM

0	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	8	**8**
Proposed Access	0	0	0	**0**
Fort Rd (s)	18	0	0	**18**
Totals	**18**	**0**	**8**	**26**

Development flows

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	6	0	**6**
Proposed Access	4	0	87	**91**
Fort Rd (s)	0	113	0	**113**
Totals	**4**	**119**	**87**	**210**

Residential Sensitivity

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	2	0	**2**
Proposed Access	1	0	20	**21**
Fort Rd (s)	0	42	0	**42**
Totals	**1**	**44**	**20**	**65**

Community Sensitivity

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	1	**1**
Proposed Access	0	0	0	**0**
Fort Rd (s)	2	0	0	**2**
Totals	**2**	**0**	**1**	**3**

2021 year flows without development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	8	**8**
Proposed Access	0	0	0	**0**
Fort Rd (s)	19	0	0	**19**
Totals	**19**	**0**	**8**	**28**

2021 year flows with development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	6	8	**14**
Proposed Access	4	0	87	**91**
Fort Rd (s)	19	113	0	**132**
Totals	**23**	**119**	**95**	**238**

2026 year flows without development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	9	**9**
Proposed Access	0	0	0	**0**
Fort Rd (s)	21	0	0	**21**
Totals	**21**	**0**	**9**	**30**

2026 year flows with development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	6	9	**15**
Proposed Access	4	0	87	**91**
Fort Rd (s)	21	113	0	**134**
Totals	**25**	**119**	**96**	**240**

2036 year flows without development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	9	**9**
Proposed Access	0	0	0	**0**
Fort Rd (s)	20	0	0	**20**
Totals	**20**	**0**	**9**	**29**

2036 year flows with development

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	6	9	**15**
Proposed Access	4	0	87	**91**
Fort Rd (s)	20	113	0	**133**
Totals	**24**	**119**	**96**	**239**

2036 year Sensitivity Test

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	8	10	**18**
Proposed Access	5	0	107	**112**
Fort Rd (s)	22	155	0	**177**
Totals	**27**	**163**	**117**	**307**

PM Peak Hour (08:15-09:15) Proposed Junction

LV's

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	8	**8**
Proposed Access	0	0	0	**0**
Fort Rd (s)	18	0	0	**18**
Totals	**18**	**0**	**8**	**26**

HGV's

	Fort Rd ((n)	Proposed Access	Fort Rd (s)	**Totals**
Fort Rd ((n)	0	0	0	**0**
Proposed Access	0	0	0	**0**
Fort Rd (s)	0	0	0	**0**
Totals	**0**	**0**	**0**	**0**

% HGV's

	Fort Rd ((n)	Proposed Access	Fort Rd (s)
Fort Rd ((n)	0.00%	0.00%	0.00%
Proposed Access	0.00%	0.00%	0.00%
Fort Rd (s)	0.00%	0.00%	0.00%

AM Peak Hour (08:15 - 09:15) Fort Rd/ Willow Park/ Creagh Demesne Crossroads junction

Base year AM

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	74	203	7	**284**
Willow Park	76	0	33	2	**111**
Fort Rd (s)	154	17	0	6	**177**
Creagh Demesne	12	2	12	0	**26**
Totals	**242**	**93**	**248**	**15**	**598**

Development flows

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	0	39	0	**39**
Willow Park	0	0	0	0	**0**
Fort Rd (s)	15	0	0	0	**15**
Creagh Demesne	0	0	0	0	**0**
Totals	**15**	**0**	**39**	**0**	**54**

Residential Sensitivity Flows

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	0	16	0	**16**
Willow Park	0	0	0	0	**0**
Fort Rd (s)	3	0	0	0	**3**
Creagh Demesne	0	0	0	0	**0**
Totals	**3**	**0**	**16**	**0**	**19**

Community Sensitivity Flows

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	0	4	0	**4**
Willow Park	0	0	0	0	**0**
Fort Rd (s)	8	0	0	0	**8**
Creagh Demesne	0	0	0	0	**0**
Totals	**8**	**0**	**4**	**0**	**12**

2021 year flows without development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	79	215	7	**301**
Willow Park	81	0	35	2	**118**
Fort Rd (s)	163	18	0	6	**188**
Creagh Demesne	13	2	13	0	**28**
Totals	**257**	**99**	**263**	**16**	**635**

2021 year flows with development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	79	254	7	**340**
Willow Park	81	0	35	2	**118**
Fort Rd (s)	178	18	0	6	**203**
Creagh Demesne	13	2	13	0	**28**
Totals	**272**	**99**	**302**	**16**	**689**

2026 year flows without development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	85	232	8	**325**
Willow Park	87	0	38	2	**127**
Fort Rd (s)	176	19	0	7	**202**
Creagh Demesne	14	2	14	0	**30**
Totals	**277**	**106**	**284**	**17**	**684**

2026 year flows with development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	85	271	8	**364**
Willow Park	87	0	38	2	**127**
Fort Rd (s)	191	19	0	7	**217**
Creagh Demesne	14	2	14	0	**30**
Totals	**292**	**106**	**323**	**17**	**738**

2036 year flows without development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	91	250	9	**349**
Willow Park	93	0	41	2	**136**
Fort Rd (s)	189	21	0	7	**218**
Creagh Demesne	15	2	15	0	**32**
Totals	**298**	**114**	**305**	**18**	**735**

2036 year flows with development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	91	289	9	**388**
Willow Park	93	0	41	2	**136**
Fort Rd (s)	204	21	0	7	**233**
Creagh Demesne	15	2	15	0	**32**
Totals	**313**	**114**	**344**	**18**	**789**

2036 year Sensitivity Test

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	91	309	9	**408**
Willow Park	93	0	41	2	**136**
Fort Rd (s)	215	21	0	7	**244**
Creagh Demesne	15	2	15	0	**32**
Totals	**324**	**114**	**364**	**18**	**820**

AM Peak Hour (08:15 - 09:15) Fort Rd/ Willow Park/ Creagh Demesne Crossroads junction

LV's

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	72	201	7	**280**
Willow Park	75	0	33	2	**110**
Fort Rd (s)	154	17	0	6	**177**
Creagh Demesne	12	2	12	0	**26**
Totals	**241**	**91**	**246**	**15**	**593**

HGV's

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	2	2	0	**4**
Willow Park	1	0	0	0	**1**
Fort Rd (s)	0	0	0	0	**0**
Creagh Demesne	0	0	0	0	**0**
Totals	**1**	**2**	**2**	**0**	**5**

% HGV's

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne
Fort Rd (n)	0.00%	2.70%	0.99%	0.00%
Willow Park	1.32%	0.00%	0.00%	0.00%
Fort Rd (s)	0.00%	0.00%	0.00%	0.00%
Creagh Demesne	0.00%	0.00%	0.00%	0.00%

PM Peak Hour (17:00 -18:00) Junction

Base year PM

0	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	49	77	3	**129**
Willow Park	30	0	24	1	**55**
Fort Rd (s)	141	38	0	16	**195**
Creagh Demesne	7	1	5	0	**13**
Totals	**178**	**88**	**106**	**20**	**392**

Development flows

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	0	39	0	**39**
Willow Park	0	0	0	0	**0**
Fort Rd (s)	51	0	0	0	**51**
Creagh Demesne	0	0	0	0	**0**
Totals	**51**	**0**	**39**	**0**	**90**

Residential Sensitivity

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	0	9	0	**9**
Willow Park	0	0	0	0	**0**
Fort Rd (s)	19	0	0	0	**19**
Creagh Demesne	0	0	0	0	**0**
Totals	**19**	**0**	**9**	**0**	**28**

Community Sensitivity

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	0	15	0	**15**
Willow Park	0	0	0	0	**0**
Fort Rd (s)	8	0	0	0	**8**
Creagh Demesne	0	0	0	0	**0**
Totals	**8**	**0**	**15**	**0**	**23**

2021 year flows without development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	52	82	3	**137**
Willow Park	32	0	25	1	**58**
Fort Rd (s)	150	40	0	17	**207**
Creagh Demesne	7	1	5	0	**14**
Totals	**189**	**93**	**113**	**21**	**416**

2021 year flows with development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	52	121	3	**176**
Willow Park	32	0	25	1	**58**
Fort Rd (s)	201	40	0	17	**258**
Creagh Demesne	7	1	5	0	**14**
Totals	**240**	**93**	**152**	**21**	**506**

2026 year flows without development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	56	88	3	**148**
Willow Park	34	0	27	1	**63**
Fort Rd (s)	161	43	0	18	**223**
Creagh Demesne	8	1	6	0	**15**
Totals	**204**	**101**	**121**	**23**	**448**

2026 year flows with development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	56	127	3	**187**
Willow Park	34	0	27	1	**63**
Fort Rd (s)	212	43	0	18	**274**
Creagh Demesne	8	1	6	0	**15**
Totals	**255**	**101**	**160**	**23**	**538**

2036 year flows without development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	60	95	4	**159**
Willow Park	37	0	30	1	**68**
Fort Rd (s)	173	47	0	20	**240**
Creagh Demesne	9	1	6	0	**16**
Totals	**219**	**108**	**130**	**25**	**482**

2036 year flows with development

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	60	134	4	**198**
Willow Park	37	0	30	1	**68**
Fort Rd (s)	224	47	0	20	**291**
Creagh Demesne	9	1	6	0	**16**
Totals	**270**	**108**	**169**	**25**	**572**

2036 year Sensitivity Test

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	60	158	4	**222**
Willow Park	37	0	30	1	**68**
Fort Rd (s)	251	47	0	20	**318**
Creagh Demesne	9	1	6	0	**16**
Totals	**297**	**108**	**193**	**25**	**623**

PM Peak Hour (17:00 -18:00) Junction

LV's

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	48	76	3	**127**
Willow Park	30	0	24	1	**55**
Fort Rd (s)	141	38	0	16	**195**
Creagh Demesne	7	1	5	0	**13**
Totals	**178**	**87**	**105**	**20**	**390**

HGV's

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne	**Totals**
Fort Rd (n)	0	1	1	0	**2**
Willow Park	0	0	0	0	**0**
Fort Rd (s)	0	0	0	0	**0**
Creagh Demesne	0	0	0	0	**0**
Totals	**0**	**1**	**1**	**0**	**2**

% HGV's

	Fort Rd (n)	Willow Park	Fort Rd (s)	Creagh Demesne
Fort Rd (n)	0.00%	2.04%	1.30%	0.00%
Willow Park	0.00%	0.00%	0.00%	0.00%
Fort Rd (s)	0.00%	0.00%	0.00%	0.00%
Creagh Demesne	0.00%	0.00%	0.00%	0.00%

AM Peak Hour (08:15 - 09:15) Fort Road / Pearse Street / John's Street Crossroads Junction

Base year AM

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	102	0	78	**180**
Pearse St ((east)	7	0	0	18	**25**
Johns Street	96	24	0	37	**157**
Pearse St (west)	44	108	0	0	**152**
Totals	**147**	**234**	**0**	**133**	**514**

Development flows

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	22	0	17	**39**
Pearse St ((east)	1	0	0	0	**1**
Johns Street	10	0	0	0	**10**
Pearse St (west)	4	0	0	0	**4**
Totals	**15**	**22**	**0**	**17**	**54**

Residential Sensitivity Flows

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	9	0	7	**16**
Pearse St ((east)	0	0	0	0	**0**
Johns Street	2	0	0	0	**2**
Pearse St (west)	1	0	0	0	**1**
Totals	**3**	**9**	**0**	**7**	**19**

Community Sensitivity Flows

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	2	0	2	**4**
Pearse St ((east)	1	0	0	0	**1**
Johns Street	5	0	0	0	**5**
Pearse St (west)	2	0	0	0	**2**
Totals	**8**	**2**	**0**	**2**	**12**

2021 year flows without development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	108	0	83	**191**
Pearse St ((east)	7	0	0	19	**27**
Johns Street	102	25	0	39	**167**
Pearse St (west)	47	115	0	0	**161**
Totals	**156**	**248**	**0**	**141**	**546**

2021 year flows with development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	130	0	100	**230**
Pearse St ((east)	8	0	0	19	**28**
Johns Street	112	25	0	39	**177**
Pearse St (west)	51	115	0	0	**165**
Totals	**171**	**270**	**0**	**158**	**600**

2026 year flows without development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	117	0	89	**206**
Pearse St ((east)	8	0	0	21	**29**
Johns Street	110	27	0	42	**180**
Pearse St (west)	50	124	0	0	**174**
Totals	**168**	**268**	**0**	**152**	**588**

2026 year flows with development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	139	0	106	**245**
Pearse St ((east)	9	0	0	21	**30**
Johns Street	120	27	0	42	**190**
Pearse St (west)	54	124	0	0	**178**
Totals	**183**	**290**	**0**	**169**	**642**

2036 year flows without development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	125	0	96	**221**
Pearse St ((east)	9	0	0	22	**31**
Johns Street	118	30	0	45	**193**
Pearse St (west)	54	133	0	0	**187**
Totals	**181**	**288**	**0**	**164**	**632**

2036 year flows with development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	147	0	113	**260**
Pearse St ((east)	10	0	0	22	**32**
Johns Street	128	30	0	45	**203**
Pearse St (west)	58	133	0	0	**191**
Totals	**196**	**310**	**0**	**181**	**686**

2036 year Sensitivity Test

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	134	0	103	**237**
Pearse St ((east)	9	0	0	22	**31**
Johns Street	120	30	0	45	**195**
Pearse St (west)	55	133	0	0	**188**
Totals	**184**	**297**	**0**	**171**	**651**

AM Peak Hour (08:15 - 09:15) Fort Road / Pearse Street / John's Street Crossroads Junction

LV's

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	102	0	78	**180**
Pearse St ((east)	7	0	0	17	**24**
Johns Street	94	24	0	37	**155**
Pearse St (west)	43	108	0	0	**151**
Totals	**144**	**234**	**0**	**132**	**510**

HGV's

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	0	0	0	**0**
Pearse St ((east)	0	0	0	1	**1**
Johns Street	2	0	0	0	**2**
Pearse St (west)	1	0	0	0	**1**
Totals	**3**	**0**	**0**	**1**	**4**

% HGV's

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)
Fort Rd	0.00%	0.00%	0.00%	0.00%
Pearse St ((east)	0.00%	0.00%	0.00%	5.56%
Johns Street	2.08%	0.00%	0.00%	0.00%
Pearse St (west)	2.27%	0.00%	0.00%	0.00%

PM Peak Hour (17:00 -18:00) Fort Road / Pearse Street / John's Street Crossroads Junction

Base year PM

0	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	58	0	47	**105**
Pearse St ((east)	14	0	0	32	**46**
Johns Street	83	37	0	74	**194**
Pearse St (west)	81	73	0	0	**154**
Totals	**178**	**168**	**0**	**153**	**499**

Development flows

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	22	0	17	**39**
Pearse St ((east)	5	0	0	0	**5**
Johns Street	25	0	0	0	**25**
Pearse St (west)	23	0	0	0	**23**
Totals	**53**	**22**	**0**	**17**	**92**

Residential Sensitivity

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	5	0	4	**9**
Pearse St ((east)	1	0	0	0	**1**
Johns Street	9	0	0	0	**9**
Pearse St (west)	9	0	0	0	**9**
Totals	**19**	**5**	**0**	**4**	**28**

Community Sensitivity

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	8	0	7	**15**
Pearse St ((east)	0	0	0	0	**0**
Johns Street	4	0	0	0	**4**
Pearse St (west)	4	0	0	0	**4**
Totals	**8**	**8**	**0**	**7**	**23**

2021 year flows without development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	62	0	50	**111**
Pearse St ((east)	15	0	0	34	**49**
Johns Street	88	39	0	79	**206**
Pearse St (west)	86	77	0	0	**163**
Totals	**189**	**178**	**0**	**162**	**530**

2021 year flows with development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	84	0	67	**150**
Pearse St ((east)	20	0	0	34	**54**
Johns Street	113	39	0	79	**231**
Pearse St (west)	109	77	0	0	**186**
Totals	**242**	**200**	**0**	**179**	**622**

2026 year flows without development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	66	0	54	**120**
Pearse St ((east)	16	0	0	37	**53**
Johns Street	95	42	0	85	**222**
Pearse St (west)	93	84	0	0	**176**
Totals	**204**	**192**	**0**	**175**	**571**

2026 year flows with development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	88	0	71	**159**
Pearse St ((east)	21	0	0	37	**58**
Johns Street	120	42	0	85	**247**
Pearse St (west)	116	84	0	0	**199**
Totals	**257**	**214**	**0**	**192**	**663**

2036 year flows without development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	71	0	58	**129**
Pearse St ((east)	17	0	0	39	**57**
Johns Street	102	45	0	91	**239**
Pearse St (west)	100	90	0	0	**189**
Totals	**219**	**207**	**0**	**188**	**614**

2036 year flows with development

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	93	0	75	**168**
Pearse St ((east)	22	0	0	39	**62**
Johns Street	127	45	0	91	**264**
Pearse St (west)	123	90	0	0	**212**
Totals	**272**	**229**	**0**	**205**	**706**

2036 year Sensitivity Test

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	76	0	62	**138**
Pearse St ((east)	18	0	0	39	**58**
Johns Street	111	45	0	91	**248**
Pearse St (west)	109	90	0	0	**198**
Totals	**238**	**212**	**0**	**192**	**642**

PM Peak Hour (17:00 -18:00) Fort Road / Pearse Street / John's Street Crossroads Junction

LV's

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	58	0	46	**104**
Pearse St ((east)	14	0	0	32	**46**
Johns Street	82	37	0	74	**193**
Pearse St (west)	81	73	0	0	**154**
Totals	**177**	**168**	**0**	**152**	**497**

HGV's

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)	**Totals**
Fort Rd	0	0	0	1	**1**
Pearse St ((east)	0	0	0	0	**0**
Johns Street	1	0	0	0	**1**
Pearse St (west)	0	0	0	0	**0**
Totals	**1**	**0**	**0**	**1**	**2**

% HGV's

	Fort Rd	Pearse St ((east)	Johns Street	Pearse St (west)
Fort Rd	0.00%	0.00%	0.00%	2.13%
Pearse St ((east)	0.00%	0.00%	0.00%	0.00%
Johns Street	1.20%	0.00%	0.00%	0.00%
Pearse St (west)	0.00%	0.00%	0.00%	0.00%

APPENDIX D – TRICS INFORMATION

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BD	BEDFORDSHIRE	1 days
	HF	HERTFORDSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
	GM	GREATER MANCHESTER	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	SR	STIRLING	1 days
12	CONNAUGHT		
	GA	GALWAY	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	1 days
17	ULSTER (NORTHERN IRELAND)		
	DE	DERRY	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 115 to 363 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/00 to 17/11/08

Selected survey days:

Monday	2 days
Tuesday	2 days
Thursday	5 days
Friday	3 days
Sunday	1 days

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	12

Selected Location Sub Categories:

Residential Zone	10
No Sub Category	3

LIST OF SITES relevant to selection parameters

1 BD-03-A-01 SEMI DETACHED, LUTON BEDFORDSHIRE
NEW BEDFORD ROAD

LUTON
Total Number of dwellings: 131
Survey date: THURSDAY 08/07/04 Survey Type: MANUAL

2 CA-03-A-02 MIXED HOUSES, PETERBOROUGH CAMBRIDGESHIRE
THORPE ROAD

PETERBOROUGH
Total Number of dwellings: 363
Survey date: THURSDAY 13/05/04 Survey Type: MANUAL

3 CF-03-A-01 MIXED HOUSES, CARDIFF CARDIFF
VIRGIL STREET
NINIAN PARK
CARDIFF
Total Number of dwellings: 222
Survey date: THURSDAY 17/10/02 Survey Type: MANUAL

4 CH-03-A-06 SEMI-DET./BUNGALOWS,CREWE CHESHIRE
CREWE ROAD

CREWE
Total Number of dwellings: 129
Survey date: TUESDAY 14/10/08 Survey Type: MANUAL

5 DE-03-A-03 BUNGALOWS, LONDONDERRY DERRY
ABBEYDALE
KILFENNAN
LONDONDERRY
Total Number of dwellings: 160
Survey date: THURSDAY 02/10/03 Survey Type: MANUAL

6 DL-03-A-01 SEMI DETACHED, DUBLIN DUBLIN
KILMACUD ROAD UPPER
GOATSTOWN
DUBLIN
Total Number of dwellings: 208
Survey date: FRIDAY 22/11/02 Survey Type: MANUAL

7 GA-03-A-02 TERRACED, GALWAY GALWAY
BOHERMORE
TOWNPARKS
GALWAY
Total Number of dwellings: 185
Survey date: TUESDAY 19/09/06 Survey Type: MANUAL

8 GM-03-A-07 SEMI DETACHED, MANCHESTER GREATER MANCHESTER
MILFORD DRIVE
LEVENSHULME
MANCHESTER
Total Number of dwellings: 138
Survey date: FRIDAY 09/11/01 Survey Type: MANUAL

9 HF-03-A-02 HOUSES, WELWYN GDN. CITY HERTFORDSHIRE
BLACK FAN ROAD
PANSHANGER
WELWYN GARDEN CITY
Total Number of dwellings: 195
Survey date: SUNDAY 20/07/08 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

10 LN-03-A-02 MIXED HOUSES, LINCOLN LINCOLNSHIRE
HYKEHAM ROAD

LINCOLN
Total Number of dwellings: 186
Survey date: MONDAY 14/05/07 Survey Type: MANUAL

11 SR-03-A-01 DETACHED, STIRLING STIRLING
BENVIEW

STIRLING
Total Number of dwellings: 115
Survey date: MONDAY 23/04/07 Survey Type: MANUAL

12 TV-03-A-01 MIXED HOUSES/FLATS, HARTLEPL TEES VALLEY
POWLETT ROAD

HARTLEPOOL
Total Number of dwellings: 225
Survey date: THURSDAY 14/04/05 Survey Type: MANUAL

13 WO-03-A-03 DETACHED, KIDDERMINSTER WORCESTERSHIRE
BLAKEBROOK
BLAKEBROOK
KIDDERMINSTER
Total Number of dwellings: 138
Survey date: FRIDAY 05/05/06 Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	13	184	0.068	13	184	0.226	13	184	0.294
08:00 - 09:00	13	184	0.164	13	184	0.416	13	184	0.580
09:00 - 10:00	13	184	0.167	13	184	0.240	13	184	0.407
10:00 - 11:00	13	184	0.147	13	184	0.159	13	184	0.306
11:00 - 12:00	13	184	0.177	13	184	0.174	13	184	0.351
12:00 - 13:00	13	184	0.215	13	184	0.192	13	184	0.407
13:00 - 14:00	13	184	0.210	13	184	0.197	13	184	0.407
14:00 - 15:00	13	184	0.210	13	184	0.205	13	184	0.415
15:00 - 16:00	13	184	0.275	13	184	0.210	13	184	0.485
16:00 - 17:00	13	184	0.314	13	184	0.200	13	184	0.514
17:00 - 18:00	13	184	0.354	13	184	0.228	13	184	0.582
18:00 - 19:00	13	184	0.296	13	184	0.249	13	184	0.545
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.597			2.696			5.293

Parameter summary

Trip rate parameter range selected:	115 - 363 (units:)
Survey date date range:	01/01/00 - 17/11/08
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	1
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:

06	**WEST MIDLANDS**		
	WM	WEST MIDLANDS	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	1 days
14	**REPUBLIC OF IRELAND**		
	IR	REPUBLIC OF IRELAND	1 days

Main parameter selection:

Parameter: Number of households
Range: 26 to 144 (units:)

Date Range: 01/01/97 to 13/11/03

Selected survey days:

Monday	1 days
Thursday	1 days
Friday	2 days

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

VEHICLES

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate
00:00 - 01:00	0	0	0.00	0	0	0.00	0	0	0.00
01:00 - 02:00	0	0	0.00	0	0	0.00	0	0	0.00
02:00 - 03:00	0	0	0.00	0	0	0.00	0	0	0.00
03:00 - 04:00	0	0	0.00	0	0	0.00	0	0	0.00
04:00 - 05:00	0	0	0.00	0	0	0.00	0	0	0.00
05:00 - 06:00	0	0	0.00	0	0	0.00	0	0	0.00
06:00 - 07:00	0	0	0.00	0	0	0.00	0	0	0.00
07:00 - 08:00	4	82	0.02	**4**	**82**	**0.15**	4	82	0.17
08:00 - 09:00	4	82	0.05	4	82	0.15	4	82	0.20
09:00 - 10:00	4	82	0.06	4	82	0.11	4	82	0.17
10:00 - 11:00	4	82	0.05	4	82	0.10	4	82	0.15
11:00 - 12:00	4	82	0.04	4	82	0.04	4	82	0.08
12:00 - 13:00	4	82	0.05	4	82	0.06	4	82	0.11
13:00 - 14:00	4	82	0.06	4	82	0.06	4	82	0.12
14:00 - 15:00	4	82	0.08	4	82	0.09	4	82	0.17
15:00 - 16:00	4	82	0.08	4	82	0.07	4	82	0.15
16:00 - 17:00	4	82	0.10	4	82	0.05	4	82	0.15
17:00 - 18:00	4	82	0.12	4	82	0.07	4	82	0.19
18:00 - 19:00	**4**	**82**	**0.15**	4	82	0.05	4	82	0.20
19:00 - 20:00	1	26	0.12	1	26	0.12	**1**	**26**	**0.24**
20:00 - 21:00	1	26	0.12	1	26	0.12	1	26	0.24
21:00 - 22:00	0	0	0.00	0	0	0.00	0	0	0.00
22:00 - 23:00	0	0	0.00	0	0	0.00	0	0	0.00
23:00 - 24:00	0	0	0.00	0	0	0.00	0	0	0.00
Daily Trip Rates:			1.08			1.23			2.34

Parameter summary

Trip rate parameter range selected:	26 - 144 (units:)
Survey date date range:	01/01/97 - 13/11/03
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	NO
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : D - NURSERY
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
03	SOUTH WEST		
	BA	BATH & NORTH EAST SOMERSET	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
	SF	SUFFOLK	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
09	NORTH		
	DH	DURHAM	1 days
10	WALES		
	WR	WREXHAM	1 days
11	SCOTLAND		
	EA	EAST AYRSHIRE	1 days
14	LEINSTER		
	WT	WESTMEATH	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 230 to 850 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/00 to 27/11/08

Selected survey days:

Tuesday	5 days
Wednesday	1 days
Thursday	3 days
Friday	2 days

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	2
Free Standing (PPS6 Out of Town)	2

Selected Location Sub Categories:

Commercial Zone	2
Development Zone	1
Residential Zone	2
Village	1
Out of Town	2
No Sub Category	3

LIST OF SITES relevant to selection parameters

1 BA-04-D-01 NURSERY, BATH BATH & NORTH EAST SOMERSET
WESTON ROAD

BATH
Total Gross floor area: 825 sqm
Survey date: THURSDAY 05/10/06 Survey Type: MANUAL

2 CA-04-D-01 NURSERY, CAMBRIDGE CAMBRIDGESHIRE
CHAPEL STREET

CAMBRIDGE
Total Gross floor area: 420 sqm
Survey date: FRIDAY 05/11/04 Survey Type: MANUAL

3 DH-04-D-01 NURSERY, STANLEY DURHAM
PEA ROAD

STANLEY
Total Gross floor area: 750 sqm
Survey date: TUESDAY 10/06/03 Survey Type: MANUAL

4 EA-04-D-01 NURSERY, KILMARNOCK EAST AYRSHIRE
ALTONHILL AVENUE

KILMARNOCK
Total Gross floor area: 592 sqm
Survey date: THURSDAY 19/05/05 Survey Type: MANUAL

5 HC-04-D-01 NURSERY, BASINGSTOKE HAMPSHIRE
STAG OAK LANE
CHINEHAM BUSINESS PARK
BASINGSTOKE
Total Gross floor area: 725 sqm
Survey date: THURSDAY 22/11/07 Survey Type: MANUAL

6 NF-04-D-01 NURSERY, NORWICH NORFOLK
MERIDIAN WAY

NORWICH
Total Gross floor area: 700 sqm
Survey date: FRIDAY 25/05/07 Survey Type: MANUAL

7 NY-04-D-01 NURSERY, NEAR TADCASTER NORTH YORKSHIRE
LONDON ROAD
BARKSTON ASH
NEAR TADCASTER
Total Gross floor area: 245 sqm
Survey date: TUESDAY 10/05/05 Survey Type: MANUAL

8 SF-04-D-01 NURSERY, NR BURY ST EDMUNDS SUFFOLK
IXWORTH ROAD
THURSTON
NEAR BURY ST EDMUNDS
Total Gross floor area: 600 sqm
Survey date: TUESDAY 09/05/06 Survey Type: MANUAL

9 WM-04-D-01 NURSERY, BIRMINGHAM WEST MIDLANDS
SCHOOL ROAD
YARDLEY WOOD
BIRMINGHAM
Total Gross floor area: 850 sqm
Survey date: WEDNESDAY 19/09/07 Survey Type: MANUAL

10 WR-04-D-01 NURSERY, NEAR WREXHAM WREXHAM
LLAY ROAD
CEFN-Y-BEDD
NEAR WREXHAM
Total Gross floor area: 230 sqm
Survey date: TUESDAY 23/09/03 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

11 WT-04-D-01 NURSERY, ATHLONE WESTMEATH
DUBLIN ROAD
GARRYCASTLE
ATHLONE
Total Gross floor area: 625 sqm
Survey date: TUESDAY 19/06/07 Survey Type: MANUAL

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	9	599	2.170	9	599	1.076	9	599	3.246
08:00 - 09:00	11	597	6.629	11	597	5.181	11	597	11.810
09:00 - 10:00	11	597	3.155	11	597	3.810	11	597	6.965
10:00 - 11:00	11	597	1.143	11	597	1.189	11	597	2.332
11:00 - 12:00	11	597	1.798	11	597	1.783	11	597	3.581
12:00 - 13:00	11	597	2.530	11	597	2.316	11	597	4.846
13:00 - 14:00	11	597	1.280	11	597	1.265	11	597	2.545
14:00 - 15:00	11	597	2.194	11	597	1.798	11	597	3.992
15:00 - 16:00	11	597	1.173	11	597	2.133	11	597	3.306
16:00 - 17:00	9	599	2.578	9	599	2.207	9	599	4.785
17:00 - 18:00	9	599	5.211	9	599	5.861	9	599	11.072
18:00 - 19:00	8	645	0.484	8	645	1.918	8	645	2.402
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			30.345			30.537			60.882

Parameter summary

Trip rate parameter range selected:	230 - 850 (units: sqm)
Survey date date range:	01/01/00 - 27/11/08
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	4

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
Category : E - CLINICS
VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	LW	LEWISHAM	1 days
03	SOUTH WEST		
	DC	DORSET	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
11	SCOTLAND		
	GC	GLASGOW CITY	1 days

Main parameter selection:

Parameter: Gross floor area
Range: 1175 to 1790 (units: sqm)

Date Range: 01/01/00 to 12/06/08

Selected survey days:

Tuesday	1 days
Wednesday	1 days
Thursday	1 days
Friday	1 days

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

Selected Locations:

Town Centre	1
Suburban Area (PPS6 Out of Centre)	2
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Built-Up Zone	1
No Sub Category	3

LIST OF SITES relevant to selection parameters

1 DC-05-E-01 MEDICAL CENTRE, SHAFTESBURY DORSET
SALISBURY ROAD

SHAFTESBURY
Total Gross floor area: 1790 sqm
Survey date: TUESDAY 02/09/03 Survey Type: MANUAL

2 DS-05-E-01 CHILDRENS CLINIC, NR CHESTFLD DERBYSHIRE
HIGH STREET
CLAY CROSS
NEAR CHESTERFIELD
Total Gross floor area: 1175 sqm
Survey date: FRIDAY 23/06/06 Survey Type: MANUAL

3 GC-05-E-01 HEALTH CENTRE, GLASGOW GLASGOW CITY
SALAMANCA STREET

GLASGOW
Total Gross floor area: 1725 sqm
Survey date: WEDNESDAY 11/06/03 Survey Type: MANUAL

4 LW-05-E-01 HEALTH CENTRE, ISLE OF DOGS LEWISHAM
EAST FERRY ROAD
CROSSHARBOUR
ISLE OF DOGS
Total Gross floor area: 1650 sqm
Survey date: THURSDAY 20/06/02 Survey Type: MANUAL

TRIP RATE for Land Use 05 - HEALTH/E - CLINICS
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	4	1585	0.347	4	1585	0.079	4	1585	0.426
08:00 - 09:00	4	1585	1.672	4	1585	0.331	4	1585	2.003
09:00 - 10:00	4	1585	2.524	4	1585	1.751	4	1585	4.275
10:00 - 11:00	4	1585	1.814	4	1585	1.987	4	1585	3.801
11:00 - 12:00	4	1585	1.767	4	1585	1.893	4	1585	3.660
12:00 - 13:00	4	1585	1.104	4	1585	1.530	4	1585	2.634
13:00 - 14:00	4	1585	1.341	4	1585	1.199	4	1585	2.540
14:00 - 15:00	4	1585	1.262	4	1585	1.404	4	1585	2.666
15:00 - 16:00	4	1585	1.120	4	1585	1.293	4	1585	2.413
16:00 - 17:00	4	1585	1.404	4	1585	1.656	4	1585	3.060
17:00 - 18:00	4	1585	0.789	4	1585	1.514	4	1585	2.303
18:00 - 19:00	4	1585	0.536	4	1585	0.915	4	1585	1.451
19:00 - 20:00	1	1790	0.112	1	1790	0.279	1	1790	0.391
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			15.792			15.831			31.623

Parameter summary

Trip rate parameter range selected:	1175 - 1790 (units: sqm)
Survey date date range:	01/01/00 - 12/06/08
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	NO
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
Category : F - NURSING HOMES

VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	BD	BEDFORDSHIRE	1 days
	ES	EAST SUSSEX	1 days
	WS	WEST SUSSEX	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	1 days
09	**NORTH**		
	TV	TEES VALLEY	1 days
	TW	TYNE & WEAR	1 days
10	**WALES**		
	CF	CARDIFF	1 days
11	**SCOTLAND**		
	AS	ABERDEENSHIRE	1 days
	HI	HIGHLAND	1 days

Main parameter selection:

Parameter: Number of residents
Range: 19 to 75 (units:)

Date Range: 01/01/00 to 11/10/06

Selected survey days:

Monday	2 days
Tuesday	2 days
Wednesday	2 days
Thursday	2 days
Saturday	1 days

Selected survey types:

Manual count	8 days
Directional ATC Count	1 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Residential Zone	4
No Sub Category	5

LIST OF SITES relevant to selection parameters

1 **AS-05-F-01** **NURSING HOME, ABERDEEN** **ABERDEENSHIRE**
FONTHILL ROAD
FERRYHILL
ABERDEEN
Total Number of residents: 53

2 **BD-05-F-01** **NURSING HOME, DUNSTABLE** **BEDFORDSHIRE**
BRANDRETH AVENUE

DUNSTABLE
Total Number of residents: 60

3 **CF-05-F-01** **NURSING HOME, CARDIFF** **CARDIFF**
ROMILLY CRESCENT
CANTON
CARDIFF
Total Number of residents: 48

4 **ES-05-F-01** **NURSING HOME, EASTBOURNE** **EAST SUSSEX**
WILLINGDON ROAD

EASTBOURNE
Total Number of residents: 54

5 **HI-05-F-01** **NURSING HOME, NAIRN** **HIGHLAND**
CAWDOR ROAD

NAIRN
Total Number of residents: 44

6 **NY-05-F-03** **NURSING HOME, TADCASTER** **NORTH YORKSHIRE**
LEEDS ROAD

TADCASTER
Total Number of residents: 33

7 **TV-05-F-01** **NURSING HOME, DARLINGTON** **TEES VALLEY**
HUNDENS LANE

DARLINGTON
Total Number of residents: 59

8 **TW-05-F-01** **NURSING HOME, FELLING** **TYNE & WEAR**
CROWHALL LANE

FELLING
Total Number of residents: 68

9 **WS-05-F-01** **NURSING HOME, CHICHESTER** **WEST SUSSEX**
WHYKE ROAD
WHYKE
CHICHESTER
Total Number of residents: 19

TRIP RATE for Land Use 05 - HEALTH/F - NURSING HOMES

VEHICLES

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate
00:00 - 01:00	1	19	0.000	1	19	0.000	1	19	0.000
01:00 - 02:00	1	19	0.000	1	19	0.000	1	19	0.000
02:00 - 03:00	1	19	0.000	1	19	0.000	1	19	0.000
03:00 - 04:00	1	19	0.000	1	19	0.000	1	19	0.000
04:00 - 05:00	1	19	0.000	1	19	0.000	1	19	0.000
05:00 - 06:00	1	19	0.000	1	19	0.000	1	19	0.000
06:00 - 07:00	1	19	0.105	1	19	0.053	1	19	0.158
07:00 - 08:00	**9**	**49**	**0.148**	9	49	0.082	9	49	0.230
08:00 - 09:00	9	49	0.055	9	49	0.055	9	49	0.110
09:00 - 10:00	9	49	0.087	9	49	0.050	9	49	0.137
10:00 - 11:00	9	49	0.080	9	49	0.059	9	49	0.139
11:00 - 12:00	9	49	0.084	9	49	0.082	9	49	0.166
12:00 - 13:00	9	49	0.073	9	49	0.087	9	49	0.160
13:00 - 14:00	9	49	0.107	9	49	0.100	9	49	0.207
14:00 - 15:00	9	49	0.110	**9**	**49**	**0.121**	**9**	**49**	**0.231**
15:00 - 16:00	9	49	0.073	9	49	0.110	9	49	0.183
16:00 - 17:00	9	49	0.096	9	49	0.119	9	49	0.215
17:00 - 18:00	9	49	0.043	9	49	0.068	9	49	0.111
18:00 - 19:00	9	49	0.053	9	49	0.073	9	49	0.126
19:00 - 20:00	4	41	0.091	4	41	0.097	4	41	0.188
20:00 - 21:00	4	41	0.024	4	41	0.030	4	41	0.054
21:00 - 22:00	2	37	0.000	2	37	0.014	2	37	0.014
22:00 - 23:00	1	19	0.000	1	19	0.000	1	19	0.000
23:00 - 24:00	1	19	0.000	1	19	0.000	1	19	0.000
Total Rates:			1.229			1.200			2.429

Parameter summary

Trip rate parameter range selected:	19 - 75 (units:)
Survey date date range:	01/01/00 - 11/10/06
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	1
Number of Sundays:	0
Optional parameters used in selection:	NO
Surveys manually removed from selection:	7

MS Consultancy Sir William Lyons Road Coventry Licence No: 729101

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : F - SHELTERED ACCOMMODATION

Selected regions and areas:

03	**SOUTH WEST**		
	DC	DORSET	1 days
04	**EAST ANGLIA**		
	SF	SUFFOLK	1 days
09	**NORTH**		
	CB	CUMBRIA	1 days

Main parameter selection:

Parameter: Number of households
Range: 19 to 124 (units:)

Date Range: 01/01/96 to 21/11/03

Selected survey days:

Tuesday	1 days
Wednesday	1 days
Thursday	1 days

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

LIST OF SITES relevant to selection parameters

1 **CB-03-F-01 SHELTERED HOUSING, CARLISLE CUMBRIA**
BOTCHERBY AVENUE
BOTCHERBY
CARLISLE
Total Number of households: 30 ******

2 **DC-03-F-01 FERNDOWN SHELTERED HOUS. DORSET**
RINGWOOD ROAD

FERNDOWN
Total Number of households: 124 ******

3 **SF-03-F-01 SHELTERED HOUSING, IPSWICH SUFFOLK**
VALLEY ROAD

IPSWICH
Total Number of households: 55 ******

TMS Consultancy Sir William Lyons Road Coventry Licence No: 729101

TRIP RATE for Land Use 03 - RESIDENTIAL/F - SHELTERED ACCOMMODATION

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate
00:00 - 01:00	0	0	0.00	0	0	0.00	0	0	0.00
01:00 - 02:00	0	0	0.00	0	0	0.00	0	0	0.00
02:00 - 03:00	0	0	0.00	0	0	0.00	0	0	0.00
03:00 - 04:00	0	0	0.00	0	0	0.00	0	0	0.00
04:00 - 05:00	0	0	0.00	0	0	0.00	0	0	0.00
05:00 - 06:00	0	0	0.00	0	0	0.00	0	0	0.00
06:00 - 07:00	0	0	0.00	0	0	0.00	0	0	0.00
07:00 - 08:00	3	70	0.03	3	70	0.04	3	70	0.07
08:00 - 09:00	3	70	0.09	3	70	0.06	3	70	0.15
09:00 - 10:00	3	70	0.08	3	70	0.09	3	70	0.17
10:00 - 11:00	3	70	0.06	3	70	0.11	3	70	0.17
11:00 - 12:00	3	70	0.10	3	70	0.10	3	70	0.20
:00 - 13:00	3	70	0.15	3	70	0.15	3	70	0.30
13:00 - 14:00	3	70	0.08	3	70	0.08	3	70	0.16
14:00 - 15:00	3	70	0.10	3	70	0.09	3	70	0.19
15:00 - 16:00	3	70	0.08	3	70	0.08	3	70	0.16
16:00 - 17:00	3	70	0.08	3	70	0.09	3	70	0.17
17:00 - 18:00	3	70	0.07	3	70	0.06	3	70	0.13
18:00 - 19:00	3	70	0.04	3	70	0.04	3	70	0.08
19:00 - 20:00	0	0	0.00	0	0	0.00	0	0	0.00
20:00 - 21:00	0	0	0.00	0	0	0.00	0	0	0.00
21:00 - 22:00	0	0	0.00	0	0	0.00	0	0	0.00
22:00 - 23:00	0	0	0.00	0	0	0.00	0	0	0.00
23:00 - 24:00	0	0	0.00	0	0	0.00	0	0	0.00
Daily Trip Rates:			0.96			0.99			1.95

Parameter summary

Trip rate parameter range selected:	19 - 124 (units:)
Survey date date range:	01/01/96 - 21/11/03
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	NO
Surveys manually removed from selection:	3

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

Selected Regions and Areas:

02	**SOUTH EAST**		
	SC	SURREY	1 days
08	**NORTH WEST**		
	GM	GREATER MANCHESTER	6 days
	LC	LANCASHIRE	7 days
09	**NORTH**		
	TW	TYNE & WEAR	1 days
10	**WALES**		
	RC	RHONDDA CYNON TAFF	1 days
12	**NORTHERN IRELAND**		
	NI	NORTHERN IRELAND	1 days

Main Parameter Selection:

Parameter: Number of Households
Range: 20 to 100 (units:)

Date Range: 01/01/95 to 14/11/02

Selected Survey Days:

Monday	2 days
Tuesday	6 days
Wednesday	4 days
Thursday	3 days
Friday	2 days

Selected Survey Types:

Manual Count	8 days
One Way ATC Count	9 days

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

Calculation Factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate
00:00 - 01:00	9	81	0.02	9	81	0.02	9	81	0.04
01:00 - 02:00	9	81	0.02	9	81	0.02	9	81	0.03
02:00 - 03:00	9	81	0.01	9	81	0.00	9	81	0.01
03:00 - 04:00	9	81	0.01	9	81	0.02	9	81	0.03
04:00 - 05:00	9	81	0.01	9	81	0.03	9	81	0.04
05:00 - 06:00	9	81	0.01	9	81	0.05	9	81	0.06
06:00 - 07:00	9	81	0.03	9	81	0.15	9	81	0.18
07:00 - 08:00	17	66	0.11	17	66	0.39	17	66	0.50
08:00 - 09:00	**17**	**66**	**0.20**	**17**	**66**	**0.66**	**17**	**66**	**0.86**
09:00 - 10:00	17	66	0.20	17	66	0.24	17	66	0.45
10:00 - 11:00	17	66	0.17	17	66	0.19	17	66	0.36
11:00 - 12:00	17	66	0.20	17	66	0.17	17	66	0.37
12:00 - 13:00	17	66	0.23	17	66	0.21	17	66	0.44
13:00 - 14:00	17	66	0.18	17	66	0.20	17	66	0.38
14:00 - 15:00	17	66	0.22	17	66	0.20	17	66	0.41
15:00 - 16:00	17	66	0.34	17	66	0.27	17	66	0.61
16:00 - 17:00	17	66	0.35	17	66	0.23	17	66	0.58
17:00 - 18:00	17	66	0.52	17	66	0.25	17	66	0.77
18:00 - 19:00	17	66	0.44	17	66	0.33	17	66	0.76
19:00 - 20:00	9	81	0.37	9	81	0.27	9	81	0.64
20:00 - 21:00	9	81	0.30	9	81	0.20	9	81	0.50
21:00 - 22:00	9	81	0.21	9	81	0.11	9	81	0.31
22:00 - 23:00	9	81	0.14	9	81	0.07	9	81	0.20
23:00 - 24:00	9	81	0.08	9	81	0.04	9	81	0.12
Daily Trip Rates:			4.37			4.29			8.66

Parameter Summary

Trip Rate Parameter Range Selected:	20 - 100 (units:)
Survey Date Date Range:	01/01/95 - 14/11/02
Number of Weekdays (Monday-Friday):	17
Number of Saturdays:	0
Number of Sundays:	0
Optional Parameters Used in Selection:	NO
Surveys Manually Removed from Selection:	0

APPENDIX E – PICADY RESULTS

TRL LIMITED

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

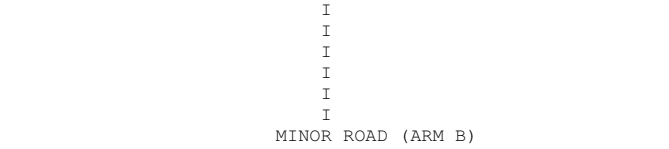
Run with file:-
"C:\PICADY\2017\17149-01\17149-02\Proposed Access\Proposed Access New Flows.vpi"
(drive-on-the-left) at 08:36:46 on Wednesday, 28 November 2018

.RUN INFORMATION
****

RUN TITLE: Proposed Mixed Development
LOCATION: Gorey, Co. Wexford
DATE: 12/01/18
CLIENT: Martin O'Looney
ENUMERATOR: Roadplan
JOB NUMBER: 17149-01
STATUS: TIA
DESCRIPTION:

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

INPUT DATA



ARM A IS Fort Rd (n)
ARM B IS Proposed Access
ARM C IS Fort Rd (s)

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)	2.20 M.
- VISIBILITY	(VC-B)	50.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	25.0 M.
- VISIBILITY TO RIGHT	(VB-A)	25.0 M.
- LANE 1 WIDTH	(WB-C)	3.50 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
671.70	0.26	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
522.91	0.24	0.10	0.15	0.34

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
602.92	0.23	0.23

NB These values do not allow for any site specific corrections

.

.TRAFFIC DEMAND DATA

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

Demand set: 2021 am with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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
08.15 - 09.15				
	ARM A	0.000	0.143	0.857
		0.0	4.0	24.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.051	0.000	0.949
		7.0	0.0	129.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.211	0.789	0.000
		20.0	75.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2021 am with development
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)
08.15-08.30									
B-AC	2.33	9.87	0.236		0.00	0.31	4.4		0.13
C-AB	1.28	9.02	0.142		0.00	0.16	2.4		0.13
A-B	0.07								
A-C	0.42								

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-AC	2.27	9.87	0.230		0.31	0.30	4.5		0.13
C-AB	1.28	9.02	0.142		0.16	0.17	2.5		0.13
A-B	0.07								
A-C	0.42								

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-AC	2.27	9.87	0.230		0.30	0.30	4.5		0.13
C-AB	1.28	9.02	0.142		0.17	0.17	2.5		0.13
A-B	0.07								
A-C	0.42								

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)
09.00-09.15									
B-AC	2.20	9.87	0.223		0.30	0.29	4.4		0.13
C-AB	1.22	9.02	0.136		0.17	0.16	2.4		0.13
A-B	0.07								
A-C	0.42								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.3
08.45	0.3
09.00	0.3
09.15	0.3

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.2
09.00	0.2
09.15	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-AC	136.0	136.0	17.8	0.13	17.8	0.13
C-AB	75.9	75.9	9.8	0.13	9.8	0.13
A-B	4.2	4.2				
A-C	25.2	25.2				
ALL	261.6	261.6	27.6	0.11	27.6	0.11

* 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 INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
671.70	0.26	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
522.91	0.24	0.10	0.15	0.34

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
602.92	0.23	0.23

NB These values do not allow for any site specific corrections

.

.TRAFFIC DEMAND DATA

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

Demand set: 2021 pm with development

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
17.00 - 18.00	ARM A	0.000	0.429	0.571
		0.0	6.0	8.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.044	0.000	0.956
		4.0	0.0	87.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.144	0.856	0.000
		19.0	113.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2021 pm with development
AND FOR TIME PERIOD 2

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-AC	1.53	9.94	0.154		0.00	0.18	2.6		0.12
C-AB	1.96	9.07	0.216		0.00	0.27	4.1		0.14
A-B	0.12								
A-C	0.15								
17.15-17.30									
B-AC	1.53	9.94	0.154		0.18	0.18	2.7		0.12
C-AB	1.90	9.07	0.209		0.27	0.27	4.0		0.14
A-B	0.12								
A-C	0.15								
17.30-17.45									
B-AC	1.47	9.96	0.148		0.18	0.17	2.6		0.12
C-AB	1.84	9.09	0.203		0.27	0.26	3.8		0.14
A-B	0.09								
A-C	0.12								
17.45-18.00									
B-AC	1.47	9.96	0.148		0.17	0.17	2.6		0.12
C-AB	1.84	9.09	0.203		0.26	0.26	3.8		0.14
A-B	0.09								
A-C	0.12								

QUEUE FOR STREAM B-AC

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-AB

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

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-AC	90.0	90.0	10.6	0.12	10.6	0.12
C-AB	113.1	113.1	15.8	0.14	15.8	0.14
A-B	6.2	6.2				
A-C	8.2	8.2				
ALL	236.6	236.6	26.3	0.11	26.3	0.11

* 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 INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
671.70	0.26	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
522.91	0.24	0.10	0.15	0.34

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
602.92	0.23	0.23

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2026 am with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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
08.15 - 09.15	ARM A	0.000	0.129	0.871
		0.0	4.0	27.0
		(0.0)%	(10.0)%	(10.0)%
	ARM B	0.051	0.000	0.949
		7.0	0.0	129.0
		(10.0)%	(0.0)%	(10.0)%
	ARM C	0.235	0.765	0.000
		23.0	75.0	0.0
		(10.0)%	(10.0)%	(0.0)%

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2026 am with development
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)
08.15-08.30									
B-AC	2.33	9.86	0.236		0.00	0.31	4.4		0.13
C-AB	1.26	9.01	0.140		0.00	0.16	2.4		0.13
A-B	0.07								
A-C	0.45								

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-AC	2.27	9.86	0.230		0.31	0.30	4.5		0.13
C-AB	1.26	9.01	0.140		0.16	0.16	2.5		0.13
A-B	0.07								
A-C	0.45								

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-AC	2.27	9.86	0.230		0.30	0.30	4.5		0.13
C-AB	1.26	9.01	0.140		0.16	0.16	2.5		0.13
A-B	0.07								
A-C	0.45								

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)
09.00-09.15									
B-AC	2.20	9.86	0.223		0.30	0.29	4.4		0.13
C-AB	1.21	9.01	0.134		0.16	0.16	2.3		0.13
A-B	0.07								
A-C	0.45								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.3
08.45	0.3
09.00	0.3
09.15	0.3

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.2
09.00	0.2
09.15	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-AC	136.0	136.0	17.8	0.13	17.8	0.13
C-AB	75.0	75.0	9.7	0.13	9.7	0.13
A-B	4.0	4.0				
A-C	27.2	27.2				
ALL	265.2	265.2	27.5	0.10	27.5	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 INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
671.70	0.26	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
522.91	0.24	0.10	0.15	0.34

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
602.92	0.23	0.23

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2036 am with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	ARM A	ARM B	ARM C
08.15 - 09.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.129	0.871
		0.0	4.0	27.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.051	0.000	0.949
		7.0	0.0	129.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.235	0.765	0.000
		23.0	75.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2036 am with development
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)
08.15-08.30									
B-AC	2.33	9.85	0.237		0.00	0.31	4.4		0.13
C-AB	1.29	9.00	0.143		0.00	0.17	2.5		0.13
A-B	0.07								
A-C	0.49								

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-AC	2.27	9.85	0.230		0.31	0.30	4.5		0.13
C-AB	1.29	9.00	0.143		0.17	0.17	2.5		0.13
A-B	0.07								
A-C	0.49								

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-AC	2.27	9.85	0.230		0.30	0.30	4.5		0.13
C-AB	1.29	9.00	0.143		0.17	0.17	2.5		0.13
A-B	0.07								
A-C	0.49								

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)
09.00-09.15									
B-AC	2.20	9.85	0.223		0.30	0.29	4.4		0.13
C-AB	1.23	9.00	0.137		0.17	0.16	2.4		0.13
A-B	0.07								
A-C	0.49								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.3
08.45	0.3
09.00	0.3
09.15	0.3

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.2
09.00	0.2
09.15	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-AC	136.0	136.0	17.9	0.13	17.9	0.13
C-AB	76.3	76.3	9.9	0.13	9.9	0.13
A-B	4.3	4.3				
A-C	29.3	29.3				
ALL	269.4	269.4	27.8	0.10	27.8	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 INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
671.70	0.26	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
522.91	0.24	0.10	0.15	0.34

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
602.92	0.23	0.23

NB These values do not allow for any site specific corrections

.

.TRAFFIC DEMAND DATA

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

Demand set: 2036 am sensitivity test

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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
08.15 - 09.15	ARM A	0.000	0.147	0.853
		0.0	5.0	29.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.052	0.000	0.948
		10.0	0.0	182.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.209	0.791	0.000
		24.0	91.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2036 am sensitivity test
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)
08.15-08.30									
B-AC	3.33	9.81	0.339		0.00	0.51	7.2		0.15
C-AB	1.59	8.97	0.177		0.00	0.21	3.2		0.13
A-B	0.10								
A-C	0.59								

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-AC	3.20	9.83	0.326		0.51	0.49	7.4		0.15
C-AB	1.54	8.99	0.171		0.21	0.21	3.1		0.13
A-B	0.09								
A-C	0.54								

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-AC	3.20	9.84	0.325		0.49	0.49	7.3		0.15
C-AB	1.54	9.00	0.170		0.21	0.21	3.1		0.13
A-B	0.08								
A-C	0.48								

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)
09.00-09.15									
B-AC	3.07	9.84	0.312		0.49	0.46	7.0		0.15
C-AB	1.49	9.00	0.165		0.21	0.20	3.0		0.13
A-B	0.08								
A-C	0.48								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.5	*
08.45	0.5	
09.00	0.5	
09.15	0.5	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.2
09.00	0.2
09.15	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-AC	192.0	192.0	28.9	0.15	28.9	0.15
C-AB	92.2	92.2	12.4	0.13	12.4	0.13
A-B	5.4	5.4				
A-C	31.2	31.2				
ALL	345.1	345.1	41.3	0.12	41.3	0.12

* 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 INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
671.70	0.26	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
522.91	0.24	0.10	0.15	0.34

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
602.92	0.23	0.23

NB These values do not allow for any site specific corrections

.

.TRAFFIC DEMAND DATA

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

Demand set: 2026 pm with development

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.

.

		TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S)		
TIME	FROM/TO	ARM A	ARM B	ARM C
17.00 - 18.00	ARM A	0.000	0.400	0.600
		0.0	6.0	9.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.044	0.000	0.956
		4.0	0.0	87.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.157	0.843	0.000
		21.0	113.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2026 pm with development
AND FOR TIME PERIOD 2

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-AC	1.53	9.94	0.154		0.00	0.18	2.6		0.12
C-AB	1.95	9.07	0.215		0.00	0.27	4.0		0.14
A-B	0.12								
A-C	0.17								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.53	9.94	0.154		0.18	0.18	2.7		0.12
C-AB	1.90	9.07	0.209		0.27	0.27	4.0		0.14
A-B	0.12								
A-C	0.17								

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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	1.53	9.96	0.154		0.18	0.18	2.7		0.12
C-AB	1.83	9.08	0.201		0.27	0.26	3.8		0.14
A-B	0.09								
A-C	0.13								

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-AC	1.47	9.96	0.148		0.18	0.17	2.6		0.12
C-AB	1.83	9.08	0.201		0.26	0.26	3.8		0.14
A-B	0.09								
A-C	0.13								

QUEUE FOR STREAM B-AC

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-AB

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

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-AC	90.9	90.9	10.7	0.12	10.7	0.12
C-AB	112.6	112.6	15.7	0.14	15.7	0.14
A-B	6.1	6.1				
A-C	9.2	9.2				
ALL	239.7	239.7	26.4	0.11	26.4	0.11

* 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 INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
671.70	0.26	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
522.91	0.24	0.10	0.15	0.34

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
602.92	0.23	0.23

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2036 pm with development

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	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
17.00 - 18.00	ARM A	0.000	0.400	0.600
		0.0	6.0	9.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.044	0.000	0.956
		4.0	0.0	87.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.150	0.850	0.000
		20.0	113.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2036 pm with development
AND FOR TIME PERIOD 2

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-AC	1.53	9.94	0.154		0.00	0.18	2.6		0.12
C-AB	1.99	9.07	0.219		0.00	0.28	4.1		0.14
A-B	0.12								
A-C	0.18								

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-AC	1.53	9.94	0.154		0.18	0.18	2.7		0.12
C-AB	1.94	9.07	0.214		0.28	0.28	4.1		0.14
A-B	0.12								
A-C	0.18								

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-AC	1.53	9.95	0.154		0.18	0.18	2.7		0.12
C-AB	1.86	9.08	0.205		0.28	0.26	3.9		0.14
A-B	0.09								
A-C	0.14								

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-AC	1.47	9.95	0.148		0.18	0.17	2.6		0.12
C-AB	1.86	9.08	0.205		0.26	0.26	3.9		0.14
A-B	0.09								
A-C	0.14								

QUEUE FOR STREAM B-AC

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-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	90.9	90.9	10.7	0.12	10.7	0.12
C-AB	114.7	114.7	16.1	0.14	16.1	0.14
A-B	6.4	6.4				
A-C	9.5	9.5				
ALL	241.8	241.8	26.8	0.11	26.8	0.11

```
* 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 INTERCEPT
--------------------

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

will be adjusted )


-----------------------------------------------------------
I Intercept For Slope For Opposing   Slope For Opposing I
I Stream B-C     Stream  A-C          Stream A-B        I
-----------------------------------------------------------
I     671.70            0.26               0.10        I
-----------------------------------------------------------


-------------------------------------------------------------------------------------------------------
I Intercept For Slope For Opposing   Slope For Opposing   Slope For Opposing   Slope For OpposingI
I Stream B-A     Stream  A-C          Stream A-B           Stream  C-A          Stream C-B       I
-------------------------------------------------------------------------------------------------------
I     522.91            0.24               0.10                 0.15               0.34       I
-------------------------------------------------------------------------------------------------------


-----------------------------------------------------------
I Intercept For Slope For Opposing   Slope For Opposing I
I Stream C-B     Stream  A-C          Stream A-B        I
-----------------------------------------------------------
I     602.92            0.23               0.23        I
-----------------------------------------------------------

NB These values do not allow for any site specific corrections
.

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

.------------------------
I ARM I FLOW SCALE(%) I
------------------------
I A   I      100      I
I B   I      100      I
I C   I      100      I
------------------------

Demand set: 2036 pm sensitivity test

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.
.
-------------------------------------------------------------
I                    I         TURNING PROPORTIONS        I
I                    I         TURNING COUNTS             I
I                    I        (PERCENTAGE OF H.V.S)       I
I                    ---------------------------------------
I        TIME        I FROM/TO I  ARM A I  ARM B I  ARM C I
-------------------------------------------------------------
I   17.00 - 18.00    I         I        I        I        I
I                    I  ARM A  I  0.000 I  0.444 I  0.556 I
I                    I         I    0.0 I    8.0 I   10.0 I
I                    I         I (  0.0)I ( 10.0)I ( 10.0)I
I                    I         I        I        I        I
I                    I  ARM B  I  0.045 I  0.000 I  0.955 I
I                    I         I    5.0 I    0.0 I  107.0 I
I                    I         I ( 10.0)I (  0.0)I ( 10.0)I
I                    I         I        I        I        I
I                    I  ARM C  I  0.124 I  0.876 I  0.000 I
I                    I         I   22.0 I  155.0 I    0.0 I
I                    I         I ( 10.0)I ( 10.0)I (  0.0)I
I                    I         I        I        I        I
-------------------------------------------------------------

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
```

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2036 pm sensitivity test
AND FOR TIME PERIOD 2

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-AC	1.93	9.89	0.195		0.00	0.24	3.5		0.13
C-AB	2.75	9.03	0.304		0.00	0.44	6.4		0.16
A-B	0.19								
A-C	0.24								

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)
17.15-17.30									
B-AC	1.87	9.90	0.189		0.24	0.23	3.5		0.12
C-AB	2.70	9.05	0.298		0.44	0.43	6.5		0.16
A-B	0.16								
A-C	0.20								

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-AC	1.87	9.93	0.188		0.23	0.23	3.5		0.12
C-AB	2.50	9.08	0.276		0.43	0.39	5.8		0.15
A-B	0.10								
A-C	0.13								

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-AC	1.80	9.93	0.181		0.23	0.22	3.4		0.12
C-AB	2.50	9.08	0.276		0.39	0.39	5.8		0.15
A-B	0.10								
A-C	0.13								

QUEUE FOR STREAM B-AC

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-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.4
17.30	0.4
17.45	0.4
18.00	0.4

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-AC	112.0	112.0	13.9	0.12	13.9	0.12
C-AB	156.8	156.8	24.5	0.16	24.5	0.16
A-B	8.3	8.3				
A-C	10.4	10.4				
ALL	309.9	309.9	38.4	0.12	38.4	0.12

* 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

TRL LIMITED

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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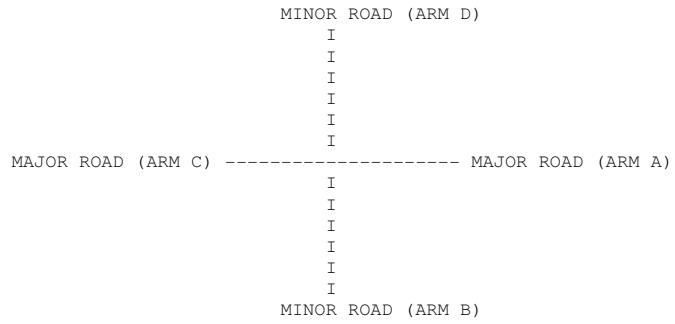
Run with file:- "C:\PICADY\2017\17149-01\17149-02\North Junction\AM\AM Flows.vpi" (drive-on-the-left) at 16:24:21 on Tuesday, 27 November 2018

.RUN INFORMATION
****

RUN TITLE: Proposed Mixed Development
LOCATION: Gorey, Wexford
DATE: 12/01/18
CLIENT: MArtin O'Looney
ENUMERATOR: Roadplan
JOB NUMBER: 17149-01
STATUS: TIA
DESCRIPTION:

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

INPUT DATA



ARM A IS Fort Rd (n)
ARM B IS Willow Park
ARM C IS Fort Rd (s)
ARM D IS Creagh Demesne

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) 6.00 M.	(W) 6.00 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) 250.0 M.
- BLOCKS TRAFFIC	YES	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.	(VD-A) 75.0 M.
- VISIBILITY TO RIGHT	(VB-A) 30.0 M.	(VD-C) 65.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 M.	(WD-A) 3.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
689.79	0.27	0.38

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
718.74	0.27	0.40

B-D Stream From Left Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
508.55	0.23	0.23	0.09	0.33

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

B-D Stream From Right Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
508.55	0.23	0.23	0.09	0.33

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

D-B Stream From Left Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

.

.TRAFFIC DEMAND DATA

.

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

Demand set: 2018 am existing flows

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
08.15 - 09.15	ARM A	0.000	0.261	0.715	0.025
		0.0	74.0	203.0	7.0
		(0.0)	(2.7)	(1.0)	(0.0)
	ARM B	0.685	0.000	0.297	0.018
		76.0	0.0	33.0	2.0
		(1.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.870	0.096	0.000	0.034
		154.0	17.0	0.0	6.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.462	0.077	0.462	0.000
		12.0	2.0	12.0	0.0
		(0.0)	(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 2018 am existing flows
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)
08.15-08.30									
B-ACD	2.00	8.08	0.248		0.00	0.32	4.6		0.16
A-BCD	0.07	11.40	0.006		0.00	0.01	0.1		0.09
D-ABC	0.53	8.90	0.060		0.00	0.06	0.9		0.12
C-ABD	0.19	10.77	0.018		0.00	0.02	0.3		0.09

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	3.00	7.06	0.425		0.32	0.72	10.1		0.24
A-BCD	0.13	10.41	0.013		0.01	0.01	0.2		0.10
D-ABC	0.67	7.72	0.087		0.06	0.09	1.4		0.14
C-ABD	0.52	10.04	0.052		0.02	0.06	0.8		0.11

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	1.47	6.95	0.211		0.72	0.27	4.3		0.18
A-BCD	0.19	11.24	0.017		0.01	0.02	0.3		0.09
D-ABC	0.53	8.34	0.064		0.09	0.07	1.1		0.13
C-ABD	0.24	9.34	0.026		0.06	0.03	0.4		0.11

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)
09.00-09.15									
B-ACD	0.93	8.09	0.115		0.27	0.13	2.0		0.14
A-BCD	0.08	11.44	0.007		0.02	0.01	0.1		0.09
D-ABC	0.00	8.92	0.000		0.07	0.00	0.0		0.00
C-ABD	0.18	10.66	0.017		0.03	0.02	0.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.3	
08.45	0.7	*
09.00	0.3	
09.15	0.1	

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QUEUE FOR STREAM A-BCD

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

.

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

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QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	0.0

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	111.0	111.0	21.1	0.19	21.1	0.19
A-BCD	7.0	7.0	0.6	0.09	0.6	0.09
D-ABC	26.0	26.0	3.3	0.13	3.3	0.13
C-ABD	17.0	17.0	1.8	0.10	1.8	0.10
ALL	598.1	598.1	26.9	0.04	26.9	0.04

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

I Intercept For I Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 508.55	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.15	0.33	0.12 I

D-C Stream

I Intercept For I Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 534.37	0.25	0.25	0.25	0.25 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.10	0.15	0.35	0.12 I

C-B Stream

I Intercept For I Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 689.79	0.27	0.38 I

A-D Stream

I Intercept For I Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 718.74	0.27	0.40 I

B-D Stream From Left Hand Lane

I Intercept For I Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

B-D Stream From Right Hand Lane

I Intercept For I Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

D-B Stream From Left Hand Lane

I Intercept For I Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I
I 534.37	0.25	0.25	0.10	0.35 I

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 am no development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

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TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
08.15 - 09.15	ARM A	0.000	0.262	0.714	0.023
		0.0	79.0	215.0	7.0
		(0.0)	(2.7)	(1.0)	(0.0)
	ARM B	0.686	0.000	0.297	0.017
		81.0	0.0	35.0	2.0
		(1.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.872	0.096	0.000	0.032
		163.0	18.0	0.0	6.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.464	0.071	0.464	0.000
		13.0	2.0	13.0	0.0
		(0.0)	(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 2021 am no development
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)
08.15-08.30									
B-ACD	2.12	8.02	0.264		0.00	0.35	5.1		0.17
A-BCD	0.07	11.36	0.006		0.00	0.01	0.1		0.09
D-ABC	0.57	8.85	0.064		0.00	0.07	1.0		0.12
C-ABD	0.20	10.72	0.019		0.00	0.02	0.3		0.10

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	3.18	6.94	0.458		0.35	0.82	11.5		0.26
A-BCD	0.13	10.32	0.013		0.01	0.01	0.2		0.10
D-ABC	0.71	7.59	0.094		0.07	0.10	1.5		0.15
C-ABD	0.55	9.95	0.055		0.02	0.06	0.9		0.11

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	1.56	6.83	0.229		0.82	0.30	4.8		0.19
A-BCD	0.19	11.20	0.017		0.01	0.02	0.3		0.09
D-ABC	0.57	8.26	0.069		0.10	0.07	1.2		0.13
C-ABD	0.26	9.21	0.028		0.06	0.03	0.4		0.11

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)
09.00-09.15									
B-ACD	0.99	8.04	0.123		0.30	0.14	2.2		0.14
A-BCD	0.08	11.40	0.007		0.02	0.01	0.1		0.09
D-ABC	0.00	8.88	0.000		0.07	0.00	0.0		0.00
C-ABD	0.19	10.60	0.018		0.03	0.02	0.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.8	*
09.00	0.3	
09.15	0.1	

QUEUE FOR STREAM A-BCD

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

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	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-ACD	117.8	117.8	23.6	0.20	23.6	0.20
A-BCD	7.0	7.0	0.6	0.09	0.6	0.09
D-ABC	27.7	27.7	3.6	0.13	3.6	0.13
C-ABD	18.1	18.1	1.9	0.11	1.9	0.11
ALL	634.8	634.8	29.8	0.05	29.8	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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

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

I	689.79	0.27	0.38	I

A-D Stream

I Intercept For Slope For Opposing I Stream A-D	Stream C-A	Slope For Opposing Stream C-B	I
I 718.74	0.27	0.40	I

B-D Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 am with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
08.15 - 09.15	ARM A	0.000	0.232	0.747	0.021
		0.0	79.0	254.0	7.0
		(0.0)%	(2.7)%	(1.0)%	(0.0)%
	ARM B	0.686	0.000	0.297	0.017
		81.0	0.0	35.0	2.0
		(1.3)%	(0.0)%	(0.0)%	(0.0)%
	ARM C	0.881	0.090	0.000	0.030
		177.0	18.0	0.0	6.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%
	ARM D	0.464	0.071	0.464	0.000
		13.0	2.0	13.0	0.0
		(0.0)%	(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 2021 am with development
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)
08.15-08.30									
B-ACD	2.12	7.84	0.270		0.00	0.36	5.2		0.17
A-BCD	0.07	11.29	0.006		0.00	0.01	0.1		0.09
D-ABC	0.57	8.71	0.065		0.00	0.07	1.0		0.12
C-ABD	0.21	10.54	0.020		0.00	0.02	0.3		0.10

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	3.18	6.74	0.472		0.36	0.86	12.1		0.28
A-BCD	0.13	10.24	0.013		0.01	0.01	0.2		0.10
D-ABC	0.71	7.44	0.095		0.07	0.10	1.5		0.15
C-ABD	0.54	9.77	0.055		0.02	0.06	0.9		0.11

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	1.56	6.62	0.235		0.86	0.31	5.0		0.20
A-BCD	0.19	11.14	0.017		0.01	0.02	0.3		0.09
D-ABC	0.57	8.12	0.070		0.10	0.08	1.2		0.13
C-ABD	0.26	9.03	0.029		0.06	0.03	0.5		0.11

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)
09.00-09.15									
B-ACD	0.99	7.87	0.126		0.31	0.15	2.3		0.15
A-BCD	0.08	11.35	0.007		0.02	0.01	0.1		0.09
D-ABC	0.00	8.77	0.000		0.08	0.00	0.0		0.00
C-ABD	0.20	10.44	0.019		0.03	0.02	0.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.9	*
09.00	0.3	
09.15	0.1	

QUEUE FOR STREAM A-BCD

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

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	117.8	117.8	24.5	0.21	24.5	0.21
A-BCD	7.0	7.0	0.7	0.09	0.7	0.09
D-ABC	27.7	27.7	3.7	0.13	3.7	0.13
C-ABD	18.1	18.1	1.9	0.11	1.9	0.11
ALL	688.0	688.0	30.8	0.04	30.8	0.04

* 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 Opposing	Slope For Opposing

I Stream B-C	Stream A-C	Stream A-B	I
I 642.82	0.25	0.10	I

D-A Stream

I Intercept For Slope For Opposing I Stream D-A	Stream C-A	Slope For Opposing Stream C-D	I
I 664.86	0.26	0.10	I

B-A Stream

I Intercept For Slope For Opposing I Stream B-A	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B	I
I 508.55	0.23	0.23	0.23	0.23	I

I Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	I
I 0.09	0.15	0.33	0.12	I

D-C Stream

I Intercept For Slope For Opposing I Stream D-C	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D	I
I 534.37	0.25	0.25	0.25	0.25	I

I Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A	I
I 0.10	0.15	0.35	0.12	I

C-B Stream

I Intercept For Slope For Opposing I Stream C-B	Stream A-C	Slope For Opposing Stream A-D	I
I 689.79	0.27	0.38	I

A-D Stream

I Intercept For Slope For Opposing I Stream A-D	Stream C-A	Slope For Opposing Stream C-B	I
I 718.74	0.27	0.40	I

B-D Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	I
I 0.15	0.15	I

B-D Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

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

D-B Stream From Left Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

.TRAFFIC DEMAND DATA

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

Demand set: 2026 am no development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME		TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S)			
	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.15	ARM A	0.000	0.232	0.748	0.021
		0.0	79.0	255.0	7.0
		(0.0)	(2.7)	(1.0)	(0.0)
	ARM B	0.686	0.000	0.297	0.017
		81.0	0.0	35.0	2.0
		(1.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.886	0.085	0.000	0.028
		187.0	18.0	0.0	6.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.464	0.071	0.464	0.000
		13.0	2.0	13.0	0.0
		(0.0)	(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 2026 am no development
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)
08.15-08.30									
B-ACD	2.12	7.80	0.272		0.00	0.37	5.2		0.17
A-BCD	0.07	11.23	0.007		0.00	0.01	0.1		0.09
D-ABC	0.57	8.66	0.066		0.00	0.07	1.0		0.12
C-ABD	0.22	10.52	0.021		0.00	0.02	0.3		0.10

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	3.18	6.72	0.473		0.37	0.87	12.1		0.28
A-BCD	0.13	10.21	0.013		0.01	0.01	0.2		0.10
D-ABC	0.71	7.40	0.096		0.07	0.10	1.5		0.15
C-ABD	0.52	9.77	0.054		0.02	0.06	0.9		0.11

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	1.56	6.60	0.236		0.87	0.31	5.0		0.20
A-BCD	0.19	11.09	0.017		0.01	0.02	0.3		0.09
D-ABC	0.57	8.07	0.071		0.10	0.08	1.2		0.13
C-ABD	0.26	9.03	0.029		0.06	0.03	0.5		0.11

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)
09.00-09.15									
B-ACD	0.99	7.86	0.126		0.31	0.15	2.3		0.15
A-BCD	0.08	11.31	0.007		0.02	0.01	0.1		0.09
D-ABC	0.00	8.73	0.000		0.08	0.00	0.0		0.00
C-ABD	0.20	10.44	0.019		0.03	0.02	0.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.9	*
09.00	0.3	
09.15	0.1	

QUEUE FOR STREAM A-BCD

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

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	0.0

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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	117.8	117.8	24.7	0.21	24.7	0.21
A-BCD	7.0	7.0	0.7	0.09	0.7	0.09
D-ABC	27.7	27.7	3.7	0.13	3.7	0.13
C-ABD	18.1	18.1	1.9	0.11	1.9	0.11
ALL	698.8	698.8	31.0	0.04	31.0	0.04

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

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

I	0.10	0.15	0.35	0.12	I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I 689.79	0.27	0.38	I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 718.74	0.27	0.40	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2026 am with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.15	ARM A	0.000	0.234	0.745	0.022
		0.0	85.0	271.0	8.0
		(0.0)	(2.7)	(1.0)	(0.0)
	ARM B	0.685	0.000	0.299	0.016
		87.0	0.0	38.0	2.0
		(1.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.880	0.088	0.000	0.032
		190.0	19.0	0.0	7.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.467	0.067	0.467	0.000
		14.0	2.0	14.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

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 2026 am with development
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)
08.15-08.30									
B-ACD	2.29	7.78	0.295		0.00	0.41	5.8		0.18
A-BCD	0.08	11.24	0.007		0.00	0.01	0.1		0.09
D-ABC	0.61	8.64	0.071		0.00	0.08	1.1		0.12
C-ABD	0.22	10.48	0.021		0.00	0.02	0.3		0.10

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	3.43	6.59	0.520		0.41	1.04	14.4		0.31
A-BCD	0.15	10.12	0.015		0.01	0.01	0.2		0.10
D-ABC	0.76	7.26	0.105		0.08	0.12	1.7		0.15
C-ABD	0.57	9.64	0.059		0.02	0.06	1.0		0.11

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	1.68	6.46	0.260		1.04	0.36	5.8		0.21
A-BCD	0.21	11.08	0.019		0.01	0.02	0.3		0.09
D-ABC	0.61	7.99	0.076		0.12	0.08	1.3		0.14
C-ABD	0.27	8.85	0.031		0.06	0.03	0.5		0.12

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)
09.00-09.15									
B-ACD	1.07	7.81	0.137		0.36	0.16	2.5		0.15
A-BCD	0.09	11.30	0.008		0.02	0.01	0.1		0.09
D-ABC	0.00	8.71	0.000		0.08	0.00	0.0		0.00
C-ABD	0.21	10.37	0.020		0.03	0.02	0.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	1.0	*
09.00	0.4	
09.15	0.2	

QUEUE FOR STREAM A-BCD

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

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	127.0	127.0	28.5	0.22	28.5	0.22
A-BCD	8.0	8.0	0.8	0.09	0.8	0.09
D-ABC	29.7	29.7	4.1	0.14	4.1	0.14
C-ABD	19.0	19.0	2.1	0.11	2.1	0.11
ALL	737.2	737.2	35.4	0.05	35.4	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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
689.79	0.27	0.38

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
718.74	0.27	0.40

B-D Stream From Left Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
508.55	0.23	0.23	0.09	0.33

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	0.15	0.15	I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
I 508.55	0.23	0.23	0.09	0.33

I Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing
I 0.15	0.15		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D
I 534.37	0.25	0.25	0.10	0.35

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing
I 0.15	0.15		I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
I 534.37	0.25	0.25	0.10	0.35

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing
I 0.15	0.15		I

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 am no development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

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TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
08.15 - 09.15	ARM A	0.000	0.233	0.745	0.022
		0.0	85.0	272.0	8.0
		(0.0)%	(2.7)%	(1.0)%	(0.0)%
	ARM B	0.685	0.000	0.299	0.016
		87.0	0.0	38.0	2.0
		(1.3)%	(0.0)%	(0.0)%	(0.0)%
	ARM C	0.885	0.084	0.000	0.031
		200.0	19.0	0.0	7.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%
	ARM D	0.467	0.067	0.467	0.000
		14.0	2.0	14.0	0.0
		(0.0)%	(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 2036 am no development
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)
08.15-08.30									
B-ACD	2.29	7.89	0.290		0.00	0.40	5.7		0.18
A-BCD	0.07	11.24	0.006		0.00	0.01	0.1		0.09
D-ABC	0.61	8.69	0.070		0.00	0.07	1.1		0.12
C-ABD	0.21	10.63	0.020		0.00	0.02	0.3		0.10

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	3.43	6.71	0.511		0.40	1.01	14.0		0.30
A-BCD	0.14	10.12	0.013		0.01	0.01	0.2		0.10
D-ABC	0.76	7.31	0.104		0.07	0.11	1.7		0.15
C-ABD	0.54	9.79	0.055		0.02	0.06	0.9		0.11

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	1.68	6.57	0.256		1.01	0.35	5.6		0.21
A-BCD	0.20	11.07	0.018		0.01	0.02	0.3		0.09
D-ABC	0.61	8.03	0.076		0.11	0.08	1.3		0.13
C-ABD	0.27	9.00	0.030		0.06	0.03	0.5		0.11

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)
09.00-09.15									
B-ACD	1.07	7.92	0.135		0.35	0.16	2.5		0.15
A-BCD	0.08	11.30	0.007		0.02	0.01	0.1		0.09
D-ABC	0.00	8.76	0.000		0.08	0.00	0.0		0.00
C-ABD	0.20	10.52	0.019		0.03	0.02	0.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	1.0	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM A-BCD

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

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	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-ACD	127.0	127.0	27.8	0.22	27.8	0.22
A-BCD	7.3	7.3	0.7	0.09	0.7	0.09
D-ABC	29.7	29.7	4.0	0.14	4.0	0.14
C-ABD	18.3	18.3	2.0	0.11	2.0	0.11
ALL	705.8	705.8	34.5	0.05	34.5	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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	664.86	0.26	0.10	I

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 508.55	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.15	0.33	0.12 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 534.37	0.25	0.25	0.25	0.25 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.10	0.15	0.35	0.12 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 689.79	0.27	0.38 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 718.74	0.27	0.40 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I

534.37	0.25	0.25	0.10	0.35	

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

.

.TRAFFIC DEMAND DATA

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

Demand set: 2036 am with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

.

		TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S)			
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.15	ARM A	0.000	0.233	0.745	0.022
		0.0	85.0	272.0	8.0
		(0.0)	(2.7)	(1.0)	(0.0)
	ARM B	0.685	0.000	0.299	0.016
		87.0	0.0	38.0	2.0
		(1.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.885	0.084	0.000	0.031
		200.0	19.0	0.0	7.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.467	0.067	0.467	0.000
		14.0	2.0	14.0	0.0
		(0.0)	(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 2036 am with development
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)
08.15-08.30									
B-ACD	2.29	7.74	0.296		0.00	0.41	5.9		0.18
A-BCD	0.08	11.19	0.007		0.00	0.01	0.1		0.09
D-ABC	0.61	8.59	0.071		0.00	0.08	1.1		0.13
C-ABD	0.23	10.46	0.022		0.00	0.02	0.3		0.10

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	3.43	6.57	0.522		0.41	1.05	14.5		0.31
A-BCD	0.15	10.08	0.015		0.01	0.01	0.2		0.10
D-ABC	0.76	7.22	0.105		0.08	0.12	1.7		0.15
C-ABD	0.55	9.65	0.057		0.02	0.06	0.9		0.11

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	1.68	6.44	0.261		1.05	0.36	5.8		0.21
A-BCD	0.21	11.03	0.019		0.01	0.02	0.3		0.09
D-ABC	0.61	7.94	0.077		0.12	0.08	1.3		0.14
C-ABD	0.28	8.85	0.031		0.06	0.03	0.5		0.12

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)
09.00-09.15									
B-ACD	1.07	7.79	0.137		0.36	0.16	2.5		0.15
A-BCD	0.09	11.27	0.008		0.02	0.01	0.1		0.09
D-ABC	0.00	8.67	0.000		0.08	0.00	0.0		0.00
C-ABD	0.21	10.37	0.020		0.03	0.02	0.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	1.0	*
09.00	0.4	
09.15	0.2	

QUEUE FOR STREAM A-BCD

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

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	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-ACD	127.0	127.0	28.6	0.23	28.6	0.23
A-BCD	8.0	8.0	0.8	0.09	0.8	0.09
D-ABC	29.7	29.7	4.1	0.14	4.1	0.14
C-ABD	19.0	19.0	2.1	0.11	2.1	0.11
ALL	748.2	748.2	35.6	0.05	35.6	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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

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

I	689.79	0.27	0.38	I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 718.74	0.27	0.40	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

.

.TRAFFIC DEMAND DATA

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

Demand set: 2036 am sensitivity test

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.15		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.222	0.756	0.022
		0.0	91.0	309.0	9.0
		(0.0)	(2.7)	(1.0)	(0.0)
	ARM B	0.684	0.000	0.301	0.015
		93.0	0.0	41.0	2.0
		(1.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.879	0.091	0.000	0.030
		203.0	21.0	0.0	7.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.469	0.063	0.469	0.000
		15.0	2.0	15.0	0.0
		(0.0)	(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 2036 am sensitivity test
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)
08.15-08.30									
B-ACD	2.46	7.60	0.324		0.00	0.47	6.7		0.19
A-BCD	0.09	11.13	0.008		0.00	0.01	0.1		0.09
D-ABC	0.66	8.48	0.078		0.00	0.08	1.2		0.13
C-ABD	0.27	10.33	0.026		0.00	0.03	0.4		0.10

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	3.69	6.31	0.585		0.47	1.33	18.1		0.37
A-BCD	0.17	9.92	0.017		0.01	0.02	0.3		0.10
D-ABC	0.82	6.98	0.118		0.08	0.13	1.9		0.16
C-ABD	0.65	9.43	0.069		0.03	0.08	1.1		0.11

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	1.80	6.17	0.292		1.33	0.42	6.9		0.24
A-BCD	0.23	10.94	0.021		0.02	0.02	0.3		0.09
D-ABC	0.66	7.75	0.085		0.13	0.09	1.4		0.14
C-ABD	0.33	8.58	0.038		0.08	0.04	0.6		0.12

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)
09.00-09.15									
B-ACD	1.15	7.64	0.150		0.42	0.18	2.8		0.15
A-BCD	0.10	11.22	0.009		0.02	0.01	0.1		0.09
D-ABC	0.00	8.58	0.000		0.09	0.00	0.0		0.00
C-ABD	0.24	10.21	0.023		0.04	0.02	0.4		0.10

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.5	
08.45	1.3	*
09.00	0.4	
09.15	0.2	

.

QUEUE FOR STREAM A-BCD

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

.

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

.

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.0
08.45	0.1
09.00	0.0
09.15	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-ACD	136.5	136.5	34.4	0.25	34.4	0.25
A-BCD	9.0	9.0	0.9	0.10	0.9	0.10
D-ABC	32.1	32.1	4.6	0.14	4.6	0.14
C-ABD	22.2	22.2	2.5	0.11	2.5	0.11
ALL	820.5	820.5	42.3	0.05	42.3	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

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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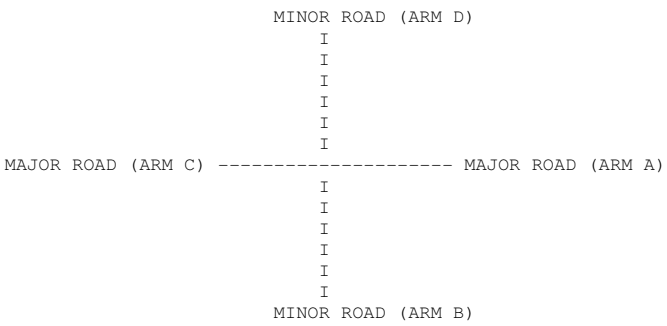
Run with file:-
"C:\PICADY\2017\17149-01\17149-02\North Junction\PM\PM Flows New.vpi"
(drive-on-the-left) at 16:29:43 on Tuesday, 27 November 2018

.RUN INFORMATION
****

RUN TITLE: Proposed Mixed Development
LOCATION: Gorey, Co. Wexford
DATE: 15/01/18
CLIENT: MArtin O'Looney
ENUMERATOR: Roadplan
JOB NUMBER: 17149-01
STATUS: TIA
DESCRIPTION:

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

INPUT DATA



ARM A IS Fort Rd (n)
ARM B IS Willow Park
ARM C IS Fort Rd (s)
ARM D IS Creagh Demesne

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) 6.00 M.	(W) 6.00 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) 250.0 M.
- BLOCKS TRAFFIC	YES	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.	(VD-A) 75.0 M.
- VISIBILITY TO RIGHT	(VB-A) 30.0 M.	(VD-C) 65.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 M.	(WD-A) 3.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
689.79	0.27	0.38

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
718.74	0.27	0.40

B-D Stream From Left Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
508.55	0.23	0.23	0.09	0.33

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

B-D Stream From Right Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
508.55	0.23	0.23	0.09	0.33

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

D-B Stream From Left Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2017 pm existing flows

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	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.380	0.597	0.023
		0.0	49.0	77.0	3.0
		(0.0)	(2.0)	(1.3)	(0.0)
	ARM B	0.545	0.000	0.436	0.018
		30.0	0.0	24.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.723	0.195	0.000	0.082
		141.0	38.0	0.0	16.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.538	0.077	0.385	0.000
		7.0	1.0	5.0	0.0
		(0.0)	(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 2017 pm existing flows
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	0.47	8.44	0.056		0.00	0.06	0.8		0.13
A-BCD	0.07	11.32	0.006		0.00	0.01	0.1		0.09
D-ABC	0.27	9.22	0.029		0.00	0.03	0.4		0.11
C-ABD	0.43	10.64	0.040		0.00	0.04	0.6		0.10

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	1.07	8.42	0.127		0.06	0.14	2.1		0.14
A-BCD	0.06	10.89	0.005		0.01	0.01	0.1		0.09
D-ABC	0.13	8.90	0.015		0.03	0.01	0.2		0.11
C-ABD	0.70	10.84	0.065		0.04	0.07	1.0		0.10

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	1.07	8.64	0.124		0.14	0.14	2.1		0.13
A-BCD	0.03	11.01	0.003		0.01	0.00	0.0		0.09
D-ABC	0.27	9.06	0.030		0.01	0.03	0.4		0.11
C-ABD	0.62	11.11	0.056		0.07	0.06	0.9		0.10

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	1.07	8.50	0.126		0.14	0.14	2.1		0.13
A-BCD	0.04	10.77	0.004		0.00	0.00	0.1		0.09
D-ABC	0.20	8.86	0.023		0.03	0.02	0.4		0.12
C-ABD	0.78	11.04	0.071		0.06	0.08	1.2		0.10

QUEUE FOR STREAM B-ACD

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

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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

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QUEUE FOR STREAM D-ABC

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

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QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.1

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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	55.2	55.2	7.2	0.13	7.2	0.13
A-BCD	3.0	3.0	0.3	0.09	0.3	0.09
D-ABC	13.1	13.1	1.5	0.11	1.5	0.11
C-ABD	38.0	38.0	3.7	0.10	3.7	0.10
ALL	392.3	392.3	12.7	0.03	12.7	0.03

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
689.79	0.27	0.38

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
718.74	0.27	0.40

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
508.55	0.23	0.23	0.09	0.33

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

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
508.55	0.23	0.23	0.09	0.33

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

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D

I 534.37	0.25	0.25	0.10	0.35	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 pm no development

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.

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TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00	ARM A	0.000	0.380	0.599	0.022
		0.0	52.0	82.0	3.0
		(0.0)	(2.0)	(1.3)	(0.0)
	ARM B	0.552	0.000	0.431	0.017
		32.0	0.0	25.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.725	0.193	0.000	0.082
		150.0	40.0	0.0	17.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.538	0.077	0.385	0.000
		7.0	1.0	5.0	0.0
		(0.0)	(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 2021 pm no development
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	0.50	8.37	0.060		0.00	0.06	0.9		0.13
A-BCD	0.07	11.27	0.006		0.00	0.01	0.1		0.09
D-ABC	0.28	9.17	0.031		0.00	0.03	0.5		0.11
C-ABD	0.45	10.58	0.043		0.00	0.04	0.7		0.10

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	1.13	8.35	0.135		0.06	0.15	2.2		0.14
A-BCD	0.06	10.83	0.005		0.01	0.01	0.1		0.09
D-ABC	0.14	8.84	0.016		0.03	0.02	0.3		0.11
C-ABD	0.74	10.80	0.068		0.04	0.07	1.1		0.10

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	1.13	8.58	0.132		0.15	0.15	2.3		0.13
A-BCD	0.03	10.95	0.003		0.01	0.00	0.0		0.09
D-ABC	0.28	9.00	0.031		0.02	0.03	0.5		0.11
C-ABD	0.66	11.09	0.059		0.07	0.06	1.0		0.10

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	1.13	8.43	0.134		0.15	0.15	2.3		0.14
A-BCD	0.04	10.70	0.004		0.00	0.00	0.1		0.09
D-ABC	0.21	8.79	0.024		0.03	0.02	0.4		0.12
C-ABD	0.82	11.01	0.075		0.06	0.08	1.2		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2

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-ABC

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	0.0
17.30	0.1
17.45	0.1
18.00	0.1

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	58.4	58.4	7.8	0.13	7.8	0.13
A-BCD	3.0	3.0	0.3	0.09	0.3	0.09
D-ABC	13.6	13.6	1.5	0.11	1.5	0.11
C-ABD	40.0	40.0	4.0	0.10	4.0	0.10
ALL	416.3	416.3	13.6	0.03	13.6	0.03

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

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

I	689.79	0.27	0.38	I

A-D Stream

I Intercept For Slope For Opposing I Stream A-D	Stream C-A	Slope For Opposing Stream C-B	I
I 718.74	0.27	0.40	I

B-D Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 pm with development

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	0.297	0.686	0.017
		0.0	52.0	120.0	3.0
		(0.0)%	(2.0)%	(1.3)%	(0.0)%
	ARM B	0.552	0.000	0.431	0.017
		32.0	0.0	25.0	1.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%
	ARM C	0.779	0.155	0.000	0.066
		201.0	40.0	0.0	17.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%
	ARM D	0.538	0.077	0.385	0.000
		7.0	1.0	5.0	0.0
		(0.0)%	(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 2021 pm with development
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	0.50	8.10	0.062		0.00	0.07	0.9		0.13
A-BCD	0.07	11.03	0.006		0.00	0.01	0.1		0.09
D-ABC	0.28	8.89	0.031		0.00	0.03	0.5		0.12
C-ABD	0.50	10.41	0.048		0.00	0.05	0.7		0.10

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	1.13	8.10	0.140		0.07	0.16	2.3		0.14
A-BCD	0.06	10.61	0.005		0.01	0.01	0.1		0.09
D-ABC	0.14	8.56	0.016		0.03	0.02	0.3		0.12
C-ABD	0.72	10.62	0.067		0.05	0.07	1.1		0.10

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	1.13	8.35	0.135		0.16	0.16	2.4		0.14
A-BCD	0.04	10.71	0.003		0.01	0.00	0.1		0.09
D-ABC	0.28	8.73	0.032		0.02	0.03	0.5		0.12
C-ABD	0.66	10.93	0.060		0.07	0.07	1.0		0.10

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	1.13	8.20	0.138		0.16	0.16	2.4		0.14
A-BCD	0.04	10.48	0.004		0.00	0.00	0.1		0.10
D-ABC	0.21	8.53	0.025		0.03	0.03	0.4		0.12
C-ABD	0.78	10.85	0.072		0.07	0.08	1.2		0.10

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2

.

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-ABC

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

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QUEUE FOR STREAM C-ABD

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	58.4	58.4	8.0	0.14	8.0	0.14
A-BCD	3.0	3.0	0.3	0.09	0.3	0.09
D-ABC	13.6	13.6	1.6	0.12	1.6	0.12
C-ABD	39.8	39.8	4.0	0.10	4.0	0.10
ALL	503.8	503.8	13.9	0.03	13.9	0.03

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	664.86	0.26	0.10	I

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 508.55	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.15	0.33	0.12 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 534.37	0.25	0.25	0.25	0.25 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.10	0.15	0.35	0.12 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 689.79	0.27	0.38 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 718.74	0.27	0.40 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I

534.37	0.25	0.25	0.10	0.35	

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
534.37	0.25	0.25	0.10	0.35

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2026 pm no development

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.

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		TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S)			
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00	ARM A	0.000	0.274	0.711	0.016
		0.0	52.0	135.0	3.0
		(0.0)	(2.0)	(1.3)	(0.0)
	ARM B	0.552	0.000	0.431	0.017
		32.0	0.0	25.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.787	0.149	0.000	0.063
		211.0	40.0	0.0	17.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.538	0.077	0.385	0.000
		7.0	1.0	5.0	0.0
		(0.0)	(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 2026 pm no development
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	0.50	8.00	0.062		0.00	0.07	1.0		0.13
A-BCD	0.07	10.97	0.006		0.00	0.01	0.1		0.09
D-ABC	0.28	8.81	0.032		0.00	0.03	0.5		0.12
C-ABD	0.51	10.33	0.049		0.00	0.05	0.8		0.10

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	1.13	8.01	0.141		0.07	0.16	2.4		0.15
A-BCD	0.05	10.55	0.005		0.01	0.01	0.1		0.10
D-ABC	0.14	8.48	0.017		0.03	0.02	0.3		0.12
C-ABD	0.72	10.55	0.068		0.05	0.07	1.1		0.10

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	1.13	8.27	0.137		0.16	0.16	2.4		0.14
A-BCD	0.04	10.67	0.003		0.01	0.00	0.1		0.09
D-ABC	0.28	8.67	0.032		0.02	0.03	0.5		0.12
C-ABD	0.66	10.85	0.061		0.07	0.07	1.0		0.10

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	1.13	8.13	0.139		0.16	0.16	2.4		0.14
A-BCD	0.04	10.42	0.004		0.00	0.00	0.1		0.10
D-ABC	0.21	8.45	0.025		0.03	0.03	0.4		0.12
C-ABD	0.78	10.79	0.073		0.07	0.08	1.2		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2

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-ABC

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	0.1
17.30	0.1
17.45	0.1
18.00	0.1

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	58.4	58.4	8.1	0.14	8.1	0.14
A-BCD	3.0	3.0	0.3	0.09	0.3	0.09
D-ABC	13.6	13.6	1.6	0.12	1.6	0.12
C-ABD	40.0	40.0	4.1	0.10	4.1	0.10
ALL	530.0	530.0	14.1	0.03	14.1	0.03

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.10	0.15	0.35	0.12

C-B Stream

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

I	689.79	0.27	0.38	I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 718.74	0.27	0.40	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2026 pm with development

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	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.303	0.681	0.016
		0.0	56.0	126.0	3.0
		(0.0)	(2.0)	(1.3)	(0.0)
	ARM B	0.548	0.000	0.435	0.016
		34.0	0.0	27.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.777	0.158	0.000	0.066
		212.0	43.0	0.0	18.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.533	0.067	0.400	0.000
		8.0	1.0	6.0	0.0
		(0.0)	(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 2026 pm with development
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	0.53	8.03	0.066		0.00	0.07	1.0		0.13
A-BCD	0.07	10.97	0.006		0.00	0.01	0.1		0.09
D-ABC	0.31	8.82	0.035		0.00	0.04	0.5		0.12
C-ABD	0.53	10.34	0.052		0.00	0.05	0.8		0.10

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	1.22	8.03	0.152		0.07	0.18	2.6		0.15
A-BCD	0.06	10.51	0.005		0.01	0.01	0.1		0.10
D-ABC	0.15	8.45	0.018		0.04	0.02	0.3		0.12
C-ABD	0.77	10.56	0.073		0.05	0.08	1.2		0.10

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	1.22	8.30	0.147		0.18	0.17	2.6		0.14
A-BCD	0.04	10.63	0.003		0.01	0.00	0.1		0.09
D-ABC	0.31	8.64	0.036		0.02	0.04	0.5		0.12
C-ABD	0.71	10.90	0.065		0.08	0.07	1.1		0.10

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	1.22	8.14	0.150		0.17	0.18	2.6		0.14
A-BCD	0.04	10.38	0.004		0.00	0.00	0.1		0.10
D-ABC	0.23	8.42	0.027		0.04	0.03	0.4		0.12
C-ABD	0.85	10.81	0.078		0.07	0.09	1.3		0.10

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2

.

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-ABC

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	0.1
17.30	0.1
17.45	0.1
18.00	0.1

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	62.8	62.8	8.8	0.14	8.8	0.14
A-BCD	3.0	3.0	0.3	0.10	0.3	0.10
D-ABC	15.0	15.0	1.8	0.12	1.8	0.12
C-ABD	43.0	43.0	4.4	0.10	4.4	0.10
ALL	536.6	536.6	15.3	0.03	15.3	0.03

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	664.86	0.26	0.10	I

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 508.55	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.15	0.33	0.12 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 534.37	0.25	0.25	0.25	0.25 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.10	0.15	0.35	0.12 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 689.79	0.27	0.38 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 718.74	0.27	0.40 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I

I 534.37	0.25	0.25	0.10	0.35	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 pm no development

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.

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I TIME	I FROM/TO	I TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	I
I 17.00 - 18.00	I ARM A	I 0.000	0.322	0.661	0.017	I
		I 0.0	56.0	115.0	3.0	I
		I (0.0)	(2.0)	(1.3)	(0.0)	I
	I ARM B	I 0.525	0.000	0.458	0.017	I
		I 31.0	0.0	27.0	1.0	I
		I (0.0)	(0.0)	(0.0)	(0.0)	I
	I ARM C	I 0.748	0.178	0.000	0.074	I
		I 181.0	43.0	0.0	18.0	I
		I (0.0)	(0.0)	(0.0)	(0.0)	I
	I ARM D	I 0.533	0.067	0.400	0.000	I
		I 8.0	1.0	6.0	0.0	I
		I (0.0)	(0.0)	(0.0)	(0.0)	I

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 2036 pm no development
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	0.53	8.20	0.065		0.00	0.07	1.0		0.13
A-BCD	0.07	11.12	0.006		0.00	0.01	0.1		0.09
D-ABC	0.31	8.97	0.035		0.00	0.04	0.5		0.12
C-ABD	0.51	10.39	0.049		0.00	0.05	0.8		0.10

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	1.22	8.19	0.149		0.07	0.17	2.5		0.14
A-BCD	0.06	10.64	0.005		0.01	0.01	0.1		0.09
D-ABC	0.15	8.60	0.017		0.04	0.02	0.3		0.12
C-ABD	0.79	10.62	0.074		0.05	0.08	1.2		0.10

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	1.22	8.45	0.144		0.17	0.17	2.6		0.14
A-BCD	0.04	10.78	0.003		0.01	0.00	0.1		0.09
D-ABC	0.31	8.79	0.035		0.02	0.04	0.5		0.12
C-ABD	0.71	10.93	0.065		0.08	0.07	1.1		0.10

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	1.22	8.30	0.147		0.17	0.17	2.6		0.14
A-BCD	0.04	10.51	0.004		0.00	0.00	0.1		0.10
D-ABC	0.23	8.56	0.027		0.04	0.03	0.4		0.12
C-ABD	0.87	10.87	0.080		0.07	0.09	1.3		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2

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-ABC

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	0.1
17.30	0.1
17.45	0.1
18.00	0.1

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	62.8	62.8	8.6	0.14	8.6	0.14
A-BCD	3.0	3.0	0.3	0.09	0.3	0.09
D-ABC	15.0	15.0	1.7	0.12	1.7	0.12
C-ABD	43.2	43.2	4.4	0.10	4.4	0.10
ALL	495.4	495.4	15.1	0.03	15.1	0.03

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
664.86	0.26	0.10

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
508.55	0.23	0.23	0.23	0.23

	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
	0.09	0.15	0.33	0.12

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
534.37	0.25	0.25	0.25	0.25

	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
	0.10	0.15	0.35	0.12

C-B Stream

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

I	689.79	0.27	0.38	I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 718.74	0.27	0.40	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 508.55	0.23	0.23	0.09	0.33	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 pm with development

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	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.280	0.705	0.015
		0.0	56.0	141.0	3.0
		(0.0)	(2.0)	(1.3)	(0.0)
	ARM B	0.548	0.000	0.435	0.016
		34.0	0.0	27.0	1.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.784	0.152	0.000	0.064
		222.0	43.0	0.0	18.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.533	0.067	0.400	0.000
		8.0	1.0	6.0	0.0
		(0.0)	(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 2036 pm with development
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	0.53	7.94	0.067		0.00	0.07	1.0		0.13
A-BCD	0.07	10.92	0.006		0.00	0.01	0.1		0.09
D-ABC	0.31	8.74	0.035		0.00	0.04	0.5		0.12
C-ABD	0.54	10.26	0.053		0.00	0.06	0.8		0.10

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	1.22	7.94	0.154		0.07	0.18	2.6		0.15
A-BCD	0.06	10.46	0.005		0.01	0.01	0.1		0.10
D-ABC	0.15	8.37	0.018		0.04	0.02	0.3		0.12
C-ABD	0.78	10.49	0.074		0.06	0.08	1.2		0.10

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	1.22	8.22	0.148		0.18	0.18	2.7		0.14
A-BCD	0.04	10.59	0.003		0.01	0.00	0.1		0.09
D-ABC	0.31	8.58	0.036		0.02	0.04	0.5		0.12
C-ABD	0.71	10.82	0.065		0.08	0.07	1.1		0.10

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	1.22	8.07	0.151		0.18	0.18	2.6		0.15
A-BCD	0.04	10.32	0.004		0.00	0.00	0.1		0.10
D-ABC	0.23	8.34	0.028		0.04	0.03	0.4		0.12
C-ABD	0.85	10.76	0.079		0.07	0.09	1.3		0.10

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2

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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

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QUEUE FOR STREAM D-ABC

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

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QUEUE FOR STREAM C-ABD

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

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	62.8	62.8	8.9	0.14	8.9	0.14
A-BCD	3.0	3.0	0.3	0.10	0.3	0.10
D-ABC	15.0	15.0	1.8	0.12	1.8	0.12
C-ABD	43.2	43.2	4.5	0.10	4.5	0.10
ALL	562.7	562.7	15.5	0.03	15.5	0.03

* 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 A-B
642.82	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	664.86	0.26	0.10	I

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 508.55	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.15	0.33	0.12 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 534.37	0.25	0.25	0.25	0.25 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.10	0.15	0.35	0.12 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 689.79	0.27	0.38 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 718.74	0.27	0.40 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 508.55	0.23	0.23	0.09	0.33 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.15	0.15		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I

I 534.37	0.25	0.25	0.10	0.35	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.15	0.15			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 534.37	0.25	0.25	0.10	0.35	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.15	0.15			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 pm sensitivity test

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.

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I TIME	I FROM/TO	I TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D	I
I 17.00 - 18.00	I ARM A	I 0.000	0.270	0.712	0.018	I
		I 0.0	60.0	158.0	4.0	I
		I (0.0)	(2.0)	(1.3)	(0.0)	I
	I ARM B	I 0.544	0.000	0.441	0.015	I
		I 37.0	0.0	30.0	1.0	I
		I (0.0)	(0.0)	(0.0)	(0.0)	I
	I ARM C	I 0.789	0.148	0.000	0.063	I
		I 251.0	47.0	0.0	20.0	I
		I (0.0)	(0.0)	(0.0)	(0.0)	I
	I ARM D	I 0.563	0.063	0.375	0.000	I
		I 9.0	1.0	6.0	0.0	I
		I (0.0)	(0.0)	(0.0)	(0.0)	I

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 2036 pm sensitivity test
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	0.57	7.79	0.073		0.00	0.08	1.1		0.14
A-BCD	0.09	10.78	0.008		0.00	0.01	0.1		0.09
D-ABC	0.33	8.67	0.038		0.00	0.04	0.6		0.12
C-ABD	0.60	10.13	0.059		0.00	0.06	0.9		0.10

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	1.31	7.79	0.168		0.08	0.20	2.9		0.15
A-BCD	0.07	10.27	0.007		0.01	0.01	0.1		0.10
D-ABC	0.16	8.26	0.019		0.04	0.02	0.3		0.12
C-ABD	0.85	10.38	0.082		0.06	0.09	1.4		0.10

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	1.31	8.09	0.162		0.20	0.19	2.9		0.15
A-BCD	0.05	10.42	0.005		0.01	0.00	0.1		0.10
D-ABC	0.33	8.48	0.039		0.02	0.04	0.6		0.12
C-ABD	0.78	10.73	0.073		0.09	0.08	1.2		0.10

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	1.31	7.97	0.164		0.19	0.20	2.9		0.15
A-BCD	0.05	10.16	0.005		0.00	0.01	0.1		0.10
D-ABC	0.25	8.27	0.030		0.04	0.03	0.5		0.12
C-ABD	0.90	10.70	0.085		0.08	0.10	1.4		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2

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-ABC

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	0.1
17.30	0.1
17.45	0.1
18.00	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	67.5	67.5	9.9	0.15	9.9	0.15
A-BCD	4.0	4.0	0.4	0.10	0.4	0.10
D-ABC	16.0	16.0	1.9	0.12	1.9	0.12
C-ABD	47.0	47.0	5.0	0.11	5.0	0.11
ALL	623.1	623.1	17.2	0.03	17.2	0.03

* 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

TRL LIMITED

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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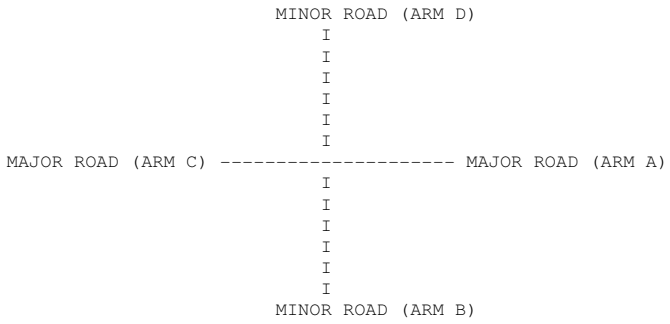
Run with file:- "C:\PICADY\2017\17149-01\17149-02\South Junction\AM\AM Flows.vpi" (drive-on-the-left) at 16:33:43 on Tuesday, 27 November 2018

.RUN INFORMATION
****

RUN TITLE: Proposed Mixed Development
LOCATION: Goery, Co. Wexford
DATE: 22/01/18
CLIENT: Martin O'Looney
ENUMERATOR: Roadplan
JOB NUMBER: 17149-01
STATUS: TIA
DESCRIPTION:

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

INPUT DATA



ARM A IS Fort Rd
ARM B IS Pearse St (east)
ARM C IS Johns Street
ARM D IS Pearse St (west)

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) 6.00 M.	(W) 6.00 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) 110.0 M.	(VA-D) 95.0 M.
- BLOCKS TRAFFIC	YES	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 20.0 M.	(VD-A) 20.0 M.
- VISIBILITY TO RIGHT	(VB-A) 15.0 M.	(VD-C) 15.0 M.
- LANE 1 WIDTH	(WB-C) 3.00 M.	(WD-A) 2.20 M.
- LANE 2 WIDTH	(WB-A) 0.00 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
637.67	0.25	0.35

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
628.98	0.25	0.35

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2017 Base Flows

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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
08.15 - 09.15	ARM A	0.000	0.567	0.000	0.433
		0.0	102.0	0.0	78.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.280	0.000	0.000	0.720
		7.0	0.0	0.0	18.0
		(0.0)	(0.0)	(0.0)	(5.6)
	ARM C	0.611	0.153	0.000	0.236
		96.0	24.0	0.0	37.0
		(2.1)	(0.0)	(0.0)	(0.0)
	ARM D	0.289	0.711	0.000	0.000
		44.0	108.0	0.0	0.0
		(2.3)	(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 2017 Base Flows
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)
08.15-08.30									
B-ACD	0.27	6.92	0.039		0.00	0.04	0.6		0.15
A-BCD	1.24	9.75	0.128		0.00	0.15	2.2		0.12
D-ABC	1.67	7.03	0.238		0.00	0.31	4.4		0.19
C-ABD	0.43	9.79	0.044		0.00	0.05	0.7		0.11

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	0.20	6.72	0.030		0.04	0.03	0.5		0.15
A-BCD	1.96	9.89	0.199		0.15	0.26	3.9		0.13
D-ABC	2.40	6.84	0.351		0.31	0.53	7.6		0.22
C-ABD	0.35	9.30	0.037		0.05	0.04	0.6		0.11

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	0.73	6.73	0.109		0.03	0.12	1.7		0.17
A-BCD	1.53	9.83	0.156		0.26	0.19	2.9		0.12
D-ABC	3.93	6.97	0.564		0.53	1.23	17.0		0.32
C-ABD	0.38	9.59	0.039		0.04	0.04	0.6		0.11

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)
09.00-09.15									
B-ACD	0.47	7.12	0.066		0.12	0.07	1.1		0.15
A-BCD	0.46	9.71	0.048		0.19	0.05	0.8		0.11
D-ABC	2.13	7.31	0.291		1.23	0.42	6.7		0.20
C-ABD	0.45	10.31	0.043		0.04	0.05	0.7		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.0	
08.45	0.0	
09.00	0.1	
09.15	0.1	

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QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.1	
08.45	0.3	
09.00	0.2	
09.15	0.1	

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QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.3	
08.45	0.5	*
09.00	1.2	*
09.15	0.4	

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QUEUE FOR STREAM C-ABD

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	25.1	25.1	3.9	0.16	3.9	0.16
A-BCD	78.0	78.0	9.7	0.12	9.7	0.12
D-ABC	151.9	151.9	35.6	0.23	35.7	0.23
C-ABD	24.0	24.0	2.6	0.11	2.6	0.11
ALL	514.0	514.0	51.8	0.10	51.8	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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
637.67	0.25	0.35

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
628.98	0.25	0.35

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D

452.12	0.21	0.21	0.08	0.30

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 no development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

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TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
08.15 - 09.15	ARM A	0.000	0.565	0.000	0.435
		0.0	108.0	0.0	83.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.269	0.000	0.000	0.731
		7.0	0.0	0.0	19.0
		(0.0)	(0.0)	(0.0)	(5.6)
	ARM C	0.614	0.151	0.000	0.235
		102.0	25.0	0.0	39.0
		(2.1)	(0.0)	(0.0)	(0.0)
	ARM D	0.290	0.710	0.000	0.000
		47.0	115.0	0.0	0.0
		(2.3)	(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 2021 no development
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)
08.15-08.30									
B-ACD	0.28	6.87	0.041		0.00	0.04	0.6		0.15
A-BCD	1.32	9.70	0.136		0.00	0.16	2.4		0.12
D-ABC	1.77	6.97	0.254		0.00	0.33	4.8		0.19
C-ABD	0.45	9.74	0.046		0.00	0.05	0.7		0.11

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	0.21	6.65	0.032		0.04	0.03	0.5		0.16
A-BCD	2.09	9.85	0.212		0.16	0.28	4.2		0.13
D-ABC	2.55	6.76	0.377		0.33	0.59	8.4		0.24
C-ABD	0.36	9.21	0.039		0.05	0.04	0.6		0.11

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	0.78	6.66	0.117		0.03	0.13	1.9		0.17
A-BCD	1.63	9.79	0.166		0.28	0.21	3.1		0.12
D-ABC	4.18	6.91	0.605		0.59	1.45	19.7		0.35
C-ABD	0.39	9.52	0.041		0.04	0.04	0.7		0.11

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)
09.00-09.15									
B-ACD	0.50	7.08	0.071		0.13	0.08	1.2		0.15
A-BCD	0.49	9.67	0.051		0.21	0.05	0.8		0.11
D-ABC	2.26	7.27	0.311		1.45	0.46	7.5		0.20
C-ABD	0.47	10.29	0.046		0.04	0.05	0.7		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.0	
08.45	0.0	
09.00	0.1	
09.15	0.1	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.2	
08.45	0.3	
09.00	0.2	
09.15	0.1	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.3	
08.45	0.6	*
09.00	1.4	*
09.15	0.5	

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
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)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-ACD	26.5	26.5	4.2	0.16	4.2	0.16
A-BCD	83.0	83.0	10.5	0.13	10.5	0.13
D-ABC	161.4	161.4	40.4	0.25	40.4	0.25
C-ABD	25.1	25.1	2.7	0.11	2.7	0.11
ALL	545.5	545.5	57.8	0.11	57.8	0.11

* 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

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

I				I
I	637.67	0.25	0.35	I

A-D Stream

I Intercept For Slope For Opposing I Stream A-D	Stream C-A	Slope For Opposing Stream C-B	I
I 628.98	0.25	0.35	I

B-D Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.15 - 09.15					
	ARM A	0.000	0.565	0.000	0.435
		0.0	130.0	0.0	100.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.296	0.000	0.000	0.704
		8.0	0.0	0.0	19.0
		(0.0)	(0.0)	(0.0)	(5.6)
	ARM C	0.636	0.142	0.000	0.222
		112.0	25.0	0.0	39.0
		(2.1)	(0.0)	(0.0)	(0.0)
	ARM D	0.307	0.693	0.000	0.000
		51.0	115.0	0.0	0.0
		(2.3)	(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 2021 with development
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)
08.15-08.30									
B-ACD	0.35	6.73	0.052		0.00	0.05	0.8		0.16
A-BCD	1.64	9.65	0.170		0.00	0.21	3.1		0.12
D-ABC	1.84	6.84	0.269		0.00	0.36	5.1		0.20
C-ABD	0.45	9.52	0.047		0.00	0.05	0.7		0.11

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	0.21	6.51	0.032		0.05	0.03	0.5		0.16
A-BCD	2.38	9.80	0.243		0.21	0.34	5.1		0.13
D-ABC	2.61	6.64	0.393		0.36	0.63	9.0		0.25
C-ABD	0.37	9.02	0.041		0.05	0.04	0.7		0.12

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	0.78	6.53	0.119		0.03	0.13	1.9		0.17
A-BCD	1.89	9.76	0.194		0.34	0.25	3.8		0.13
D-ABC	4.24	6.81	0.622		0.63	1.55	21.0		0.37
C-ABD	0.39	9.34	0.042		0.04	0.04	0.7		0.11

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)
09.00-09.15									
B-ACD	0.50	6.97	0.072		0.13	0.08	1.2		0.15
A-BCD	0.75	9.63	0.078		0.25	0.09	1.3		0.11
D-ABC	2.33	7.17	0.325		1.55	0.49	8.0		0.21
C-ABD	0.46	10.11	0.046		0.04	0.05	0.7		0.10

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.1	
08.45	0.0	
09.00	0.1	
09.15	0.1	

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QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.2	
08.45	0.3	
09.00	0.3	
09.15	0.1	

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QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.6	*
09.00	1.5	**
09.15	0.5	

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QUEUE FOR STREAM C-ABD

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	27.6	27.6	4.4	0.16	4.4	0.16
A-BCD	100.0	100.0	13.4	0.13	13.4	0.13
D-ABC	165.3	165.3	43.1	0.26	43.1	0.26
C-ABD	25.1	25.1	2.8	0.11	2.8	0.11
ALL	599.7	599.7	63.7	0.11	63.7	0.11

* 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	582.65	0.23	0.09	I

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 491.48	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.14	0.32	0.11 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 452.12	0.21	0.21	0.21	0.21 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.08	0.13	0.30	0.10 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 637.67	0.25	0.35 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 628.98	0.25	0.35 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 491.48	0.23	0.23	0.09	0.32 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 491.48	0.23	0.23	0.09	0.32 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I

I 452.12	0.21	0.21	0.08	0.30	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2026 no development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

.

I	I	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
I TIME	I FROM/TO I	ARM A I	ARM B I	ARM C I	ARM D I
I 08.15 - 09.15	I	I	I	I	I
I	I ARM A	I 0.000	I 0.563	I 0.000	I 0.437 I
I	I	I 0.0	I 130.0	I 0.0	I 101.0 I
I	I	I (0.0)	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I	I
I	I ARM B	I 0.321	I 0.000	I 0.000	I 0.679 I
I	I	I 9.0	I 0.0	I 0.0	I 19.0 I
I	I	I (0.0)	I (0.0)	I (0.0)	I (5.6) I
I	I	I	I	I	I
I	I ARM C	I 0.644	I 0.139	I 0.000	I 0.217 I
I	I	I 116.0	I 25.0	I 0.0	I 39.0 I
I	I	I (2.1)	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I	I
I	I ARM D	I 0.324	I 0.676	I 0.000	I 0.000 I
I	I	I 55.0	I 115.0	I 0.0	I 0.0 I
I	I	I (2.3)	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I	I

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 2026 no development
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)
08.15-08.30									
B-ACD	0.42	6.70	0.063		0.00	0.07	1.0		0.16
A-BCD	1.65	9.62	0.172		0.00	0.21	3.2		0.13
D-ABC	1.97	6.85	0.288		0.00	0.40	5.6		0.20
C-ABD	0.46	9.52	0.048		0.00	0.05	0.8		0.11

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	0.21	6.49	0.032		0.07	0.03	0.5		0.16
A-BCD	2.43	9.80	0.248		0.21	0.35	5.2		0.14
D-ABC	2.68	6.67	0.402		0.40	0.65	9.3		0.25
C-ABD	0.36	8.99	0.040		0.05	0.04	0.6		0.12

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	0.78	6.49	0.120		0.03	0.13	1.9		0.17
A-BCD	1.93	9.74	0.198		0.35	0.26	3.9		0.13
D-ABC	4.31	6.82	0.632		0.65	1.61	21.7		0.38
C-ABD	0.39	9.32	0.042		0.04	0.04	0.7		0.11

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)
09.00-09.15									
B-ACD	0.50	6.97	0.072		0.13	0.08	1.2		0.15
A-BCD	0.73	9.62	0.076		0.26	0.08	1.3		0.11
D-ABC	2.33	7.20	0.324		1.61	0.49	8.0		0.21
C-ABD	0.46	10.13	0.045		0.04	0.05	0.7		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.1	
08.45	0.0	
09.00	0.1	
09.15	0.1	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.2	
08.45	0.4	
09.00	0.3	
09.15	0.1	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.7	*
09.00	1.6	**
09.15	0.5	

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.0
09.00	0.0
09.15	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-ACD	28.6	28.6	4.6	0.16	4.6	0.16
A-BCD	101.1	101.1	13.6	0.13	13.6	0.13
D-ABC	169.4	169.4	44.6	0.26	44.6	0.26
C-ABD	25.1	25.1	2.8	0.11	2.8	0.11
ALL	610.0	610.0	65.6	0.11	65.7	0.11

* 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

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

I	637.67	0.25	0.35 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 628.98	0.25	0.35	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2026 with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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
08.15 - 09.15	ARM A	0.000	0.567	0.000	0.433
		0.0	139.0	0.0	106.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.300	0.000	0.000	0.700
		9.0	0.0	0.0	21.0
		(0.0)	(0.0)	(0.0)	(5.6)
	ARM C	0.633	0.144	0.000	0.223
		119.0	27.0	0.0	42.0
		(2.1)	(0.0)	(0.0)	(0.0)
	ARM D	0.303	0.697	0.000	0.000
		54.0	124.0	0.0	0.0
		(2.3)	(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 2026 with development
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)
08.15-08.30									
B-ACD	0.37	6.65	0.056		0.00	0.06	0.8		0.16
A-BCD	1.73	9.59	0.181		0.00	0.23	3.4		0.13
D-ABC	1.97	6.75	0.292		0.00	0.40	5.7		0.21
C-ABD	0.49	9.45	0.052		0.00	0.05	0.8		0.11

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	0.23	6.43	0.036		0.06	0.04	0.6		0.16
A-BCD	2.53	9.77	0.259		0.23	0.38	5.6		0.14
D-ABC	2.81	6.55	0.429		0.40	0.73	10.3		0.26
C-ABD	0.39	8.91	0.044		0.05	0.05	0.7		0.12

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	0.84	6.43	0.131		0.04	0.15	2.1		0.18
A-BCD	2.01	9.71	0.207		0.38	0.28	4.2		0.13
D-ABC	4.57	6.72	0.680		0.73	1.95	25.9		0.43
C-ABD	0.42	9.26	0.046		0.05	0.05	0.7		0.11

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)
09.00-09.15									
B-ACD	0.53	6.90	0.077		0.15	0.08	1.3		0.16
A-BCD	0.79	9.57	0.082		0.28	0.09	1.4		0.11
D-ABC	2.51	7.10	0.353		1.95	0.56	9.3		0.23
C-ABD	0.50	10.09	0.050		0.05	0.05	0.8		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.0
09.00	0.1
09.15	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.2
08.45	0.4
09.00	0.3
09.15	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.7	*
09.00	2.0	**
09.15	0.6	*

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.0
09.00	0.0
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	29.5	29.5	4.9	0.16	4.9	0.16
A-BCD	105.9	105.9	14.6	0.14	14.6	0.14
D-ABC	177.9	177.9	51.2	0.29	51.2	0.29
C-ABD	27.1	27.1	3.0	0.11	3.0	0.11
ALL	640.8	640.8	73.7	0.11	73.7	0.11

* 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 Opposing	Slope For Opposing

I Stream B-C	Stream A-C	Stream A-B	I
I 633.38	0.25	0.10	I

D-A Stream

I Intercept For Slope For Opposing I Stream D-A	Stream C-A	Slope For Opposing Stream C-D	I
I 582.65	0.23	0.09	I

B-A Stream

I Intercept For Slope For Opposing I Stream B-A	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B	I
I 491.48	0.23	0.23	0.23	0.23	I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	I
I	0.09	0.14	0.32	0.11	I

D-C Stream

I Intercept For Slope For Opposing I Stream D-C	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D	I
I 452.12	0.21	0.21	0.21	0.21	I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A	I
I	0.08	0.13	0.30	0.10	I

C-B Stream

I Intercept For Slope For Opposing I Stream C-B	Stream A-C	Slope For Opposing Stream A-D	I
I 637.67	0.25	0.35	I

A-D Stream

I Intercept For Slope For Opposing I Stream A-D	Stream C-A	Slope For Opposing Stream C-B	I
I 628.98	0.25	0.35	I

B-D Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	I
I	0.14	0.14	I

B-D Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

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

D-B Stream From Left Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 no development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

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TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
08.15 - 09.15	ARM A	0.000	0.565	0.000	0.435
		0.0	139.0	0.0	107.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.323	0.000	0.000	0.677
		10.0	0.0	0.0	21.0
		(0.0)	(0.0)	(0.0)	(5.6)
	ARM C	0.642	0.140	0.000	0.218
		124.0	27.0	0.0	42.0
		(2.1)	(0.0)	(0.0)	(0.0)
	ARM D	0.319	0.681	0.000	0.000
		58.0	124.0	0.0	0.0
		(2.3)	(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 2036 no development
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)
08.15-08.30									
B-ACD	0.37	6.74	0.055		0.00	0.06	0.8		0.16
A-BCD	1.48	9.59	0.155		0.00	0.19	2.8		0.12
D-ABC	2.04	6.89	0.296		0.00	0.41	5.8		0.20
C-ABD	0.48	9.63	0.049		0.00	0.05	0.8		0.11

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	0.23	6.50	0.035		0.06	0.04	0.6		0.16
A-BCD	2.31	9.77	0.237		0.19	0.33	4.9		0.13
D-ABC	2.81	6.68	0.421		0.41	0.71	10.0		0.26
C-ABD	0.38	9.06	0.042		0.05	0.04	0.7		0.12

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	0.84	6.49	0.129		0.04	0.15	2.1		0.18
A-BCD	1.82	9.71	0.187		0.33	0.24	3.7		0.13
D-ABC	4.57	6.83	0.669		0.71	1.87	24.9		0.41
C-ABD	0.41	9.39	0.044		0.04	0.05	0.7		0.11

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)
09.00-09.15									
B-ACD	0.53	6.98	0.076		0.15	0.08	1.3		0.16
A-BCD	0.56	9.57	0.059		0.24	0.06	1.0		0.11
D-ABC	2.51	7.22	0.348		1.87	0.54	9.0		0.22
C-ABD	0.49	10.24	0.048		0.05	0.05	0.8		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.1	
08.45	0.0	
09.00	0.1	
09.15	0.1	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.2	
08.45	0.3	
09.00	0.2	
09.15	0.1	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.7	*
09.00	1.9	**
09.15	0.5	*

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.0
09.00	0.0
09.15	0.1

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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	29.5	29.5	4.8	0.16	4.8	0.16
A-BCD	92.6	92.6	12.3	0.13	12.3	0.13
D-ABC	178.9	178.9	49.7	0.28	49.8	0.28
C-ABD	26.4	26.4	2.9	0.11	2.9	0.11
ALL	610.0	610.0	69.7	0.11	69.8	0.11

* 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

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

I	0.08	0.13	0.30	0.10	I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	I
I 637.67	0.25	0.35	I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 628.98	0.25	0.35	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 with development

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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
08.15 - 09.15	ARM A	0.000	0.565	0.000	0.435
		0.0	139.0	0.0	107.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.323	0.000	0.000	0.677
		10.0	0.0	0.0	21.0
		(0.0)	(0.0)	(0.0)	(5.6)
	ARM C	0.642	0.140	0.000	0.218
		124.0	27.0	0.0	42.0
		(2.1)	(0.0)	(0.0)	(0.0)
	ARM D	0.319	0.681	0.000	0.000
		58.0	124.0	0.0	0.0
		(2.3)	(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 2036 with development
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)
08.15-08.30									
B-ACD	0.44	6.62	0.066		0.00	0.07	1.0		0.16
A-BCD	1.74	9.56	0.183		0.00	0.23	3.4		0.13
D-ABC	2.11	6.76	0.312		0.00	0.44	6.3		0.21
C-ABD	0.50	9.45	0.052		0.00	0.06	0.8		0.11

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	0.23	6.40	0.036		0.07	0.04	0.6		0.16
A-BCD	2.57	9.75	0.264		0.23	0.39	5.8		0.14
D-ABC	2.88	6.56	0.439		0.44	0.76	10.7		0.27
C-ABD	0.39	8.89	0.044		0.06	0.05	0.7		0.12

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	0.84	6.39	0.131		0.04	0.15	2.1		0.18
A-BCD	2.05	9.69	0.211		0.39	0.29	4.3		0.13
D-ABC	4.63	6.73	0.688		0.76	2.02	26.7		0.44
C-ABD	0.42	9.24	0.046		0.05	0.05	0.7		0.11

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)
09.00-09.15									
B-ACD	0.53	6.90	0.077		0.15	0.08	1.3		0.16
A-BCD	0.76	9.55	0.080		0.29	0.09	1.3		0.11
D-ABC	2.51	7.13	0.352		2.02	0.56	9.2		0.23
C-ABD	0.50	10.11	0.049		0.05	0.05	0.8		0.10

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.1	
08.45	0.0	
09.00	0.1	
09.15	0.1	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.2	
08.45	0.4	
09.00	0.3	
09.15	0.1	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.4	
08.45	0.8	*
09.00	2.0	**
09.15	0.6	*

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.0
09.00	0.0
09.15	0.1

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	30.6	30.6	5.1	0.17	5.1	0.17
A-BCD	106.9	106.9	14.8	0.14	14.8	0.14
D-ABC	182.0	182.0	53.0	0.29	53.0	0.29
C-ABD	27.1	27.1	3.0	0.11	3.0	0.11
ALL	652.1	652.1	75.9	0.12	75.9	0.12

* 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
637.67	0.25	0.35

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
628.98	0.25	0.35

B-D Stream From Left Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	0.14	0.14		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 sensitivity test

TIME PERIOD BEGINS 08.15 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

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TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
08.15 - 09.15	ARM A	0.000	0.565	0.000	0.435
		0.0	134.0	0.0	103.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.290	0.000	0.000	0.710
		9.0	0.0	0.0	22.0
		(0.0)	(0.0)	(0.0)	(5.6)
	ARM C	0.615	0.154	0.000	0.231
		120.0	30.0	0.0	45.0
		(2.1)	(0.0)	(0.0)	(0.0)
	ARM D	0.293	0.707	0.000	0.000
		55.0	133.0	0.0	0.0
		(2.3)	(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 2036 sensitivity test
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)
08.15-08.30									
B-ACD	0.46	6.46	0.071		0.00	0.08	1.1		0.17
A-BCD	2.05	9.47	0.217		0.00	0.29	4.3		0.13
D-ABC	2.25	6.52	0.345		0.00	0.51	7.2		0.23
C-ABD	0.59	9.24	0.064		0.00	0.07	1.0		0.12

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	0.25	6.22	0.040		0.08	0.04	0.7		0.17
A-BCD	2.92	9.66	0.302		0.29	0.48	7.1		0.15
D-ABC	3.08	6.29	0.489		0.51	0.92	12.9		0.31
C-ABD	0.48	8.65	0.055		0.07	0.06	0.9		0.12

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	0.90	6.28	0.143		0.04	0.16	2.4		0.19
A-BCD	2.26	9.63	0.235		0.48	0.33	5.0		0.14
D-ABC	4.90	6.54	0.749		0.92	2.62	33.6		0.54
C-ABD	0.50	9.09	0.055		0.06	0.06	0.9		0.12

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)
09.00-09.15									
B-ACD	0.57	6.80	0.084		0.16	0.09	1.4		0.16
A-BCD	0.89	9.48	0.094		0.33	0.11	1.6		0.12
D-ABC	2.69	6.99	0.385		2.62	0.64	11.0		0.25
C-ABD	0.59	10.02	0.058		0.06	0.06	0.9		0.11

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.1	
08.45	0.0	
09.00	0.2	
09.15	0.1	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.3	
08.45	0.5	
09.00	0.3	
09.15	0.1	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.30	0.5	*
08.45	0.9	*
09.00	2.6	***
09.15	0.6	*

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	32.7	32.7	5.6	0.17	5.6	0.17
A-BCD	121.8	121.8	18.0	0.15	18.0	0.15
D-ABC	193.8	193.8	64.7	0.33	64.8	0.33
C-ABD	32.3	32.3	3.8	0.12	3.8	0.12
ALL	716.7	716.7	92.1	0.13	92.1	0.13

* 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

TRL LIMITED

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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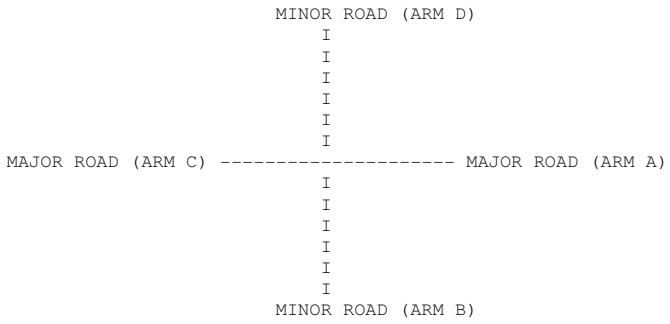
Run with file:- "C:\PICADY\2017\17149-01\17149-02\South Junction\PM\PM Flows.vpi" (drive-on-the-left) at 16:49:06 on Tuesday, 27 November 2018

.RUN INFORMATION
****

RUN TITLE: Proposed Mixed Development
LOCATION: Goery, Co. Wexford
DATE: 22/01/18
CLIENT: Martin O'Looney
ENUMERATOR: Roadplan
JOB NUMBER: 17149-01
STATUS: TIA
DESCRIPTION:

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

INPUT DATA



ARM A IS Fort Rd
ARM B IS Pearse St (east)
ARM C IS Johns Street
ARM D IS Pearse St (west)

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)	6.00 M.	(W)	6.00 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)	110.0 M.	(VA-D)	95.0 M.
- BLOCKS TRAFFIC		YES		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	20.0 M.	(VD-A)	20.0 M.
- VISIBILITY TO RIGHT	(VB-A)	15.0 M.	(VD-C)	15.0 M.
- LANE 1 WIDTH	(WB-C)	3.00 M.	(WD-A)	2.20 M.
- LANE 2 WIDTH	(WB-A)	0.00 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
637.67	0.25	0.35

A-D Stream

Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
628.98	0.25	0.35

B-D Stream From Left Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

B-D Stream From Right Hand Lane

Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

D-B Stream From Left Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2017 Base Flows

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	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.552	0.000	0.448
		0.0	58.0	0.0	47.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM B	0.304	0.000	0.000	0.696
		14.0	0.0	0.0	32.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.428	0.191	0.000	0.381
		83.0	37.0	0.0	74.0
		(1.2)	(0.0)	(0.0)	(0.0)
	ARM D	0.526	0.474	0.000	0.000
		81.0	73.0	0.0	0.0
		(0.0)	(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 2017 Base Flows
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	1.13	7.18	0.157		0.00	0.18	2.6		0.16
A-BCD	1.07	9.49	0.113		0.00	0.13	1.9		0.12
D-ABC	2.33	7.76	0.300		0.00	0.42	6.0		0.18
C-ABD	0.57	9.91	0.058		0.00	0.06	0.9		0.11

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	0.47	7.13	0.066		0.18	0.07	1.1		0.15
A-BCD	0.86	9.37	0.092		0.13	0.10	1.6		0.12
D-ABC	2.80	7.75	0.361		0.42	0.55	8.0		0.20
C-ABD	0.66	10.05	0.066		0.06	0.07	1.1		0.11

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	0.80	7.33	0.109		0.07	0.12	1.8		0.15
A-BCD	0.51	9.49	0.053		0.10	0.06	0.9		0.11
D-ABC	2.80	7.93	0.353		0.55	0.55	8.3		0.19
C-ABD	0.57	10.29	0.056		0.07	0.06	0.9		0.10

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	0.67	7.23	0.093		0.12	0.10	1.6		0.15
A-BCD	0.68	9.37	0.073		0.06	0.08	1.2		0.12
D-ABC	2.33	7.81	0.298		0.55	0.43	6.7		0.18
C-ABD	0.66	10.17	0.065		0.06	0.07	1.1		0.11

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.1	
17.45	0.1	
18.00	0.1	

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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	

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QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	

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QUEUE FOR STREAM C-ABD

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	46.0	46.0	7.1	0.15	7.1	0.15
A-BCD	46.9	46.9	5.5	0.12	5.5	0.12
D-ABC	153.9	153.9	29.0	0.19	29.0	0.19
C-ABD	37.0	37.0	3.9	0.11	3.9	0.11
ALL	498.9	498.9	45.5	0.09	45.6	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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
637.67	0.25	0.35

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
628.98	0.25	0.35

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
491.48	0.23	0.23	0.09	0.32

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

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D

452.12	0.21	0.21	0.08	0.30

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 no development

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.

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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	0.554	0.000	0.446
		0.0	62.0	0.0	50.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM B	0.306	0.000	0.000	0.694
		15.0	0.0	0.0	34.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.427	0.189	0.000	0.383
		88.0	39.0	0.0	79.0
		(1.2)	(0.0)	(0.0)	(0.0)
	ARM D	0.528	0.472	0.000	0.000
		86.0	77.0	0.0	0.0
		(0.0)	(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 2021 no development
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	1.20	7.11	0.169		0.00	0.20	2.9		0.17
A-BCD	1.14	9.44	0.121		0.00	0.14	2.1		0.12
D-ABC	2.48	7.72	0.321		0.00	0.46	6.6		0.19
C-ABD	0.60	9.87	0.061		0.00	0.07	1.0		0.11

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	0.50	7.07	0.071		0.20	0.08	1.2		0.15
A-BCD	0.92	9.31	0.098		0.14	0.11	1.7		0.12
D-ABC	2.97	7.71	0.385		0.46	0.61	8.9		0.21
C-ABD	0.70	10.01	0.070		0.07	0.08	1.1		0.11

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	0.85	7.28	0.117		0.08	0.13	1.9		0.16
A-BCD	0.54	9.44	0.057		0.11	0.06	0.9		0.11
D-ABC	2.97	7.90	0.376		0.61	0.61	9.2		0.20
C-ABD	0.60	10.27	0.059		0.08	0.06	1.0		0.10

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	0.71	7.17	0.099		0.13	0.11	1.7		0.15
A-BCD	0.73	9.31	0.078		0.06	0.08	1.3		0.12
D-ABC	2.48	7.77	0.319		0.61	0.48	7.4		0.19
C-ABD	0.70	10.14	0.069		0.06	0.07	1.1		0.11

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.1	
17.45	0.1	
18.00	0.1	

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	0.5	
17.30	0.6	*
17.45	0.6	*
18.00	0.5	

QUEUE FOR STREAM C-ABD

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

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	48.9	48.9	7.7	0.16	7.7	0.16
A-BCD	49.8	49.8	5.9	0.12	5.9	0.12
D-ABC	163.5	163.5	32.0	0.20	32.0	0.20
C-ABD	39.0	39.0	4.2	0.11	4.2	0.11
ALL	529.7	529.7	49.8	0.09	49.8	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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

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

I				I
I	637.67	0.25	0.35	I

A-D Stream

I Intercept For Slope For Opposing I Stream A-D	Stream C-A	Slope For Opposing Stream C-B	I
I 628.98	0.25	0.35	I

B-D Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream B-D	Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Slope For Opposing I Stream D-B	Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2021 with development

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	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.556	0.000	0.444
		0.0	84.0	0.0	67.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM B	0.370	0.000	0.000	0.630
		20.0	0.0	0.0	34.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.489	0.169	0.000	0.342
		113.0	39.0	0.0	79.0
		(1.2)	(0.0)	(0.0)	(0.0)
	ARM D	0.586	0.414	0.000	0.000
		109.0	77.0	0.0	0.0
		(0.0)	(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 2021 with development
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	1.34	6.87	0.195		0.00	0.24	3.4		0.18
A-BCD	1.46	9.33	0.156		0.00	0.19	2.8		0.13
D-ABC	2.88	7.69	0.374		0.00	0.59	8.3		0.20
C-ABD	0.62	9.65	0.064		0.00	0.07	1.0		0.11

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	0.56	6.84	0.082		0.24	0.09	1.4		0.16
A-BCD	1.21	9.22	0.131		0.19	0.16	2.3		0.12
D-ABC	3.37	7.69	0.438		0.59	0.76	11.0		0.23
C-ABD	0.69	9.81	0.070		0.07	0.08	1.2		0.11

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	0.92	7.06	0.130		0.09	0.15	2.2		0.16
A-BCD	0.80	9.34	0.085		0.16	0.10	1.4		0.12
D-ABC	3.37	7.89	0.427		0.76	0.75	11.4		0.22
C-ABD	0.60	10.09	0.060		0.08	0.07	1.0		0.11

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	0.77	6.97	0.111		0.15	0.13	1.9		0.16
A-BCD	0.99	9.22	0.107		0.10	0.12	1.8		0.12
D-ABC	2.81	7.75	0.362		0.75	0.58	9.0		0.20
C-ABD	0.69	9.96	0.069		0.07	0.08	1.1		0.11

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.1	
17.45	0.1	
18.00	0.1	

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QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.2	
17.45	0.1	
18.00	0.1	

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QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*

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QUEUE FOR STREAM C-ABD

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	53.8	53.8	8.9	0.17	8.9	0.17
A-BCD	66.8	66.8	8.4	0.13	8.4	0.13
D-ABC	186.4	186.4	39.6	0.21	39.6	0.21
C-ABD	39.0	39.0	4.3	0.11	4.3	0.11
ALL	621.6	621.6	61.2	0.10	61.2	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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	582.65	0.23	0.09	I

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 491.48	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.14	0.32	0.11 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 452.12	0.21	0.21	0.21	0.21 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.08	0.13	0.30	0.10 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 637.67	0.25	0.35 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 628.98	0.25	0.35 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 491.48	0.23	0.23	0.09	0.32 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 491.48	0.23	0.23	0.09	0.32 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I

I 452.12	0.21	0.21	0.08	0.30	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I 0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2026 no development

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.

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I	I	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S)			
I TIME	I FROM/TO I	ARM A I	ARM B I	ARM C I	ARM D I
I 17.00 - 18.00	I	I	I	I	I
I	I ARM A	I 0.000	I 0.552	I 0.000	I 0.448 I
I	I	I 0.0	I 91.0	I 0.0	I 74.0 I
I	I	I (0.0)	I (0.0)	I (0.0)	I (2.1) I
I	I	I	I	I	I
I	I ARM B	I 0.370	I 0.000	I 0.000	I 0.630 I
I	I	I 20.0	I 0.0	I 0.0	I 34.0 I
I	I	I (0.0)	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I	I
I	I ARM C	I 0.496	I 0.167	I 0.000	I 0.338 I
I	I	I 116.0	I 39.0	I 0.0	I 79.0 I
I	I	I (1.2)	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I	I
I	I ARM D	I 0.597	I 0.403	I 0.000	I 0.000 I
I	I	I 114.0	I 77.0	I 0.0	I 0.0 I
I	I	I (0.0)	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I	I

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 2026 no development
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	1.34	6.86	0.195		0.00	0.24	3.4		0.18
A-BCD	1.56	9.35	0.167		0.00	0.21	3.0		0.13
D-ABC	2.81	7.71	0.365		0.00	0.56	7.9		0.20
C-ABD	0.60	9.59	0.062		0.00	0.07	1.0		0.11

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	0.56	6.84	0.082		0.24	0.09	1.4		0.16
A-BCD	1.34	9.25	0.145		0.21	0.18	2.6		0.13
D-ABC	3.17	7.70	0.411		0.56	0.68	9.9		0.22
C-ABD	0.66	9.73	0.068		0.07	0.07	1.1		0.11

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	0.85	7.05	0.120		0.09	0.14	2.0		0.16
A-BCD	0.93	9.38	0.099		0.18	0.11	1.7		0.12
D-ABC	3.17	7.90	0.401		0.68	0.68	10.2		0.21
C-ABD	0.58	10.01	0.057		0.07	0.06	0.9		0.11

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	0.71	6.97	0.102		0.14	0.11	1.8		0.16
A-BCD	1.09	9.25	0.118		0.11	0.13	2.0		0.12
D-ABC	2.68	7.78	0.345		0.68	0.54	8.3		0.20
C-ABD	0.66	9.90	0.066		0.06	0.07	1.1		0.11

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.1	
17.45	0.1	
18.00	0.1	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.2	
17.45	0.1	
18.00	0.1	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.7	*
17.45	0.7	*
18.00	0.5	*

QUEUE FOR STREAM C-ABD

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

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	51.9	51.9	8.6	0.16	8.6	0.17
A-BCD	73.8	73.8	9.4	0.13	9.4	0.13
D-ABC	177.4	177.4	36.4	0.20	36.4	0.21
C-ABD	37.3	37.3	4.1	0.11	4.1	0.11
ALL	617.9	617.9	58.4	0.09	58.5	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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

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

I	637.67	0.25	0.35	I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 628.98	0.25	0.35	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2026 with development

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	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.553	0.000	0.447
		0.0	88.0	0.0	71.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM B	0.362	0.000	0.000	0.638
		21.0	0.0	0.0	37.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.486	0.170	0.000	0.344
		120.0	42.0	0.0	85.0
		(1.2)	(0.0)	(0.0)	(0.0)
	ARM D	0.580	0.420	0.000	0.000
		116.0	84.0	0.0	0.0
		(0.0)	(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 2026 with development
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	1.43	6.79	0.211		0.00	0.26	3.7		0.19
A-BCD	1.55	9.26	0.168		0.00	0.21	3.1		0.13
D-ABC	3.07	7.61	0.404		0.00	0.66	9.3		0.22
C-ABD	0.66	9.59	0.069		0.00	0.08	1.1		0.11

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	0.60	6.75	0.089		0.26	0.10	1.5		0.16
A-BCD	1.29	9.14	0.141		0.21	0.17	2.5		0.13
D-ABC	3.60	7.61	0.473		0.66	0.87	12.5		0.25
C-ABD	0.74	9.77	0.076		0.08	0.08	1.3		0.11

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	0.98	6.99	0.140		0.10	0.16	2.3		0.17
A-BCD	0.85	9.28	0.091		0.17	0.10	1.5		0.12
D-ABC	3.60	7.82	0.460		0.87	0.86	13.0		0.24
C-ABD	0.65	10.06	0.065		0.08	0.07	1.1		0.11

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	0.83	6.89	0.120		0.16	0.14	2.1		0.17
A-BCD	1.05	9.14	0.115		0.10	0.13	2.0		0.12
D-ABC	3.00	7.68	0.391		0.86	0.66	10.2		0.22
C-ABD	0.74	9.93	0.075		0.07	0.08	1.2		0.11

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.1	
17.45	0.2	
18.00	0.1	

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QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.2	
17.45	0.1	
18.00	0.1	

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QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.7	*
17.30	0.9	*
17.45	0.9	*
18.00	0.7	*

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QUEUE FOR STREAM C-ABD

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	57.6	57.6	9.8	0.17	9.8	0.17
A-BCD	71.1	71.1	9.1	0.13	9.1	0.13
D-ABC	199.0	199.0	45.1	0.23	45.1	0.23
C-ABD	42.0	42.0	4.7	0.11	4.7	0.11
ALL	662.8	662.8	68.6	0.10	68.7	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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
I 582.65 I	0.23	0.09		

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
I 491.48 I	0.23	0.23	0.23	0.23

I Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
I 0.09	0.14	0.32	0.11 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
I 452.12 I	0.21	0.21	0.21	0.21

I Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
I 0.08	0.13	0.30	0.10 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D
I 637.67 I	0.25	0.35 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
I 628.98 I	0.25	0.35 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
I 491.48 I	0.23	0.23	0.09	0.32 I

I Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
I 0.14	0.14 I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B
I 491.48 I	0.23	0.23	0.09	0.32 I

I Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
I 0.14	0.14 I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D

452.12	0.21	0.21	0.08	0.30

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 no development

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.

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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	0.551	0.000	0.449
		0.0	81.0	0.0	66.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM B	0.327	0.000	0.000	0.673
		18.0	0.0	0.0	37.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.450	0.182	0.000	0.368
		104.0	42.0	0.0	85.0
		(1.2)	(0.0)	(0.0)	(0.0)
	ARM D	0.548	0.452	0.000	0.000
		102.0	84.0	0.0	0.0
		(0.0)	(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 2036 no development
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	1.36	6.90	0.197		0.00	0.24	3.5		0.18
A-BCD	1.44	9.33	0.154		0.00	0.19	2.8		0.13
D-ABC	2.87	7.61	0.377		0.00	0.59	8.3		0.21
C-ABD	0.66	9.67	0.068		0.00	0.07	1.1		0.11

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	0.60	6.87	0.087		0.24	0.10	1.5		0.16
A-BCD	1.20	9.21	0.131		0.19	0.16	2.3		0.13
D-ABC	3.34	7.60	0.439		0.59	0.76	11.0		0.23
C-ABD	0.75	9.82	0.076		0.07	0.08	1.3		0.11

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	0.92	7.09	0.130		0.10	0.15	2.1		0.16
A-BCD	0.79	9.34	0.085		0.16	0.09	1.4		0.12
D-ABC	3.34	7.81	0.428		0.76	0.76	11.4		0.22
C-ABD	0.65	10.10	0.064		0.08	0.07	1.1		0.11

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	0.76	6.99	0.109		0.15	0.12	1.9		0.16
A-BCD	0.97	9.21	0.105		0.09	0.12	1.8		0.12
D-ABC	2.80	7.68	0.365		0.76	0.59	9.1		0.21
C-ABD	0.75	9.98	0.075		0.07	0.08	1.2		0.11

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.1	
17.45	0.1	
18.00	0.1	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.2	
17.30	0.2	
17.45	0.1	
18.00	0.1	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*

QUEUE FOR STREAM C-ABD

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

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	54.6	54.6	9.0	0.16	9.0	0.16
A-BCD	66.0	66.0	8.3	0.13	8.3	0.13
D-ABC	185.2	185.2	39.9	0.22	39.9	0.22
C-ABD	42.0	42.0	4.7	0.11	4.7	0.11
ALL	617.8	617.8	61.8	0.10	61.8	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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D
582.65	0.23	0.09

B-A Stream

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For Opposing Stream D-B
491.48	0.23	0.23	0.23	0.23

Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C
0.09	0.14	0.32	0.11

D-C Stream

Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For Opposing Stream B-D
452.12	0.21	0.21	0.21	0.21

Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream B-A
0.08	0.13	0.30	0.10

C-B Stream

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

I	637.67	0.25	0.35	I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I 628.98	0.25	0.35	I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For Opposing Stream C-B	I
I 491.48	0.23	0.23	0.09	0.32	I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For Opposing	I
I	0.14	0.14			I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

D-B Stream From Right Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D	I
I 452.12	0.21	0.21	0.08	0.30	I

I	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing	Slope For Opposing	I
I	0.13	0.13			I

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 with development

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	0.554	0.000	0.446
		0.0	93.0	0.0	75.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM B	0.361	0.000	0.000	0.639
		22.0	0.0	0.0	39.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.483	0.171	0.000	0.346
		127.0	45.0	0.0	91.0
		(1.2)	(0.0)	(0.0)	(0.0)
	ARM D	0.577	0.423	0.000	0.000
		123.0	90.0	0.0	0.0
		(0.0)	(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 2036 with development
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	1.53	6.70	0.228		0.00	0.29	4.1		0.19
A-BCD	1.64	9.20	0.179		0.00	0.22	3.3		0.13
D-ABC	3.27	7.53	0.434		0.00	0.75	10.4		0.23
C-ABD	0.71	9.53	0.075		0.00	0.08	1.2		0.11

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	0.64	6.66	0.096		0.29	0.11	1.7		0.17
A-BCD	1.36	9.07	0.150		0.22	0.18	2.7		0.13
D-ABC	3.84	7.53	0.510		0.75	1.01	14.4		0.27
C-ABD	0.80	9.72	0.082		0.08	0.09	1.4		0.11

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	1.05	6.91	0.152		0.11	0.18	2.6		0.17
A-BCD	0.89	9.21	0.096		0.18	0.11	1.6		0.12
D-ABC	3.84	7.76	0.495		1.01	0.99	15.0		0.26
C-ABD	0.70	10.03	0.070		0.09	0.08	1.2		0.11

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	0.89	6.80	0.131		0.18	0.15	2.3		0.17
A-BCD	1.11	9.07	0.123		0.11	0.14	2.1		0.13
D-ABC	3.20	7.61	0.421		0.99	0.74	11.7		0.23
C-ABD	0.80	9.88	0.081		0.08	0.09	1.4		0.11

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.3
17.30	0.1
17.45	0.2
18.00	0.2

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QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.2
17.45	0.1
18.00	0.1

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QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.7	*
17.30	1.0	*
17.45	1.0	*
18.00	0.7	*

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QUEUE FOR STREAM C-ABD

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	61.6	61.6	10.7	0.17	10.7	0.17
A-BCD	75.0	75.0	9.8	0.13	9.8	0.13
D-ABC	212.3	212.3	51.5	0.24	51.5	0.24
C-ABD	45.1	45.1	5.1	0.11	5.1	0.11
ALL	705.4	705.4	77.1	0.11	77.1	0.11

* 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 A-B
633.38	0.25	0.10

D-A Stream

Intercept For Stream D-A	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D

I	582.65	0.23	0.09	I

B-A Stream

I Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream D-A	Slope For OpposingI Stream D-B I
I 491.48	0.23	0.23	0.23	0.23 I

I	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For OpposingI Stream D-C I
I	0.09	0.14	0.32	0.11 I

D-C Stream

I Intercept For Stream D-C	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream B-C	Slope For OpposingI Stream B-D I
I 452.12	0.21	0.21	0.21	0.21 I

I	Slope For Opposing Stream C-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For OpposingI Stream B-A I
I	0.08	0.13	0.30	0.10 I

C-B Stream

I Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing I Stream A-D I
I 637.67	0.25	0.35 I

A-D Stream

I Intercept For Stream A-D	Slope For Opposing Stream C-A	Slope For Opposing I Stream C-B I
I 628.98	0.25	0.35 I

B-D Stream From Left Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 491.48	0.23	0.23	0.09	0.32 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.14	0.14		I

B-D Stream From Right Hand Lane

I Intercept For Stream B-D	Slope For Opposing Stream A-C	Slope For Opposing Stream A-D	Slope For Opposing Stream A-B	Slope For OpposingI Stream C-B I
I 491.48	0.23	0.23	0.09	0.32 I

I	Slope For Opposing Stream C-A	Slope For Opposing Stream C-D	Slope For Opposing	Slope For OpposingI I
I	0.14	0.14		I

D-B Stream From Left Hand Lane

I Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream D-C	Slope For OpposingI Stream A-D I

452.12	0.21	0.21	0.08	0.30	

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

D-B Stream From Right Hand Lane

Intercept For Stream D-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	Slope For Opposing Stream C-D	Slope For Opposing Stream A-D
452.12	0.21	0.21	0.08	0.30

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

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.TRAFFIC DEMAND DATA

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

Demand set: 2036 sensitivity test

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.

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		TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S)			
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
17.00 - 18.00	ARM A	0.000	0.552	0.000	0.448
		0.0	106.0	0.0	86.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM B	0.371	0.000	0.000	0.629
		23.0	0.0	0.0	39.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.507	0.163	0.000	0.330
		140.0	45.0	0.0	91.0
		(1.2)	(0.0)	(0.0)	(0.0)
	ARM D	0.602	0.398	0.000	0.000
		136.0	90.0	0.0	0.0
		(0.0)	(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 2036 sensitivity test
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	1.59	6.56	0.242		0.00	0.31	4.5		0.20
A-BCD	1.86	9.13	0.204		0.00	0.27	3.9		0.14
D-ABC	3.54	7.49	0.473		0.00	0.87	12.0		0.25
C-ABD	0.72	9.39	0.077		0.00	0.08	1.3		0.12

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	0.64	6.55	0.098		0.31	0.11	1.7		0.17
A-BCD	1.54	9.02	0.171		0.27	0.22	3.2		0.13
D-ABC	4.04	7.51	0.538		0.87	1.12	16.1		0.29
C-ABD	0.79	9.60	0.083		0.08	0.09	1.4		0.11

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	1.00	6.79	0.147		0.11	0.17	2.5		0.17
A-BCD	1.07	9.16	0.117		0.22	0.14	2.0		0.12
D-ABC	4.04	7.73	0.522		1.12	1.11	16.8		0.27
C-ABD	0.70	9.91	0.071		0.09	0.08	1.2		0.11

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	0.89	6.70	0.133		0.17	0.15	2.4		0.17
A-BCD	1.26	9.02	0.140		0.14	0.17	2.5		0.13
D-ABC	3.40	7.59	0.448		1.11	0.83	13.1		0.24
C-ABD	0.79	9.78	0.081		0.08	0.09	1.4		0.11

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.1	
17.45	0.2	
18.00	0.2	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.3	
17.30	0.2	
17.45	0.1	
18.00	0.2	

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.9	*
17.30	1.1	*
17.45	1.1	*
18.00	0.8	*

QUEUE FOR STREAM C-ABD

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-ACD	61.8	61.8	11.0	0.18	11.0	0.18
A-BCD	86.0	86.0	11.7	0.14	11.7	0.14
D-ABC	225.3	225.3	58.0	0.26	58.0	0.26
C-ABD	45.1	45.1	5.2	0.12	5.2	0.12
ALL	755.5	755.5	85.9	0.11	85.9	0.11

* 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

APPENDIX F – TRAFFIC COUNTS

Irish Traffic Surveys Ltd

REF: ITS J165 Gorey

SITE: Site 1

LOCATION: -

DAY: Monday

DATE: 18 December 2017

Irish Traffic Surveys

	A => A									A => B								A => C								A => D								B => A							
TIME	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
07:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
07:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	1	6	1	0	0	0	8	7.4
H/TOT	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	27	0	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	1	14	1	0	0	0	16	15.4
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08:15	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	0	29	0	1	0	0	30	30.5	0	0	0	0	0	0	0	0	0	0	0	17	2	0	0	0	19	19
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	58	4	0	1	1	64	66.3	1	0	176	11	1	0	1	190	191	0	0	8	0	0	0	0	8	8	0	0	67	5	1	0	0	73	73.5
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	27	3	0	0	0	30	30	0	0	95	9	0	0	0	104	104	0	0	1	0	0	0	0	1	1	0	0	23	1	1	0	0	25	25.5
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	11	4	1	0	0	16	16.5	0	0	48	10	0	0	0	58	58	0	0	2	0	0	0	0	2	2	0	0	17	1	1	0	0	19	19.5
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	25	3	0	0	0	28	28	0	0	58	3	2	0	0	63	64	0	0	2	0	0	0	0	2	2	0	0	12	2	0	0	0	14	14
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	17	4	0	0	0	21	21	0	0	55	8	1	0	0	64	64.5	0	0	3	0	0	0	0	3	3	0	0	26	5	0	0	0	31	31
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	31	5	0	0	0	36	36	0	0	99	5	1	0	1	106	108	0	0	6	1	0	0	0	7	7	0	0	37	3	0	0	0	40	40
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	52	6	0	0	0	58	58	0	0	116	8	0	0	0	124	124	0	0	8	1	0	0	0	9	9	0	0	42	5	0	0	0	47	47
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H/TOT	0	0	0	1	0	0	0	1	1	0	0	46	12	0	0	0	58	58	0	0	97	17	1	0	0	115	116	0	0	1	0	0	0	0	1	1	0	0	43	2	0	0	0	45	45
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H/TOT	0	0	0	0	0	0	0	0	0	1	0	48	0	0	1	0	50	50.5	0	0	71	5	1	0	0	77	77.5	0	0	3	0	0	0	0	3	3	0	0	30	0	0	0	0	30	30
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H/TOT	0	0	1	0	0	0	0	1	1	0	0	32	1	0	0	0	33	33	0	0	63	2	0	0	1	66	67	0	0	6	0	0	0	0	6	6	1	0	28	2	0	0	0	31	30.2
12 TOT	0	0	1	1	0	0	0	2	2	1	0	411	46	3	2	1	464	468	2	0	1002	83	7	0	3	1097	1102	0	0	45	2	0	0	0	47	47	1	1	384	29	5	0	0	420	421

B => B									B => C								B => D								C => A								C => B							
PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU
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C => C									C => D									D => A									D => B									D => C									D => D								
PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU
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Irish Traffic Surveys Ltd

REF: ITS J165 Gorey

SITE: Site 2

LOCATION: -

DAY: Tuesday

DATE: 09 January 2018

Irish Traffic Surveys

	A => A									A => B								A => C								A => D								B => A							
TIME	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BL	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	2	0	1	0	0	0	0	3	1.4	0	0	4	2	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	5	6	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	6	6	0	0	0	1	0	0	0	1	1
07:45	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	1	0	8	1	0	0	0	10	9.2	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	27	3	0	0	0	30	30	2	0	1	0	0	0	0	3	1.4	1	0	19	6	0	0	1	27	27.2	0	0	0	1	0	0	0	1	1
08:00	0	0	0	0	0	0	0	0	0	0	0	5	1	1	0	0	7	7.5	0	0	0	0	0	0	0	0	0	1	0	19	3	1	0	0	24	23.7	0	0	2	0	0	0	0	2	2
08:15	0	0	0	0	0	0	0	0	0	0	0	29	0	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	12	2	0	0	0	14	14	0	0	1	0	0	0	0	1	1
08:30	0	0	0	0	0	0	0	0	0	0	0	33	3	0	0	0	36	36	1	0	1	0	0	0	0	2	1.2	0	0	29	3	0	0	0	32	32	0	0	1	0	0	0	0	1	1
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	96	5	1	0	0	102	103	1	0	1	0	0	0	0	2	1.2	2	0	82	9	1	0	0	94	92.9	0	0	7	0	0	0	0	7	7
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H/TOT	0	0	0	0	0	0	0	0	0	1	0	43	3	0	0	0	47	46.2	0	0	0	0	0	0	0	0	0	1	0	37	9	0	0	0	47	46.2	0	0	6	0	0	0	0	6	6
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	42	3	0	0	0	45	45	0	0	0	0	0	0	0	0	0	0	0	42	1	0	0	0	43	43	0	0	8	1	0	0	0	9	9
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	43	4	2	2	0	51	54.6	0	0	0	0	0	0	0	0	0	0	0	46	5	0	0	0	51	51	0	0	8	2	0	0	0	10	10
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	47	5	1	1	0	54	55.8	0	0	0	0	0	0	0	0	0	0	0	49	12	3	0	0	64	65.5	0	0	26	2	0	0	0	28	28
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	52	3	0	0	0	55	55	0	0	0	0	0	0	0	0	0	0	0	40	6	0	0	2	48	50	0	0	11	1	0	0	0	12	12
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	70	4	0	0	0	74	74	1	0	0	0	0	0	0	1	0.2	0	0	56	11	0	0	0	67	67	0	0	15	1	0	0	0	16	16
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H/TOT	0	0	0	0	0	0	0	0	0	1	0	68	4	0	0	2	75	76.2	0	0	0	0	0	0	0	0	0	1	0	46	8	1	0	1	57	57.7	0	0	23	1	0	0	0	24	24
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	50	7	0	1	0	58	59.3	0	0	0	0	0	0	0	0	0	0	0	57	6	1	0	0	64	64.5	1	0	20	2	0	0	0	23	22.2
17:00	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	16	1	1	0	0	18	18.5	0	0	3	0	0	0	0	3	3
17:15	0	0	0	0	0	0	0	0	0	0	0	12	4	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	11	2	0	0	0	13	13	0	0	3	0	0	0	0	3	3
17:30	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	6	0	0	3	1	0	0	0	4	4
17:45	0	0	0	0	0	0	0	0	0	0	0	12	1	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	0	4	0	0	0	0	4	4
H/TOT	0	0	0	0	0	0	0	0	0	0	0	52	6	0	0	0	58	58	0	0	0	0	0	0	0	0	0	0	0	40	6	1	0	0	47	47.5	0	0	13	1	0	0	0	14	14
18:00	0	0	0	0	0	0	0	0	0	0	0	15	1	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	9	2	0	0	0	11	11	0	0	5	0	0	0	0	5	5
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H/TOT	0	0	0	0	0	0	0	0	0	0	0	66	4	0	0	0	70	70	0	0	0	0	0	0	0	0	0	0	0	42	4	0	0	0	46	46	0	0	10	0	0	0	0	10	10
12 TOT	0	0	0	0	0	0	0	0	0	2	0	656	51	4	4	2	719	727	4	0	2	0	0	0	0	6	2.8	5	0	556	83	7	0	4	655	659	1	0	147	12	0	0	0	160	159

B => B									B => C									B => D									C => A									C => B								
PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU
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C => C									C => D									D => A									D => B									D => C									D => D								
PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU	PCL	MCL	CAR	LGV	OGV1	OGV2	V (BU	TOT	PCU
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