

# TABLE OF CONTENTS

## SECTION 13 – TRAFFIC

<b>13.1</b>	<b>Introduction</b>	<b>13-1</b>
<b>13.2</b>	<b>Existing Transport Environment</b>	<b>13-1</b>
13.2.1	Site Location & Road Network	13-1
13.2.2	Existing Traffic Conditions	13-1
<b>13.3</b>	<b>Proposed Development and Site Access</b>	<b>13-2</b>
13.3.1	Description of the Proposal	13-2
13.3.2	Proposed Vehicular Access	13-2
13.3.3	Traffic Generation and Capacity Impact Assessment	13-3
13.3.3.1	Trip Generation	13-3
13.3.3.2	Traffic Impact Assessment	13-3
13.3.3.3	Increase in Traffic on the R152	13-4
13.3.3.4	Development Access Junction	13-6
13.3.3.5	R152/ R150 Junction at Duleek	13-7
13.3.3.6	M1/R152 Junction on the Haul Route from Drogheda and M1 Corridor	13-9
13.3.3.7	Haul Route from Navan	13-12
13.3.3.8	N2/R153 Junction at Balrath Cross	13-13
13.3.3.9	Traffic through Duleek Village	13-14
13.3.3.10	N2/R152 Junction at Kilmoon	13-15
13.3.3.11	Construction Traffic	13-16
13.3.4	Access Junction Sightline Assessment	13-18
13.3.5	Suitability of the R152 Alignment	13-18
13.3.5.1	General Suitability of the R152 Alignment	13-18
13.3.5.2	Local Suitability of the R152 Alignment	13-19
13.3.6	General Suitability of the R150 Alignment	13-20
<b>13.4</b>	<b>Predicted Impacts</b>	<b>13-20</b>
<b>13.5</b>	<b>Proposed Mitigation</b>	<b>13-21</b>
<b>13.6</b>	<b>Conclusions</b>	<b>13-21</b>

## LIST OF TABLES

Table 13.1	Level of Service Definitions
Table 13.2	Estimated Level of service
Table 13.3	Predicted Traffic Growth
Table 13.4	PICADY Results for the Proposed Development Access Junction
Table 13.5	PICADY Results for the R152/R150 Junction Under Pre Development Conditions
Table 13.6	PICADY Results for the R152/R150 Junction Under Post Development Conditions
Table 13.7	PICADY Results for the R152/R150 Junction Under Future Traffic Growth
Table 13.8	ARCADY Results for the Western Roundabout of the M1/R152 Interchange Under Pre-Development Conditions
Table 13.9	ARCADY Results for the Western Roundabout of the M1/R152 Interchange Under Post-Development Conditions
Table 13.10	ARCADY Results for the Eastern Roundabout of the M1/R152 Interchange Under Pre-Development Conditions
Table 13.11	ARCADY Results for the Eastern Roundabout of the M1/R152 Interchange Under Post-Development Conditions
Table 13.12	PICADY Results for the N2/R150 Junction Under Pre Development Conditions
Table 13.13	PICADY Results for the N2/R150 Junction Under Post Development Conditions
Table 13.14	PICADY Results for the N2/R153 Junction Under Pre Development Conditions
Table 13.15	PICADY Results for the N2/R153 Junction Under Post Development Conditions
Table 13.16	PICADY Results for the N2/R152 Junction Under Pre Development Conditions
Table 13.17	PICADY Results for the N2/R152 Junction Under Post Development Conditions
Table 13.18	Traffic Generation during the construction phase

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## APPENDICES

- Appendix 13.1 Figures
- Appendix 13.2 Traffic Counts
- Appendix 13.3 Traffic Generation
- Appendix 13.4 Junction Capacity Analysis
- Appendix 13.5 R152 Photographs
- Appendix 13.6 R150 Photographs

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## 13. TRAFFIC

### 13.1 INTRODUCTION

This Traffic Impact Assessment (TIA) generally follows the 'guidelines for Traffic Impact Assessment' published by the UK Institution of Highways and Transportation.

### 13.2 EXISTING TRANSPORT ENVIRONMENT

#### 13.2.1 Site Location & Road Network

The site of the proposed development (see Figure 1, Location Plan, in Appendix 13.1) is located on the R152 Regional Road linking Drogheda and Duleek.

In the vicinity of the site, the existing R152 is a single carriageway road with a general width of 7.0m. At the site of the proposed development, a speed limit of 80kph applies.

To the east of the site, the R152 connects to the M1 Motorway via the Drogheda South Interchange, with a pair of roundabouts at the slip ramps. To the west of the site, the R152 forms a priority-controlled junction with the R150 to the east of Duleek.

#### 13.2.2 Existing Traffic Conditions

The anticipated haul routes to the facility are shown on Figure 1 in Appendix 13.1. The main routes that will carry traffic to and from the development are the R152 and the M1 motorway. Traffic from the site will disperse across the network, along the R150 and R153 routes towards Navan, and the N2 towards Ashbourne. There are 5 main haul routes as follows:

1. From Drogheda via the R152;
2. From Louth and Monaghan via the M1 Motorway and R152;
3. From Navan and surrounds via the R153 through Kentstown, across the N2 and then via the R150 through Duleek to join the R152;
4. From Ashbourne via the N2 and R152 from Kilmoon Cross;
5. From east Meath via the R150 through Julianstown.

The traffic data used in this assessment is based on traffic counts carried out in November 2005 and January 2006 at 8 locations on the haul routes. The results are included in Appendix 13.2 to this report.

The traffic counts show that the peak hour traffic period is 7:45 to 8:45. The counts show that during the AM Peak, the two-way flow on the R152 is 1,108 veh/hr.

The pre-development flows at the R152/R150 junction are shown on Figure 5 in Appendix 13.1 to this report.

The pre-development flows at the M1/R152 junction are shown on Figures 7 & 9 in Appendix 13.1 to this report.

Other junctions in the vicinity of the facility that have been assessed are the N2/R152 at Kilmoon, the N2/R150 at Brien's Cross, and the N2/R153 at Balrath , for which the existing traffic flows are shown on Figures 11, 13, and 15 in Appendix 13.1.

### **13.3 PROPOSED DEVELOPMENT AND SITE ACCESS**

#### **13.3.1 Description of the Proposal**

The proposed development is a 70MW waste-to-energy facility which will have a capacity of 150,000 - 200,000 tonnes per annum for the treatment of non-hazardous waste. The Traffic Impact Assessment has been based on a maximum annual capacity of 200,000 tonnes per annum (worst case scenario).

The area of the site for development will be approximately 4 hectares, with the remaining areas of the site to be utilised for landscaping to minimise the visual impact of the proposed facility.

The layout of the proposed facility is shown on Figure 2 in Appendix 13.1 to this report.

#### **13.3.2 Proposed Vehicular Access**

Access to the subject site is via the existing R152 Drogheda to Duleek Road.

The proposal includes the widening of the R152 along the northern side to allow for a right turning lane, and a deceleration lane for traffic turning left into the site. This widening will minimise the impact on through traffic on the R152 and will provide a safe access to and from the site.

The proposed haul routes to the site, based on the centres of waste generation are shown on Figure 1 in Appendix 13.1.

The layout of the proposed access junction is shown on Figure 2 in Appendix 13.1.

### **13.3.3 Traffic Generation and Capacity Impact Assessment.**

#### **13.3.3.1 Trip Generation**

An assessment of the catchment area of the facility was carried out. This assessment determined the origin of the waste to be treated at the facility and the route it would take to the site. A copy of the findings of the analysis is included as Appendix 13.3 to this report.

Based on this assessment the proposed development will generate an average daily total of 58 inbound delivery truck movements, or 13 truck movements per hour. The directional split is expected to be roughly even from both directions at the site entrance. Empty trucks leaving the site will generate a similar flow in the outbound direction.

In addition to the truck movements delivering waste to the facility, truck movements associated with the delivery of raw materials and the removal of residual waste will be generated. The analysis for this generated traffic is included in Appendix 13.3 to this report. The analysis shows that the transport of consumables and facility products will result in 15 vehicle movements per day, equating to a peak hour movement of 4 vehicles. As with the delivery of the waste material, these movements are equally split between northbound and southbound on the R152. A conservative approach has been taken with this analysis as, wherever possible, trucks delivering raw materials or waste to the facility will collect residues from the process for disposal to landfill locally or abroad. Therefore, a lower number of daily truck movements and two-way movements are anticipated.

This conservative assessment results in a total of 17 inbound truck movements during the peak hour, equating to 34 two-way movements.

The traffic generated by the development will generally be trucks. There will be a small number of car trips generated, but these movements will be slight and will not adversely affect the operation of the R152. It is intended that the facility will receive waste between 08:00 and 18:30. The car traffic associated with the development will be the arrival and departure of facility staff. As waste acceptance is to commence at 8:00, it is anticipated that the arrival of staff will precede the morning peak hour period on the local road network.

The generated traffic in and out of the proposed development and the resulting total flows at the site access junction are shown on Figures 3 & 4 in Appendix 13.1 respectively.

#### **13.3.3.2 Traffic Impact Assessment**

In order to assess the impact of the traffic generated by the proposed development on the surrounding road network, the capacities of the development access junction with R152, and of various other junctions along the haul routes were assessed.

The junctions were analysed using the Transport Research Laboratory (TRL) software Priority Intersection CApacity DelaY (PICADY) and Assessment of Roundabout And DelaY (ARCADY).

The junction capacity assessments were carried out on the traffic in the base year 2006.

Future traffic conditions were also assessed in so far as possible for a 20 year time horizon. Ongoing development and growth in Drogheda and Navan in particular will significantly affect the traffic context in the surrounding area during this period. Under the National Spatial Strategy and the Regional Planning Guidelines for the Greater Dublin Area these towns will grow considerably in the future, and it is therefore expected that traffic flows between the two towns will increase correspondingly.

### 13.3.3.3 Increase in Traffic on the R152

The post development traffic Peak Hour flows on the R152 of 1,142 compares to a pre development flow of 1,108, an increase of 3%. This is a small increase, which would not have an impact on the operation of the road.

The number of truck movements on the R152 will increase from 165 during the peak hour to 199, an increase of 20%. Increasing the HGV proportion from 14.9% to 17.4% of the total traffic flow.

The concept of level of service is defined by the NRA in their National Roads Needs Study, in terms of % time delay, average speed, passing conditions and driving conditions as follows:

Table 13.1: Level of Service Definitions

Classification	% Time Delay	Average Speed	Passing Conditions	Driving Conditions
LOS C	≤60	84kph	Platoon formation occurs with passing demand exceeding opportunity	Driver delay up to 60% due to slower vehicles
LOS D	≤75	80kph	Passing extremely difficult, with very high demand and limited opportunity. Platoon sizes of 5-10 vehicles	Driver delay up to 75%. Turning vehicles or roadside distractions cause major shockwaves in the traffic system.
LOS E	>75	72kph	Passing becomes impossible with intense platooning.	Driver delay over 75%. LOS E rarely maintained as traffic disturbance leads to LOS F
LOS F	100	<72kph	No passing – platoon flow	Congested flow

The design capacity of undivided rural roads at a given level of service is defined as a function of carriageway width and the percentage sight distance greater than 490m along the route.

In the vicinity of the proposed development, the R152 is a single carriageway with a typical carriageway width of 7.0m. As the road is an existing road, it is impossible to exactly define the percentage sight distance greater than 490m along the route. Therefore the design capacity of the R152 is to be less than 4,800 AADT at LOS C, 4,800 to 8,600 AADT at LOS D and 8,600 to 15,600 AADT at LOS E

It is a general principle that 10% of the Annual Average Daily Traffic AADT flow occurs within the peak hour. Using this assumption, the pre development flow AADT is 11,080 with a post development AADT of 11,420.

**Table 13.2: Estimated Level of service**

	Design Capacities AADT		Actual AADT Flows
	LOS D	LOS E	
R152 (Pre development)	8,600	15,600	11,080
R152 (Post development)	8,600	15,600	11,400

Based on the traffic counts and the generated traffic, the R152 currently operates within capacity at LOS E. Post development, the R152 will continue to operate within LOS E. The National Roads Need Study sets LOS D as the minimum acceptable standard for the National Primary network, or roads with national strategic importance.

The R152 is a regional Road with regional strategic importance, which is not covered by the National Roads Needs Study. Given the reduced category of the road, it is considered that a LOS E is appropriate for the class of road. It should be noted that the traffic generated by the development will not significantly increase the AADT flows on the R152 and will therefore have a negligible impact on the Level of Service of the road.

Any adverse capacity impacts would be observed at the junctions rather than the open road. Assessments of the key junctions are detailed later in this report.

It is therefore considered that under the anticipated traffic flows, the R152 would operate within the recommended limits. The post development traffic flows on the R152 equate to an approximate Annual Average Daily Traffic flow of 11,400.

The NRA National Roads Needs Study for the period up to 2019 envisage that light vehicle traffic will grow by 2% a year from 2005 to 2015 on the overall national network. The growth rate between 2016 and 2026 are assumed to continue at 2%, although this growth is unlikely, as the Central Statistics



Office envisage that car ownership will reach saturation in 2016. Based on this assumption, the predicted future R152 traffic flows are:

**Table 13.3: Predicted Traffic Growth**

	Development Traffic	Predicted AADT volumes without proposed development		% increase due to development	
		2006	2026	2006	2026
R152	320	11,080	16,464	+2.89%	+1.94%

The increase in AADT flows as a result of the proposed development is 2.89% in the base year, reducing to 1.94% in the year 2026. This shows that the impact of the proposed development on AADT flows is not significant.

Major future growth of both Navan and Drogheda will give rise to a significant increase in traffic between the two towns. The main road link between the two towns is the N51 through Slane. The R152/R150/R153 route through Duleek and Kentstown is a secondary link between the towns. It is recognised by Meath County Council that the realisation of the growth targets for Drogheda and Navan will give rise to a need for an improved road connection between the two towns, and this will relieve future pressure on the R152 route. Some preliminary assessment of this issue is ongoing during early 2006 as part of a wider transportation study for the National Roads Authority, but specific proposals are not known at this time. It is reasonable on this basis to expect that the worst case scenario of the R152 operation dropping to Level of Service F in the long term will not arise, because of other road improvements to be undertaken by Meath County Council to support the regional growth.

Traffic from other local developments such as the expansion of the Irish Cement Platin facility, or the Platin Power Plant near the Indaver site, will be catered for in the short to medium term by the residual capacity on the R152, and in the longer term by the expected improvements to the road links between Drogheda and Navan. These developments are included in the general traffic growth factors applied in the foregoing assessment of the future traffic on the R152. For example the planning application for the Platin Cement Works expansion indicates that daily traffic flows on the R152 will increase by up to 1.4% as a result of that development. The cumulative traffic growth over 20 years assumed in this report is many times greater than the increase expected from the nearby cement works expansion.

#### **13.3.3.4 Development Access Junction**

Under the post development flows, as shown on Figure 4 in Appendix 13.1, the junction operates well, with no queuing. The analysis shows that the highest Reference Flow Capacity (RFC) of 0.043 is very low compared to the desirable maximum RFC of 0.85 for a new junction.

A summary of the PICADY results is shown in Table 13.4.

**Table 13.4: PICADY Results for the Proposed Development Access Junction**

Movement	Proposed Facility	
	RFC	Max Queue Length
From R152	0.017	0
From Site	0.043	0

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

### 13.3.3.5 R152/ R150 Junction at Duleek

The traffic flows at the R152/ R150 junction, post development are shown on Figure 6 in Appendix 13.1. This junction was analysed under pre development and post development conditions to allow a comparison between the two and to assess the impact of the generated traffic.

#### Pre Development Conditions

Table 13.5 shows a summary of the PICADY analysis for the pre development scenario.

**Table 13.5: PICADY Results for the R152/R150 Junction Under Pre Development Conditions**

Junction Arm	RFC	Queue Length
R152 North	0.441	0.8
R152 South	0.014	0
R150 East	0.151	0.2
R150 West	0.678	2.0

The table above shows that under pre development traffic conditions, the junction operates well within capacity. The highest RFC calculated by ARCADY is 0.678 for the approach on the R150 from the west. This RFC is well below the desirable maximum of 0.85 for a new junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

#### Post Development Conditions

The post development traffic conditions are the predicted traffic flows, as detailed above with the additional traffic generated by the development. Table 13.6 shows a summary of the PICADY analysis for the post development scenario.

**Table 13.6: PICADY Results for the R152/R150 Junction Under Post Development Conditions**

Junction Arm	RFC	Queue Length
R152 North	0.487	0.9
R152 South	0.014	0
R150 East	0.143	0.2
R150 West	0.718	0.7

The PICADY analysis shows that there is very slight increase in the RFC values for all the approaches to the junction. As with the pre development scenario, the R150 western approach has the highest RFC at 0.718, an increase from 0.678 of less than 6%. The analysis shows that with the addition of the traffic generated by the proposed development, the junction operates well within its capacity. The maximum RFC is below the maximum desirable RFC of 0.85 for a new junction.

### Future Traffic Growth

The R150/R152 junction was assessed to determine when the traffic flows at the junction would reach saturation level. The background traffic flows were increased using an annual growth rate of 3% per annum. The junction was analysed in the years 2010, 2011, 2012, 2013 and 2014 for the RFC for the highest arm, the R150 west. The results of the PICADY analyses are summarised in Table 13.7 below.

**Table 13.7: PICADY Results for the R152/R150 Junction Under Future Traffic Growth**

Year	RFC	Queue Length
2006	0.718	0.7
2010	0.850	5.2
2011	0.899	7.2
2012	0.961	12.5
2013	1.013	24.3
2014	1.060	35.0

The results of the PICADY Analysis under future traffic conditions show that the maximum desirable RFC of 0.85 will be reached by 2010, and that the saturation capacity (RFC = 1.0) of the junction will be reached by year 2013. At that time, the junction will fail and significant queuing will occur. However, Meath County Council has plans to bypass the village of Duleek and this would result in additional traffic capacity by removing a portion of the traffic from the R150/R152 junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

**13.3.3.6 M1/R152 Junction on the Haul Route from Drogheda and M1 Corridor**

The M1/R152 Junction is a partial Dumbbell Diamond Interchange, built as part of the M1 Drogheda Bypass Project. The layout does not provide direct northbound entry or southbound exit slips. These movements are catered for at the other part of the split interchange to the north at the Donore Road. Access to this interchange is via a link road from the eastern roundabout of the M1/R152 Interchange. Each roundabout within the interchange operates as an independent junction and is therefore assessed separately.

Each roundabout was assessed under pre-development and post development traffic using ARCADY to allow a comparison between the two and to assess the impact of the generated traffic.

**M1 Western Roundabout**

The western interchange roundabout consists of 3 arms, The R152 west to Duleek, The R152 east to Drogheda and the M1 northbound exit slip.

The traffic counts show that the total peak hour flow at the roundabout is 940 vehicles with an HGV content of 11.4%. The post development flows would increase to 958 vehicles, an increase of 1.9%, with an HGV content of 13.5%. The typical capacity of a 3-arm roundabout is 4,000 vehicles, well above the predicted post development flows. This shows that there is significant spare capacity within the roundabout to cater for the anticipated flows. In order to verify the above, capacity analyses were carried out under pre-development and post development conditions.

The pre-development and predicted post-development flows are shown on Figures 7 and 8 respectively in Appendix 13.1.

**Pre-Development Conditions at M1 West**

Table 13.8 shows a summary of the ARCADY analysis for the pre development scenario.

**Table 13.8: ARCADY Results for the Western Roundabout of the M1/R152 Interchange Under Pre-Development Conditions**

Junction Arm	RFC	Queue Length
R152 to Duleek	0.258	0.3
R152 to Drogheda	0.339	0.5
M1 Exit Slip	0.033	0.0

The table above shows that under pre development traffic conditions, the junction operates well within capacity. The highest RFC calculated by ARCADY is 0.339 for the approach on the R152 from Drogheda. This RFC is well below the desirable maximum of 0.85 for a new junction.

Detailed results from the ARCADY analysis are given in Appendix 13.4 to this report.

### Post Development Conditions at M1 West

The post development traffic conditions are the predicted traffic flows, as detailed above with the additional traffic generated by the development. Table 13.9 shows a summary of the ARCADY analysis for the post development scenario.

**Table 13.9: ARCADY Results for the Western Roundabout of the M1/R152 Interchange Under Post-Development Conditions**

Junction Arm	RFC	Queue Length
R152 to Duleek	0.264	0.4
R152 to Drogheda	0.345	0.5
M1 Exit Slip	0.033	0

The ARCADY analysis shows that there is very slight increase in the RFC values for all the approaches to the junction. As with the pre development scenario, the R152 from Drogheda has the highest RFC at 0.345, an increase from 0.339 of less than 2%. The analysis shows that with the addition of the traffic generated by the proposed development, the junction operates well within its capacity. The maximum RFC is far below the maximum desirable RFC of 0.85 for a new junction.

Detailed results from the ARCADY analysis are given in Appendix 13.4 to this report.

### M1 Eastern Roundabout

The eastern interchange roundabout consists of 4 arms, The R152 west to Duleek, The R152 east to Drogheda, the M1 southbound entry slip and the Donore Road Interchange Link. In operational terms this roundabout is similar to a 3-arm junction because there are only 3 entries.

The traffic counts show that the total peak hour flow at the roundabout is 1,251 vehicles with an HGV content of 10.1%. The post development flows would increase to 1,269 vehicles, an increase of 1.4%, with an HGV content of 11.4%. The typical capacity of a 3-arm roundabout is 4,000 vehicles, well above the predicted post development flows. This shows that there is significant spare capacity within the roundabout to cater for the anticipated flows. In order to verify the above, capacity analyses were carried out under pre-development and post development conditions.

The pre-development and predicted post-development flows are shown on Figures 9 and 10 respectively in Appendix 13.1.

### Pre-Development Conditions at M1 East

Table 13.10 shows a summary of the ARCADY analysis for the pre development scenario.

**Table 13.10: ARCADY Results for the Eastern Roundabout of the M1/R152 Interchange Under Pre-Development Conditions**

Junction Arm	RFC	Queue Length
R152 to Duleek	0.236	0.3
Interchange Link	0.190	0.2
R152 to Drogheda	0.344	0.5
M1 Entry Slip	Exit only	-

The table above shows that under pre development traffic conditions, the junction operates well within capacity. The highest RFC calculated by ARCADY is 0.344 for the approach on the R152 from Drogheda. This RFC is well below the desirable maximum of 0.85 for a new junction.

Detailed results from the ARCADY analysis are given in Appendix 13.4 to this report.

### Post Development Conditions at M1 East

The post development traffic conditions are the predicted traffic flows, as detailed above with the additional traffic generated by the development. Table 13.11 shows a summary of the ARCADY analysis for the post development scenario.

**Table 13.11: ARCADY Results for the Eastern Roundabout of the M1/R152 Interchange Under Post-Development Conditions**

Junction Arm	RFC	Queue Length
R152 to Duleek	0.240	0.3
Interchange Link	0.193	0.2
R152 to Drogheda	0.349	0.5
M1 Entry Slip	Exit only	-

The ARCADY analysis shows that there is very slight increase in the RFC values for all the approaches to the junction. As with the pre development scenario, the R152 from Drogheda has the highest RFC at 0.349, an increase from 0.344 of less than 2%. The analysis shows that with the addition of the traffic generated by the proposed development, the junction operates well within its capacity. The maximum RFC is far below the maximum desirable RFC of 0.85 for a new junction.

Detailed results from the ARCADY analysis are given in Appendix 13.4 to this report.

### 13.3.3.7 Haul Route from Navan

Traffic to the site from the west will pass through the village of Kentstown, and will cross the N2 National Primary Route at Brien's Cross. The predicted increase in traffic along this route is 6 trucks per hour (two-way). This is a very low number and will have no significant impact at Kentstown village in traffic terms. However, local people have expressed concern over the potential use by trucks of the R150 route between Kentstown and the N2 past Kentstown National School. Greenstar, which operates the nearby landfill facility, directs traffic to that site via Balrath Cross further south rather than the more direct route along the R150. In response to the concerns of the residents of Kentstown, the applicant for the Carranstown waste facility also proposes to prohibit truck traffic from using this section of the R150 at Kentstown. This will be achieved through provision in haulier's contracts. Instead, trucks serving the facility will be required to stay on the R153 to the N2/R153 junction at Balrath and then travel up the N2 to the N2/R153 junction at Brien's Cross. Accordingly the junction analyses in this assessment are based on the use of a short section of the N2 between Balrath and Brien's Cross.

#### N2/R150 Junction at Brien's Cross

This junction was analysed under pre development and post development conditions to allow a comparison between the two and to assess the impact of the generated traffic.

#### Pre Development Conditions at Brien's Cross

Table 13.12 shows a summary of the PICADY analysis for the pre development scenario.

**Table 13.12: PICADY Results for the N2/R150 Junction Under Pre Development Conditions**

Junction Arm	RFC	Queue Length
N2 North	0.021	0.0
N2 South	0.015	0.0
R150 East	0.346	0.5
R150 West	0.275	0.4

The table above shows that under pre development traffic conditions, the junction operates well within capacity. The highest RFC calculated by PICADY is 0.346 for the approach on the R150 from the east. This RFC is well below the desirable maximum of 0.85 for a new junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

#### Post Development Conditions at Brien's Cross

The post development traffic conditions are the predicted traffic flows, as detailed above with the additional traffic generated by the development. Table 13.13 shows a summary of the PICADY analysis for the post development scenario.

**Table 13.13: PICADY Results for the N2/R150 Junction Under Post Development Conditions**

Junction Arm	RFC	Queue Length
N2 North	0.021	0.0
N2 South	0.022	0.0
R150 East	0.352	0.5
R150 West	0.295	0.4

The PICADY analysis shows that there is very slight increase in the RFC values for some the approaches to the junction. On other arms there is no change because the development will not add to the existing traffic on that approach. As with the pre development scenario, the R150 East approach has the highest RFC at 0.352, an increase from 0.346 of 1.7%. The analysis shows that with the addition of the traffic generated by the proposed development, the junction operates well within its capacity. The maximum RFC is below the maximum desirable RFC of 0.85 for a new junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

### 13.3.3.8 N2/R153 Junction at Balrath Cross

This junction was analysed under pre development and post development conditions to allow a comparison between the two and to assess the impact of the generated traffic.

#### Pre Development Conditions at Balrath Cross

Table 13.14 shows a summary of the PICADY analysis for the pre development scenario.

**Table 13.14: PICADY Results for the N2/R153 Junction Under Pre Development Conditions**

Junction Arm	RFC	Queue Length
N2 North	0.027	0.0
N2 South	0.004	0.0
County Road	0.159	0.2
R153	0.519	1.0

The table above shows that under pre development traffic conditions, the junction operates well within capacity. The highest RFC calculated by ARCADY is 0.519 for the approach on the R153 from the west. This RFC is well below the desirable maximum of 0.85 for a new junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.



### Post Development Conditions at Balrath Cross

The post development traffic conditions are the predicted traffic flows, as detailed above with the additional traffic generated by the development. Table 13.15 shows a summary of the PICADY analysis for the post development scenario.

**Table 13.15: PICADY Results for the N2/R153 Junction Under Post Development Conditions**

Junction Arm	RFC	Queue Length
N2 North	0.034	0.0
N2 South	0.004	0.0
County Road	0.159	0.2
R153	0.520	1.1

The PICADY analysis shows that there is very slight increase in the RFC values for all the approaches to the junction. As with the pre development scenario, the R153 approach has the highest RFC at 0.520, an increase from 0.519 of less than 1%. The analysis shows that with the addition of the traffic generated by the proposed development, the junction operates well within its capacity. The maximum RFC is below the maximum desirable RFC of 0.85 for a new junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

#### 13.3.3.9 Traffic through Duleek Village

Traffic surveys were conducted at 3 locations in Duleek Village, with the following results for the existing traffic flows:

- Western edge of the village: 352 veh/hr with 50 trucks (14%).
- Middle of the village at the pedestrian signals: 592 veh/hr with 74 trucks (13%).
- Eastern edge of the village at the R152/R150 junction: 682 veh/hr with 103 trucks (15%).

The proposed development will give rise to an additional truck flow of 8 vehicles per hour through Duleek, which represents the following increase on the existing flows at each of the above locations:

- Western edge: 16%
- Centre: 11%
- Eastern edge: 8%.

The scale of the truck traffic increase is clearly low, especially at the busier eastern side of the village.

The Meath County Council Development Plan includes an objective for an east-west bypass of Duleek Village. When this link is provided, all traffic to and from the Carranstown waste-to-energy facility will be diverted away from Duleek village main street.

### 13.3.3.10 N2/R152 Junction at Kilmoon

The southern haul route will follow the N2 as far as the junction with the R152 at Kilmoon Cross, where trucks will turn right towards Duleek and Carranstown. The junction was analysed under pre-development and post-development conditions to allow a comparison between the two and to assess the impact of the generated traffic.

#### Pre Development Conditions at Kilmoon

Table 13.16 shows a summary of the PICADY analysis for the pre development scenario.

**Table 13.16: PICADY Results for the N2/R152 Junction Under Pre Development Conditions**

Junction Arm	RFC	Queue Length
N2 South	0.388	0.6
R152	0.901	7.8

The table above shows that under pre-development traffic conditions, the junction operates with an RFC of 0.901 for the approach on the R152. This RFC is above the desirable maximum of 0.85 for a new junction but below the maximum RFC of 0.95. This situation occurs only during the morning peak hour when the through flows on the N2 southbound are significantly higher than throughout the rest of the day. The RFC result in excess of 0.85 would imply a delay for R152 southbound traffic, which must await a gap in the main road traffic. The junction analysis software assumes that each vehicle from the side road joins the main road from a stop position, in which case a long gap in main road traffic is required for each side road vehicle to move forward. In practice on the N2 at Kilmoon there is an acceleration lane that allows traffic from the R152 to merge with little delay, and the operational conditions at the junction do not match the simulation results, which are quite conservative in this respect. The true RFC at Kilmoon is therefore likely to be considerably lower than the above results. The small volume of additional traffic arising from the proposed development will not materially change the current operating conditions at this junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

#### Post Development Conditions at Kilmoon

The post development traffic conditions are the predicted traffic flows, as detailed above with the additional traffic generated by the development. Table 13.17 shows a summary of the PICADY analysis for the post development scenario.

**Table 13.17: PICADY Results for the N2/R152 Junction Under Post Development Conditions**

Junction Arm	RFC	Queue Length
N2 South	0.393	0.6
R152	0.907	8.2

The PICADY analysis shows that there is very slight increase in the RFC values for all the approaches to the junction. As with the pre development scenario, the R152 approach has the highest RFC at 0.907, a very slight increase from 0.901 of 0.7%. The RFC increase is so small as to be imperceptible, and it is considered that the traffic generated by the development will not adversely affect the operation of this junction.

Detailed results from the PICADY analysis are given in Appendix 13.4 to this report.

### **13.3.3.11 Construction Traffic**

The expected construction period for the proposed facility is 24 months. During this period, there will be 3 types of construction traffic generated. These are HGV traffic, workforce traffic and general construction traffic.

#### **HGV Traffic**

The construction stage of the development will involve a significant number of HGV movements. Estimates of the anticipated HGV construction traffic volumes indicate that up to 7 HGV vehicles per hour would access the site during the day time shift.

#### **Workforce Traffic**

The construction phase will also generate demand in terms of construction workforce access. Throughout the construction phase there will be some variation in the number of workforce on site. A maximum of around 300 construction workers will be employed on site during the busiest period working a daytime shift of 07:00-19:00.

To determine the trips generated during construction it is assumed, that 95% of the workforce travel by car with an occupancy of 1.15. These assumptions are applied to all workers arriving for the day shift. This assumption is based on information obtained from other surveys of workers, including construction workers at various industrial plants, and is considered to be indicative of the norms for this type of project.

Due to the nature of the construction stage of the development not all workers will arrive before 07:00 to start their shift or finish at 19:00 in the evening as there will be some natural fall-off in construction activity before 19:00. For the purpose of this estimate the following profile is proposed to take account of the construction workers arrival and departure profile:

- 80% of the daytime construction workers arrive before 07:00
- 20% of the daytime construction workers arrive after 07:00
- 20% of the daytime construction workers leave for lunch between 13:00 and 14:00
- 20% of the daytime construction workers leave before 18:00
- 60% of the daytime construction workers leave between 18:00-19:00
- 20% of the daytime construction workers leave after 19:00

### General Site Traffic

The construction stage will also generate general site traffic in addition to HGV movements and workforce traffic. This general site traffic accounts for visitors and general service vehicles to the site. The general site traffic is estimated at up to 20 vehicles per hour between 06:00 - 19:00.

### Total Construction Traffic

Table 13.18: Traffic Generation during the construction phase

Time Period	HGV Movements		Workforce Traffic		General Site Traffic		Total Traffic Generation		
	In	Out	In	Out	In	Out	In	Out	Total
0600-0700	7	7	208	0	10	10	225	17	242
0700-0800	7	7	52	0	10	10	69	17	86
0800-0900	7	7	0	0	10	10	17	17	34
0900-1000	7	7	0	0	10	10	17	17	34
1000-1100	7	7	0	0	10	10	17	17	34
1100-1200	7	7	0	0	10	10	17	17	34
1200-1300	7	7	0	0	10	10	17	17	34
1300-1400	7	7	52	52	10	10	69	69	138
1400-1500	7	7	0	0	10	10	17	17	34
1500-1600	7	7	0	0	10	10	17	17	34
1600-1700	7	7	0	0	10	10	17	17	34
1700-1800	7	7	0	52	10	10	17	69	86
1800-1900	7	7	0	165	10	10	17	182	199
1900-2000	7	7	0	52	10	10	17	69	86

Table 13.1 shows that the peak traffic period for construction traffic will be 0600-0700, with 242 vehicle movements. Although the peak construction traffic will be fairly high, it will not result in a significant impact on the local road network, as it will not coincide with the peak background flows.

The traffic count report in Appendix 13.2 to this report commenced at 7.00. Assuming the traffic flows in the preceding hour are the same as the 7.00-8.00 period, the existing two way flow on the R152 would be 803veh (excluding construction traffic). This is a conservative assumption. The addition of the

construction traffic would increase the flow to 1039veh. This compares with the pre development peak hour flow of 1,108. This shows that the traffic flows resulting from the construction peak will be below the flows during the existing R152 peak hour. As demonstrated previously, the surrounding road network has sufficient spare capacity to handle the predicted peak hour flows, therefore it is able to cater for the anticipated construction traffic peak.

The construction traffic generated during the peak hour, 08.00-09.00 is estimated to be 34veh (two-way flows). This compares with an operational phase generated traffic flow of 34veh (two way flows). This shows that the traffic impact of the proposed development during the peak hour is unchanged between the construction phase and the operational phase. As demonstrated previously, the surrounding road network is has sufficient spare capacity to cater for the operational phase traffic. There is therefore sufficient capacity to cater for the predicted construction traffic.

A scenario could arise of simultaneous construction on several developments in the Carranstown area, including perhaps the Platin Power Plant or the expansion of the Irish Cement works. As described above, the normal construction work start and finish times that are outside of the peak periods for main road traffic should ensure that the impact of several construction projects will not exceed the normal peak flows on the R152 road.

#### **13.3.4 Access Junction Sightline Assessment**

The R152 in the vicinity of the proposed development has an 80kph speed limit. This corresponds to an 85kph design speed, as defined by Table 2 of TD 9/04 of the NRA Design Manual for Roads and Bridges.

The sightline requirements for the access junction are defined in TD 41/95 of the NRA DMRB. This requires a visibility envelope 160m in length from a point 4.5m from the junction. The development access achieves a visibility envelope in excess of the required 160m.

The required visibility splays are shown on Figure 2 in Appendix 13.1.

#### **13.3.5 Suitability of the R152 Alignment**

##### **13.3.5.1 General Suitability of the R152 Alignment**

The overall alignment and layout of the R152 is of reasonably high quality over most of the 15km length between the N2 junction at Kilmoon Cross and the M1/R152 motorway interchange.

The availability of adequate straight sections of road in which to overtake lessens the temptation for drivers to attempt unsafe overtaking manoeuvres on bendy sections of road. The generally high quality of the R152 alignment provides ample opportunity for faster traffic to overtake slower traffic. The

northern section of the road between Drogheda and Duleek is busier and bendier than the southern section, but drivers would be less inclined to overtake on the northern section in the knowledge that there are quieter sections of road to the south where overtaking could be undertaken more comfortably.

The standard of the R152 exceeds that of many regional roads, and indeed it would compare favourably with most of the national secondary routes, and even with several national primary routes.

Photographs showing the road conditions are included in Appendix 13.5 to this report. The photograph sequence commences at the N2/R152 junction at 0km. Photographs 29 and 30 show the R152 in the vicinity of the entrance to the proposed development.

### **13.3.5.2 Local Suitability of the R152 Alignment**

Photographs 29 and 30 in Appendix 13.5 show that the proposed site entrance will be located on a straight and level section of the R152. However, to the east of the site (as shown in the photographs) there is a bendy section of road with a series of horizontal curves combined with a crest curve. A continuous white centre line marking prohibits overtaking on this section of road, and this extends past the proposed site entrance to prevent eastbound traffic from overtaking on the approach to the bendy section.

The proposed road layout at the site entrance will involve the addition of ghost islands and a central right turn lane. The effect of these measures will be to extend the non-overtaking section a short distance further westward. In terms of road safety, the proposed location for the site entrance immediately after a bendy section of road is better than if it were to be located on a long straight section. It is better to have a junction located where overtaking is already prohibited, rather than on a section where drivers might ignore the road markings and overtake because of the attraction of a long straight section of road.

To the north of the proposed entrance to the development, there is a crest curve. The NRA Design Manual for Roads and Bridges (TD9/04) requires forward sight visibility of 160m as a desirable minimum for a design speed of 85hph. However, where there is not a junction within the sight lines, a one step relaxation, to 120m, may be used. On the R152, the forward sight visibility is reduced to 145m minimum at one point (based on a site survey). This is below the desirable minimum but greater than the allowable relaxation distance. As there are no existing junctions within section of reduced visibility, a relaxation is permitted. The crest curve therefore complies with the requirements of the NRA DMRB.

The R152 in the vicinity of the proposed development has an 80kph speed limit. This corresponds to an 85kph design speed, as defined by Table 2 of TD 9/04 of the NRA Design Manual for Roads and Bridges. The sightline requirements for the access junction are defined in TD 41/95 of the NRA DMRB. This requires a visibility envelope 160m in length from a point 4.5m from the junction. The development access achieves a visibility envelope in excess of the required 160m.

In summary, the road alignment of the R152 in the general vicinity of the proposed development site complies with the appropriate design standards, and is suitable to cater for the traffic that will arise from the proposed development. Furthermore, the existing road alignment of the R152 in the immediate vicinity of the proposed entrance junction is of a very high geometric standard, which will permit the provision of a junction layout in excess of the normal requirements for a regional road.

### 13.3.6 General Suitability of the R150 Alignment

West of Duleek the R150 extends to a junction with the N2 at Brien's Cross over a distance of 5km.

The overall alignment and layout of the R150 is of reasonably high quality between Duleek and the N2 as shown in the photographs in Appendix 13.6. The limited number of vehicles generated by the development that will use the R150 means that there would be a negligible impact on the R150.

The photographs show that the R150 is highly suitable as a haul route from the west to the proposed development at Carranstown.

## 13.4 PREDICTED IMPACTS

### Impact 1

The proposed development will result in additional turning movements on the R152 at the entrance to the waste-to-energy facility.

### Impact 2

The two way traffic flows on the R152 will increase from 1,108 veh to 1,142 veh during the peak hour. This equates to an increase of 3 %.

### Impact 3

The additional traffic generated by the facility will increase the highest Reference Flow Capacity at the highest approach to the R150/R152 junction from 0.678 to 0.718. This compares to a desirable maximum of 0.85.

### Impact 4

The additional traffic generated by the facility will increase the flows at the M1/R150 by a negligible amount. The roundabouts currently operate well, with out and queuing.

### Impact 5

The additional traffic generated by the facility will increase the flows at the N2/R150, N2/R153 and N2/R152 junctions by a negligible amounts.

### Impact 6

The construction traffic generated by the facility will have a similar impact on capacity as the operational phase generated traffic.

## 13.5 PROPOSED MITIGATION

### Mitigation 1

The existing R152 will be widened to provide a ghost island junction, allowing through traffic to safely pass stationary vehicles waiting to turn into the facility.

### Mitigation 2

The increase in traffic flows will not adversely affect the operation of the road. The provision of turning lanes will mitigate any impacts on the flow due to turning traffic.

### Mitigation 3

The slight increase in RFC and the fact that the RFC is well below the desirable minimum means that the impact on the junction capacity is negligible. No mitigation measures are proposed at this junction.

### Mitigation 4

The increase in traffic flows at the junction is negligible. No mitigation measures are proposed at this junction.

### Mitigation 5

The increases in traffic flows at the junctions are negligible. No mitigation measures are proposed at this junction.

### Mitigation 6

The increase in traffic flows on the surrounding road network the junctions are negligible. No mitigation measures are proposed at this junction.

## 13.6 CONCLUSIONS

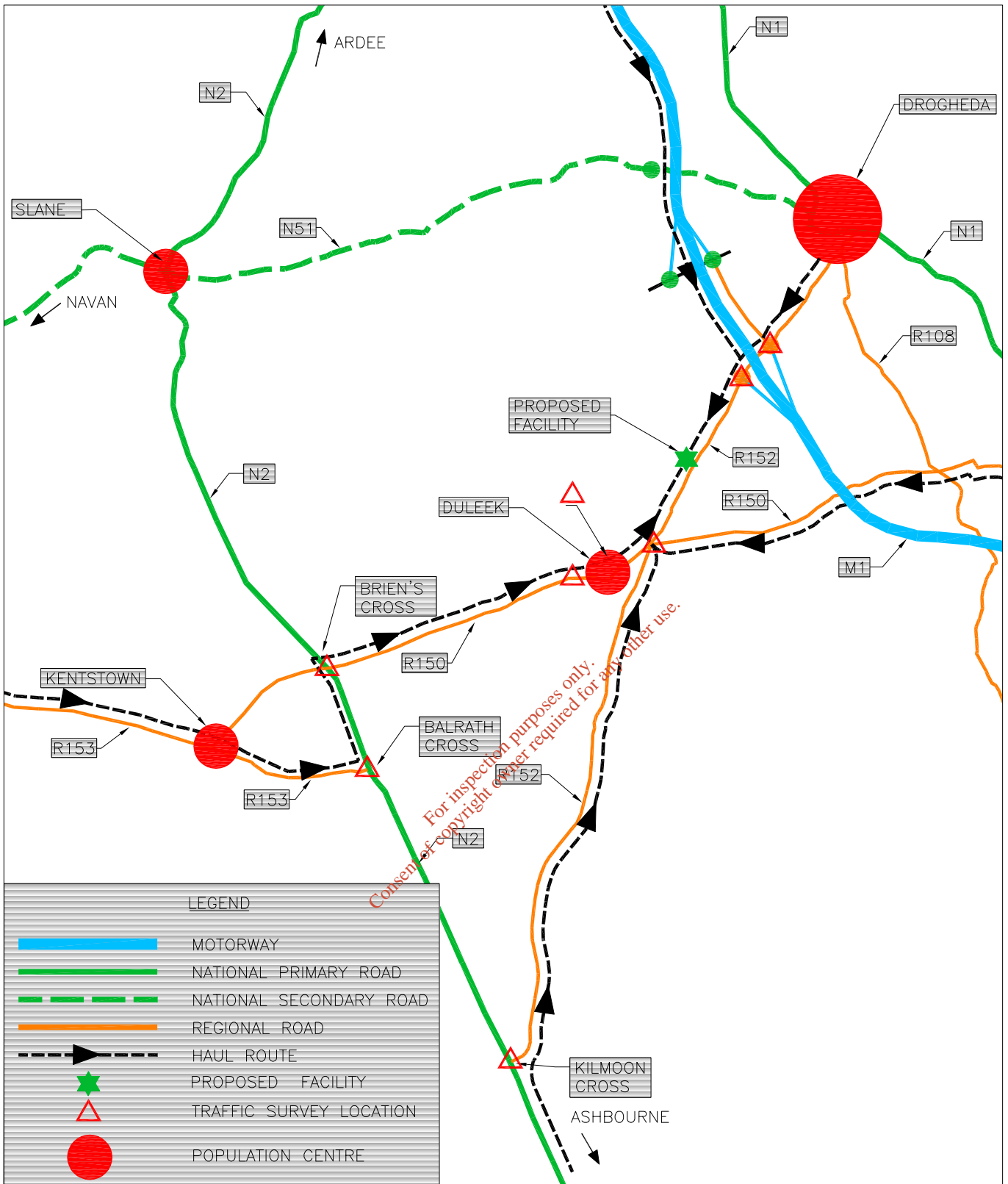
The conclusions of this Traffic Impact Assessment are as follows:


- The proposed development of a 70 MW waste-to-energy plant for the acceptance of Non Hazardous Waste at Carranstown will be accessed from the existing R152 by means of a priority controlled junction.

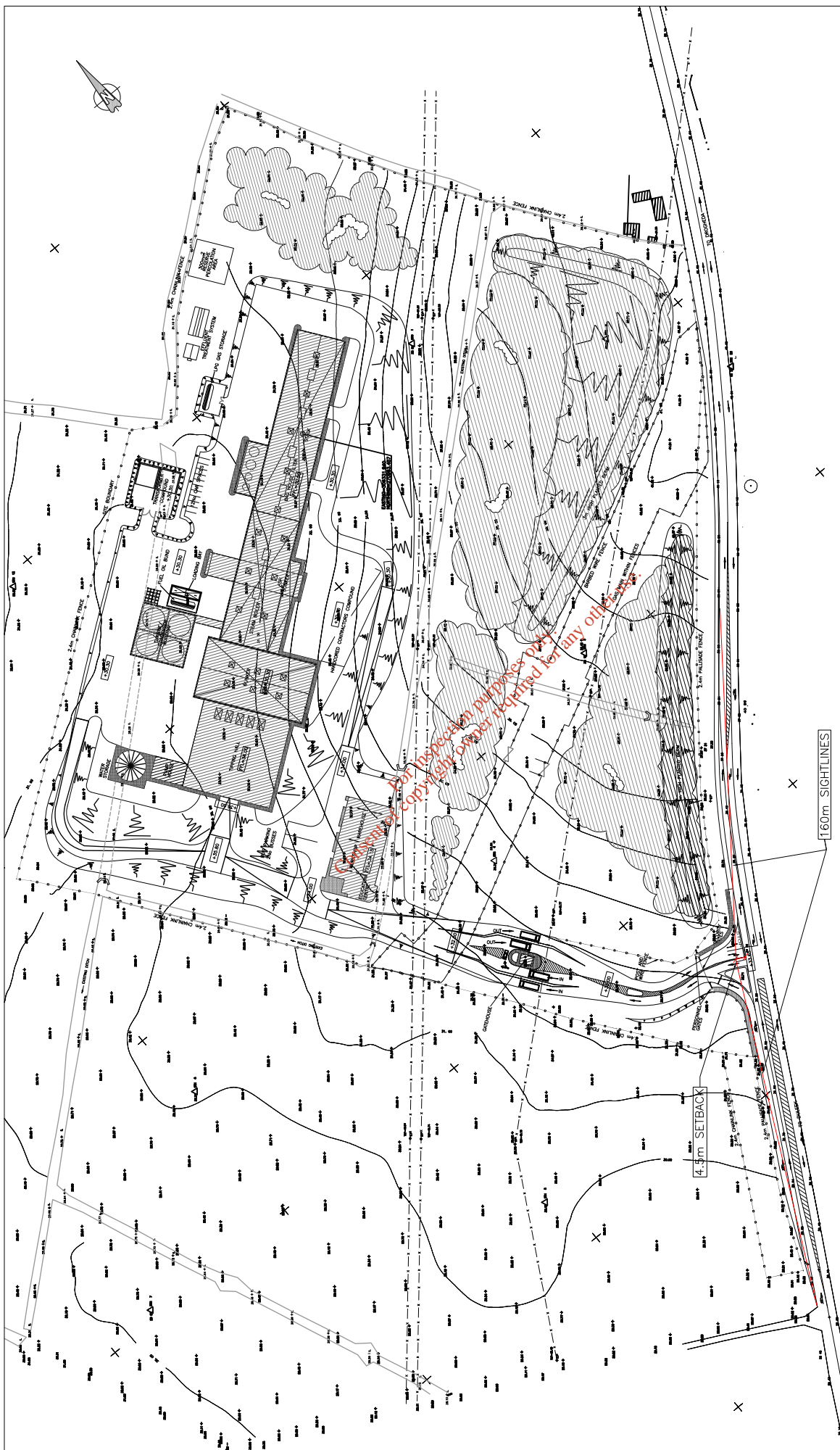


- The R152 currently operates with a Level of Service (LOS) E, as defined by the NRA. With the development generated traffic, the road will continue to operate with a LOS E.
- The proposed priority controlled junction at the site entrance will operate well within capacity under the expected traffic conditions.
- The R152/R150 junction at Duleek will operate within capacity under the expected traffic conditions as a result of the development. The traffic flow at this junction will reach capacity in the year 2013. The construction of the planned Duleek by-pass will improve the traffic flows in and around the village of Duleek, particularly the R150/ R152 junction.
- The M1/R152 junction will operate well within capacity under the expected traffic conditions with no significant loss in spare capacity as a result of the traffic generated by the development.
- Truck traffic on the western haul route through Kentstown will not use the section of the R150 past Kentstown primary school.
- Traffic impacts at the 3 junctions on the N2 at Brien's cross, at Balrath and Kilmoon west of the site will be very low and there will be no operational problems as a result of the development.
- The construction traffic will be similar operational traffic during the Peak Hour. The R152 has sufficient capacity to cater for the anticipated construction traffic.

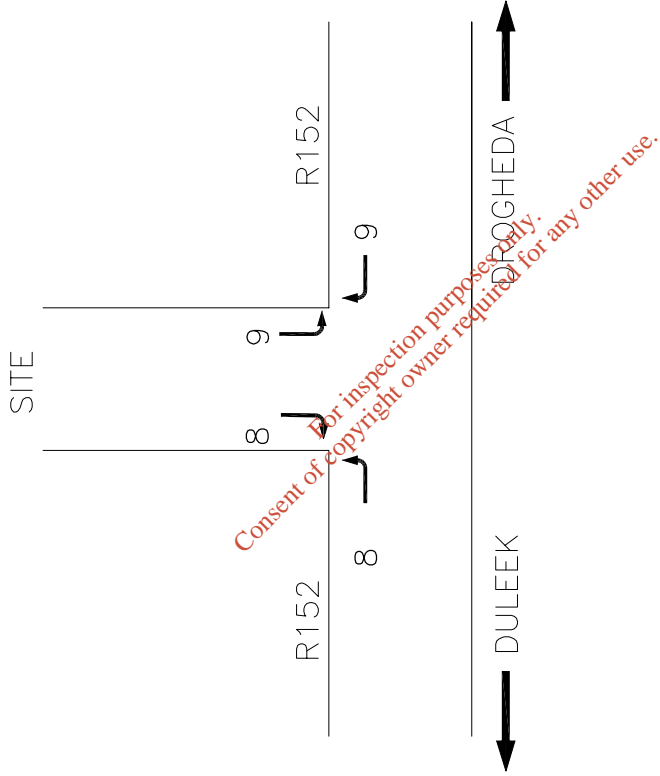
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	Drawing Title		LOCATION MAP & HAUL ROUTES			
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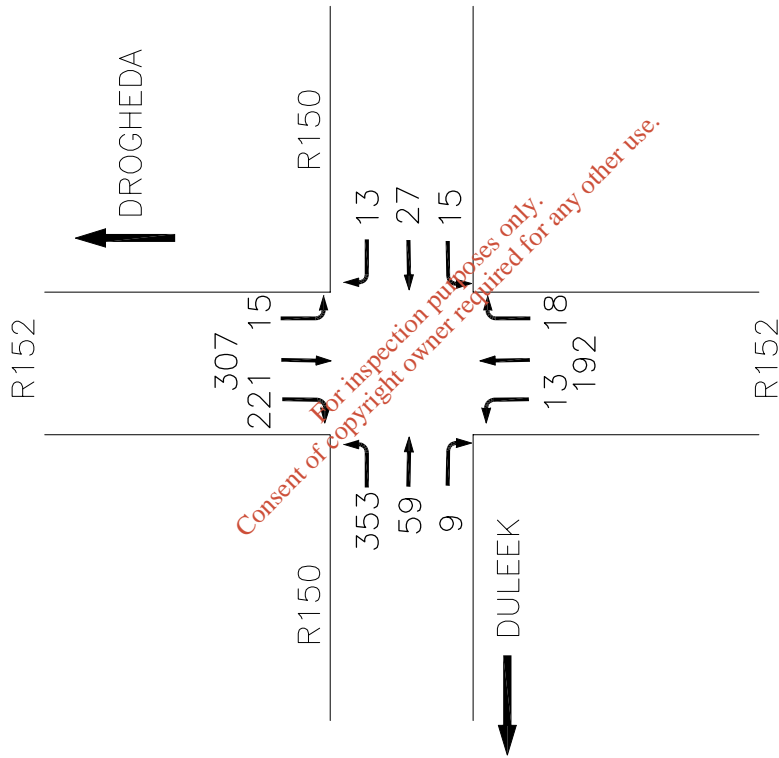



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<p>CAD File  <b>FIGURE 2</b></p>		<p>Checked  <b>GTM</b></p>		<p>Approved  <b>SMG</b></p>	
<p>Drawing Localton: L:\acaddwg\2005\05186\Drawings\FIGURE 2.dwg</p>		<p>Drawn  <b>JC</b></p>		<p>Drawing No.  <b>FIGURE 2</b></p>	
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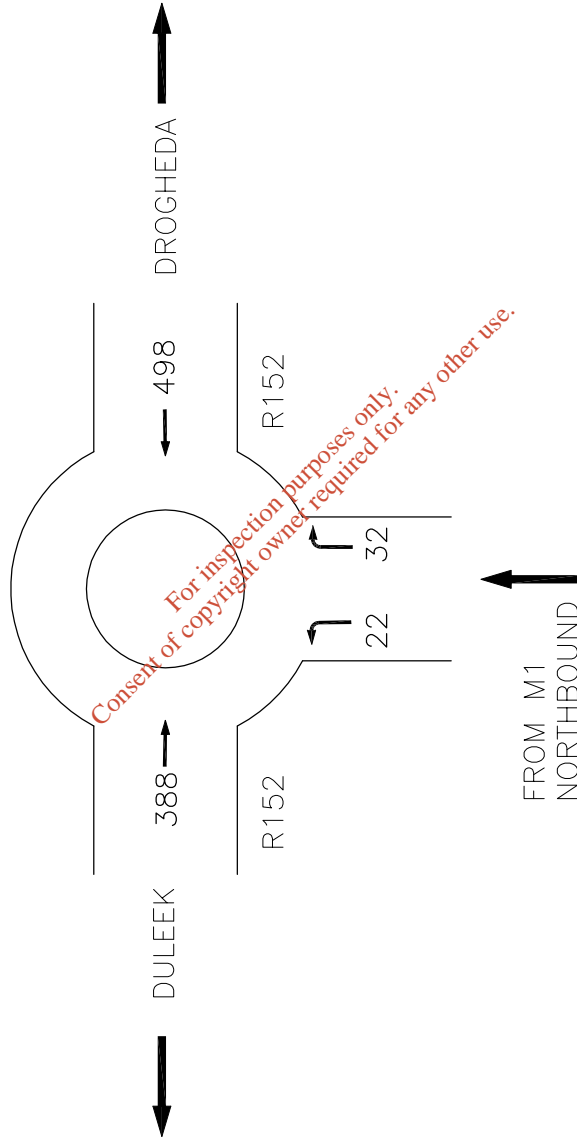
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Date	Jan '06	Scale	N.T.S	CAD File	FIGURE 3
Project No.	05.186	Drawn	JC	Checked	GTM
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Date	Jan '06	Scale	N.T.S	CAD File	FIGURE 5
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<b>Project Title</b> WASTE TO ENERGY FACILITY AT CARRANSTOWN, Co MEATH		<b>Project No.</b> 05.186	
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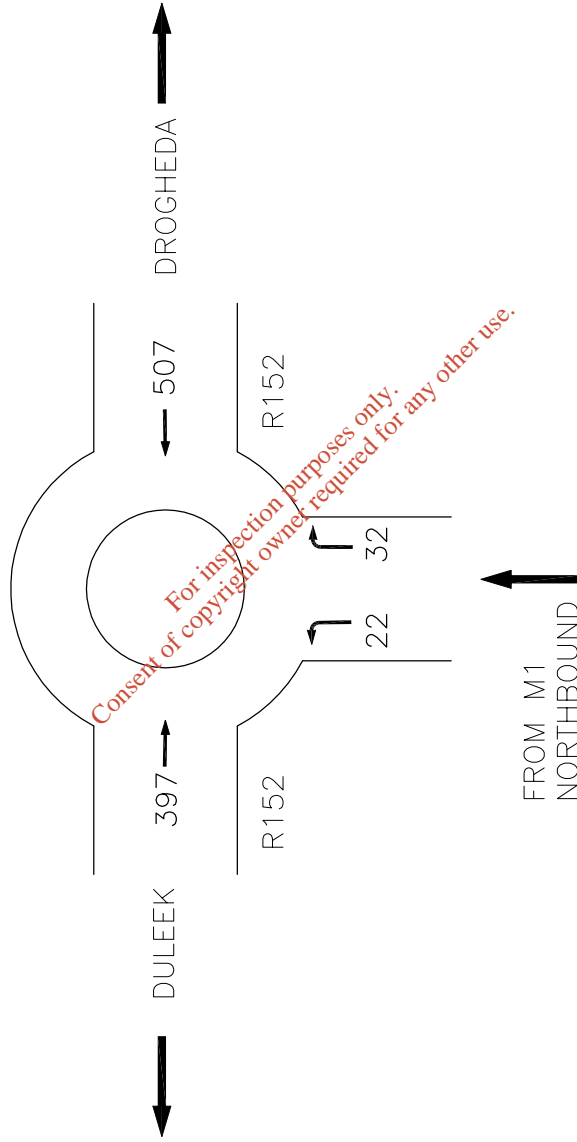


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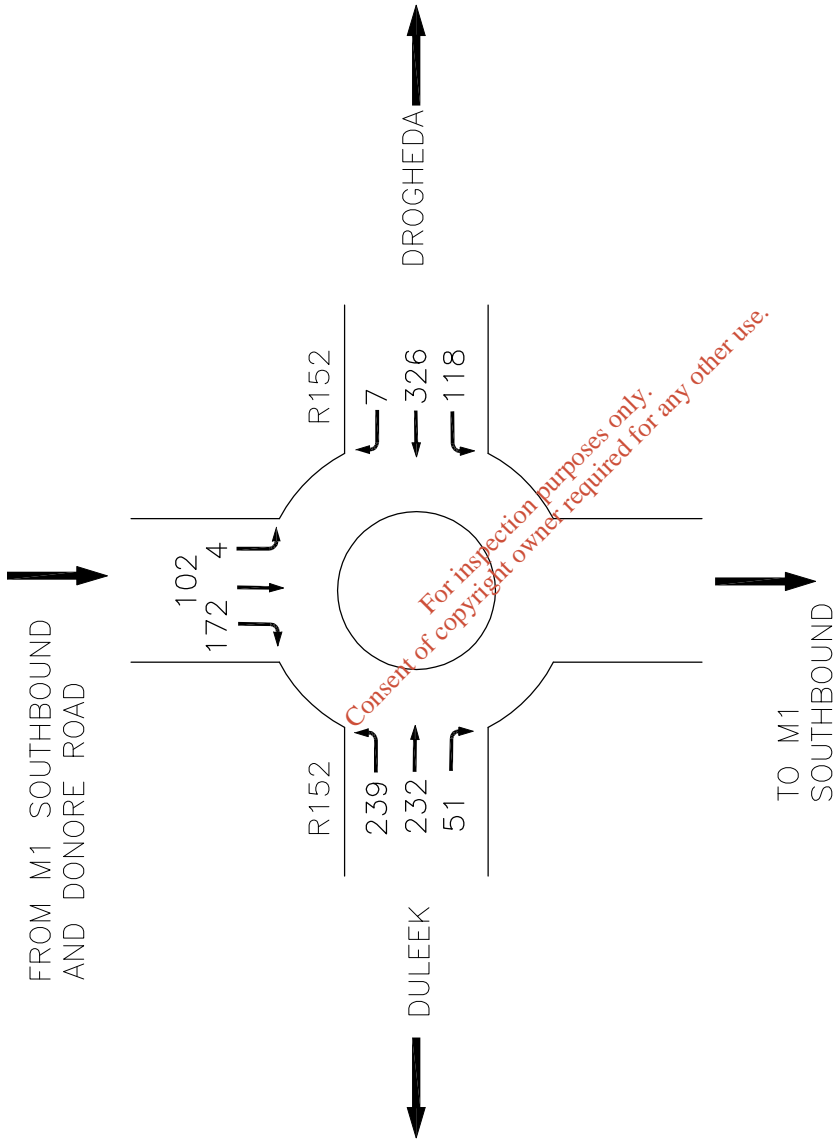
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 Tel : +353 1 294 0800  
 Fax : +353 1 294 0820  
 e-mail : info@rod.ie  
 www.roughanodonovan.com

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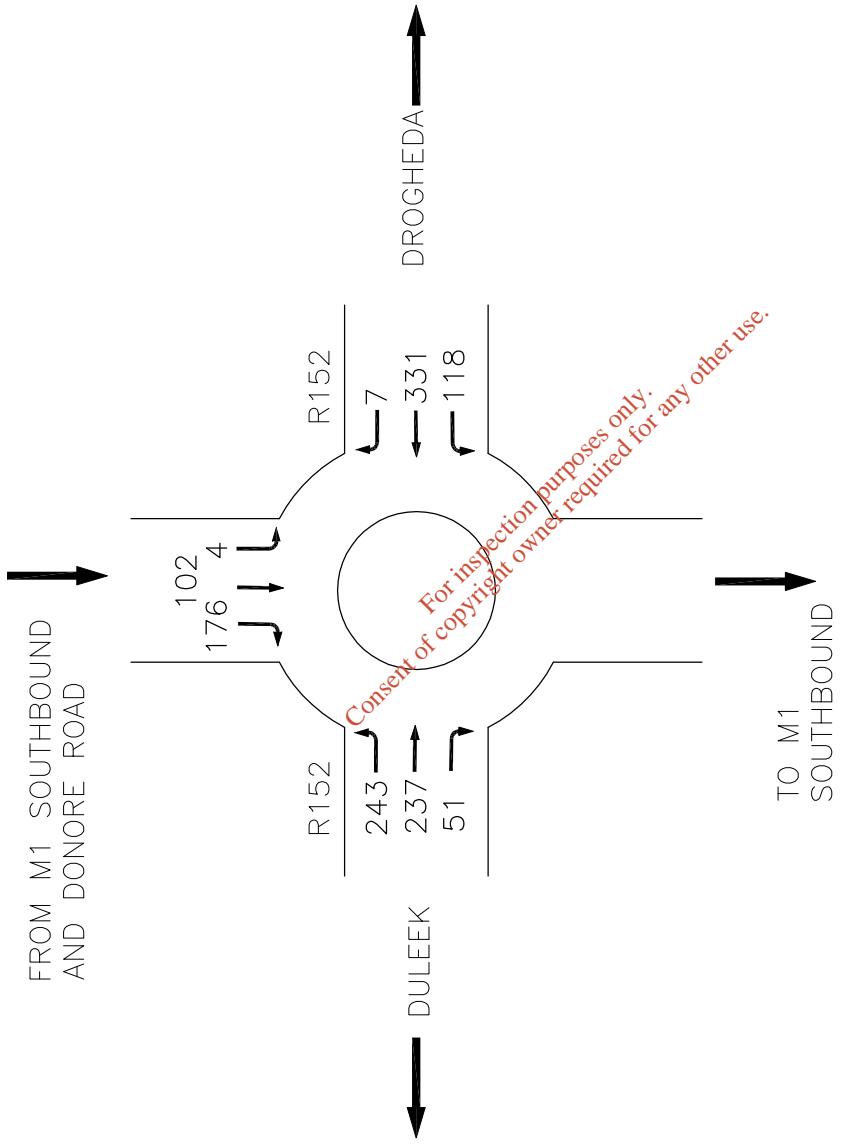
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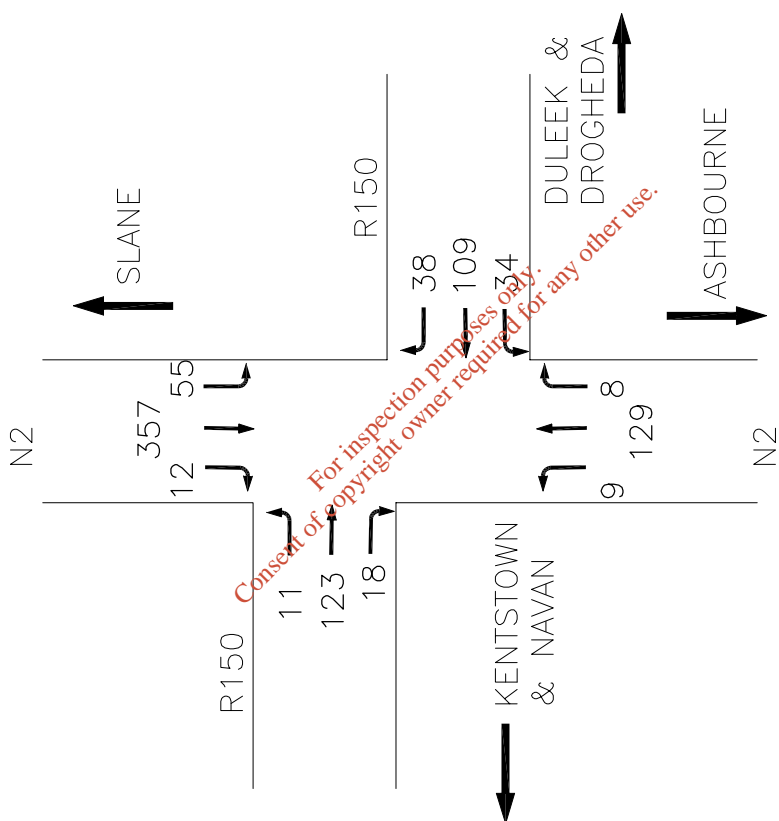
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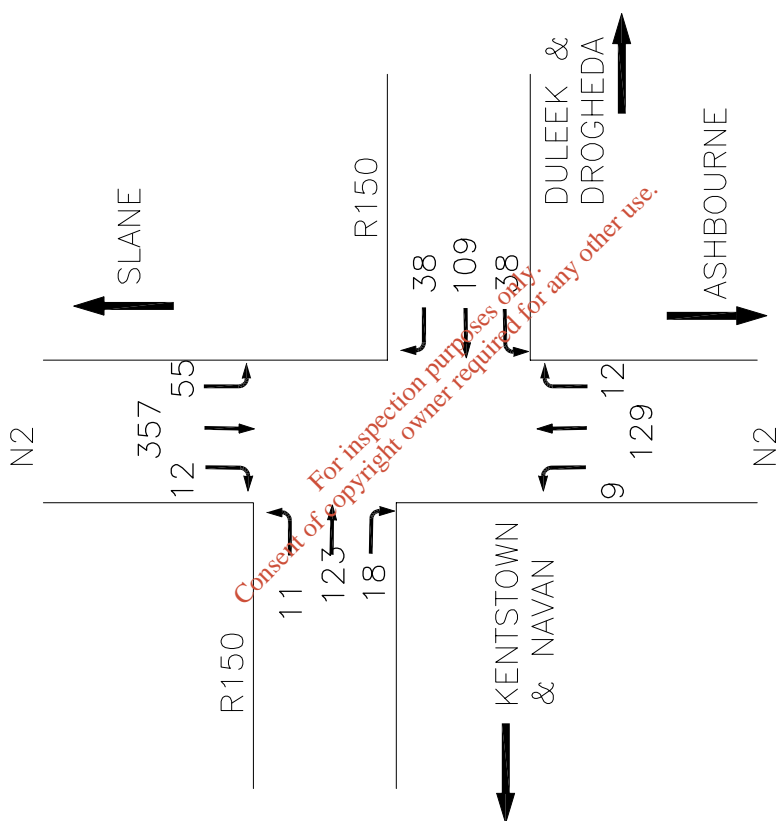
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 Sandyford, Dublin 18.  
 Tel : +353 1 294 0800  
 Fax : +353 1 294 0820  
 e-mail : info@rod.ie  
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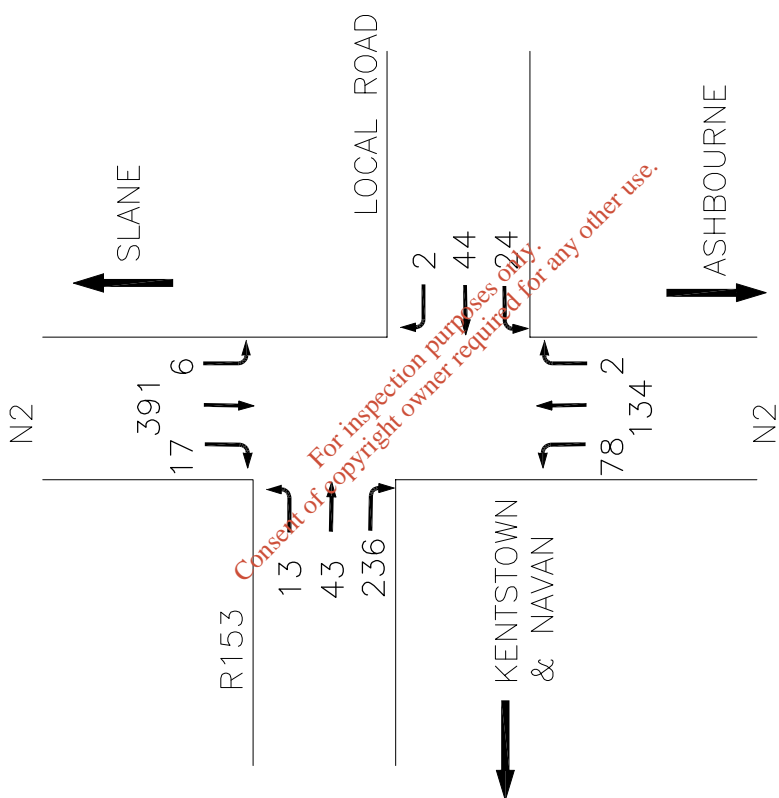
<b>Project Title</b> WASTE TO ENERGY FACILITY AT CARRANSTOWN, Co MEATH		<b>Project No.</b> 05.186		<b>Figure No.</b> FIGURE 8		<b>Scale</b> N.T.S.		<b>Date</b> Jan '06	
<b>Drawing Title</b> M1/R152 EASTERN ROUNDABOUT POST DEVELOPMENT AM PEAK HOUR FLOWS		<b>Approved</b> SMG		<b>Checked</b> GTM		<b>Drawn</b> SP		<b>Rev.</b> -	
<b>Address</b> Arena House, Arena Road, Sandyford, Dublin 18. Tel : +353 1 294 0800 Fax : +353 1 294 0820 e-mail : info@rod.ie www.roughanodonovan.com		<b>CAD File</b> FIGURE 8		<b>Consulting Engineers</b> Civil - Structural - Transportation - Environmental		<b>Roughan &amp; O'Donovan</b>		<b>Consent of copyright owner required for any other use. For inspection purposes only.</b>	




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Date	Jan '06	Scale	N.T.S	CAD File	FIGURE 11
Project No.	05.186	Drawn	JC	Checked	GTM
Approved	SMG	Drawing No.	FIGURE 11	Rev.	-
Drawing Title <b>N2/R150 JUNCTION AT BRIEN'S CROSS          PRE DEVELOPMENT AM PEAK HOUR FLOWS</b>					

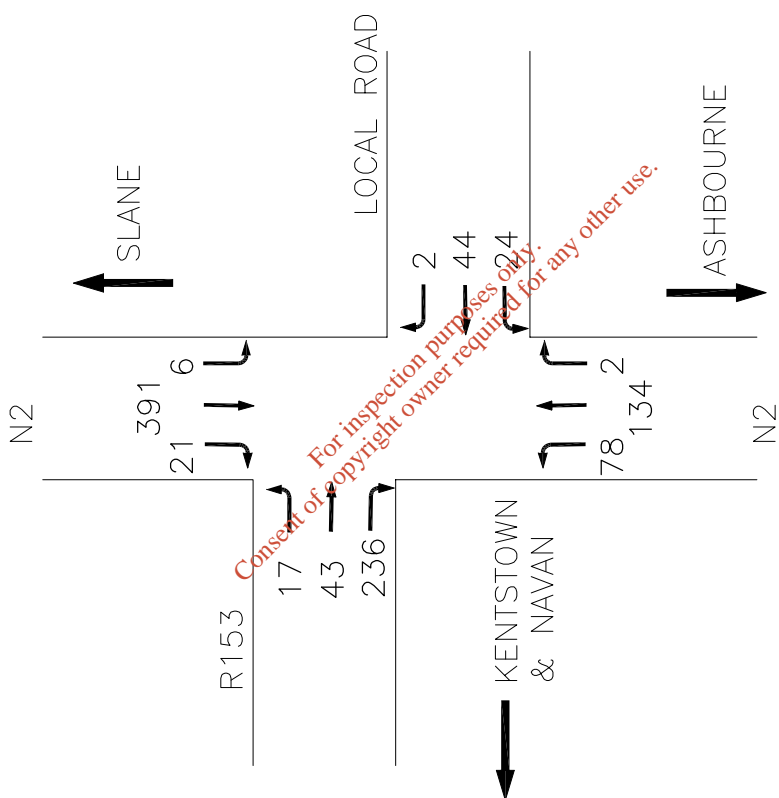


<p><b>Roughan &amp; O'Donovan</b> Consulting Engineers Civil - Structural - Transportation - Environmental</p>		<p>Arena House, Arena Road, Sandyford, Dublin 18. Tel : +353 1 294 0800 Fax : +353 1 294 0820 e-mail : info@rod.ie www.roughanodonovan.com</p>		<p>Project Title <b>WASTE TO ENERGY FACILITY AT CARRANSTOWN, Co MEATH</b></p>	
Date	Jan '06	Scale	N.T.S	CAD File	FIGURE 12
Project No.	05.186	Drawn	JC	Checked	GTM
Approved	SMG	Drawing No.	FIGURE 12	Rev.	-
<p>Drawing Title <b>N2/R150 JUNCTION AT BRIEN'S CROSS POST DEVELOPMENT AM PEAK HOUR FLOWS</b></p>					




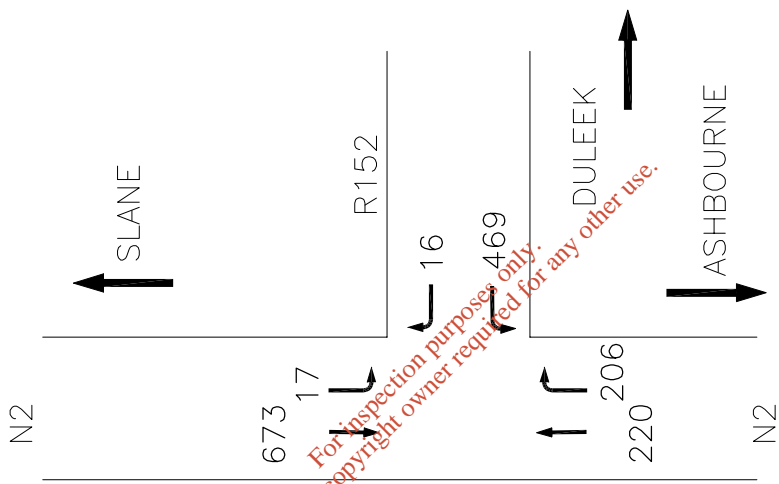
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		Date <b>Jan '06</b>		Scale <b>N.T.S</b>		CAD File <b>FIGURE 13</b>		Project No. <b>05.186</b>		Drawn <b>JC</b>		Checked <b>GTM</b>		Approved <b>SMG</b>		Drawing No. <b>FIGURE 13</b>	




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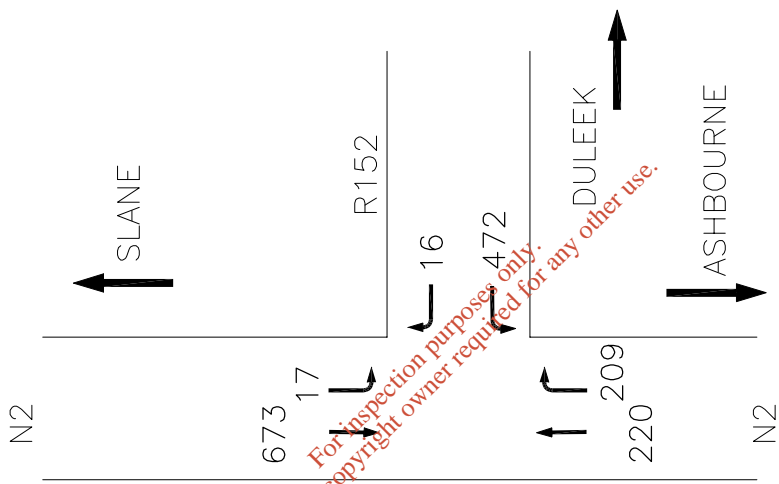
 Consulting Engineers <small>Civil - Structural - Transportation - Environmental</small>		Arena House, Arena Road, Sandyford, Dublin 18. Tel : +353 1 294 0800 Fax : +353 1 294 0820 e-mail : info@rod.ie www.roughanodonovan.com		Project Title <b>WASTE TO ENERGY FACILITY          AT CARRANSTOWN, Co MEATH</b>													
		Date Jan '06		Scale N.T.S		CAD File FIGURE 14		Project No. 05.186		Drawn JC		Checked GTM		Approved SMG		Drawing No. FIGURE 14	




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		Date <b>Jan '06</b>		Scale <b>N.T.S</b>		CAD File <b>FIGURE 15</b>		Project No. <b>05.186</b>		Drawn <b>JC</b>		Checked <b>GTM</b>		Approved <b>SMG</b>		Drawing No. <b>FIGURE 15</b>	

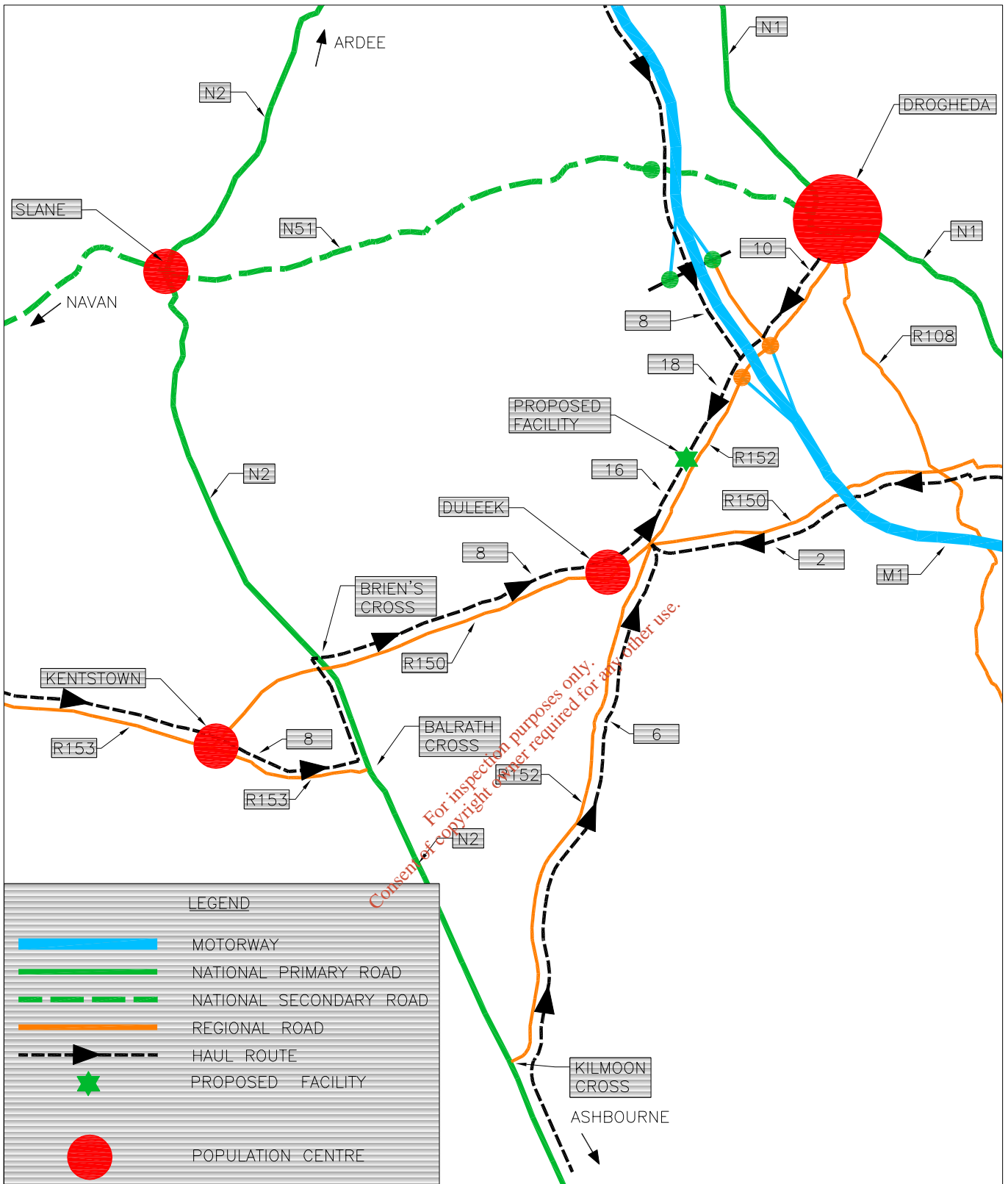




 <b>Roughan &amp; O'Donovan</b> Consulting Engineers <small>Civil - Structural - Transportation - Environmental</small>		Arena House, Arena Road, Sandyford, Dublin 18. Tel : +353 1 294 0800 Fax : +353 1 294 0820 e-mail : info@rod.ie www.roughanodonovan.com		Project Title <b>WASTE TO ENERGY FACILITY          AT CARRANSTOWN, Co MEATH</b>	
Date	Jan '06	Scale	N.T.S	CAD File	FIGURE 16
				Project No.	05.186
				Drawn	JC
				Checked	GTM
				Approved	SMG
				Drawing No.	FIGURE 16
				Rev.	-

**Appendix 13.1**  
**Figures**

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LEGEND	
	MOTORWAY
	NATIONAL PRIMARY ROAD
	NATIONAL SECONDARY ROAD
	REGIONAL ROAD
	HAUL ROUTE
	PROPOSED FACILITY
	POPULATION CENTRE

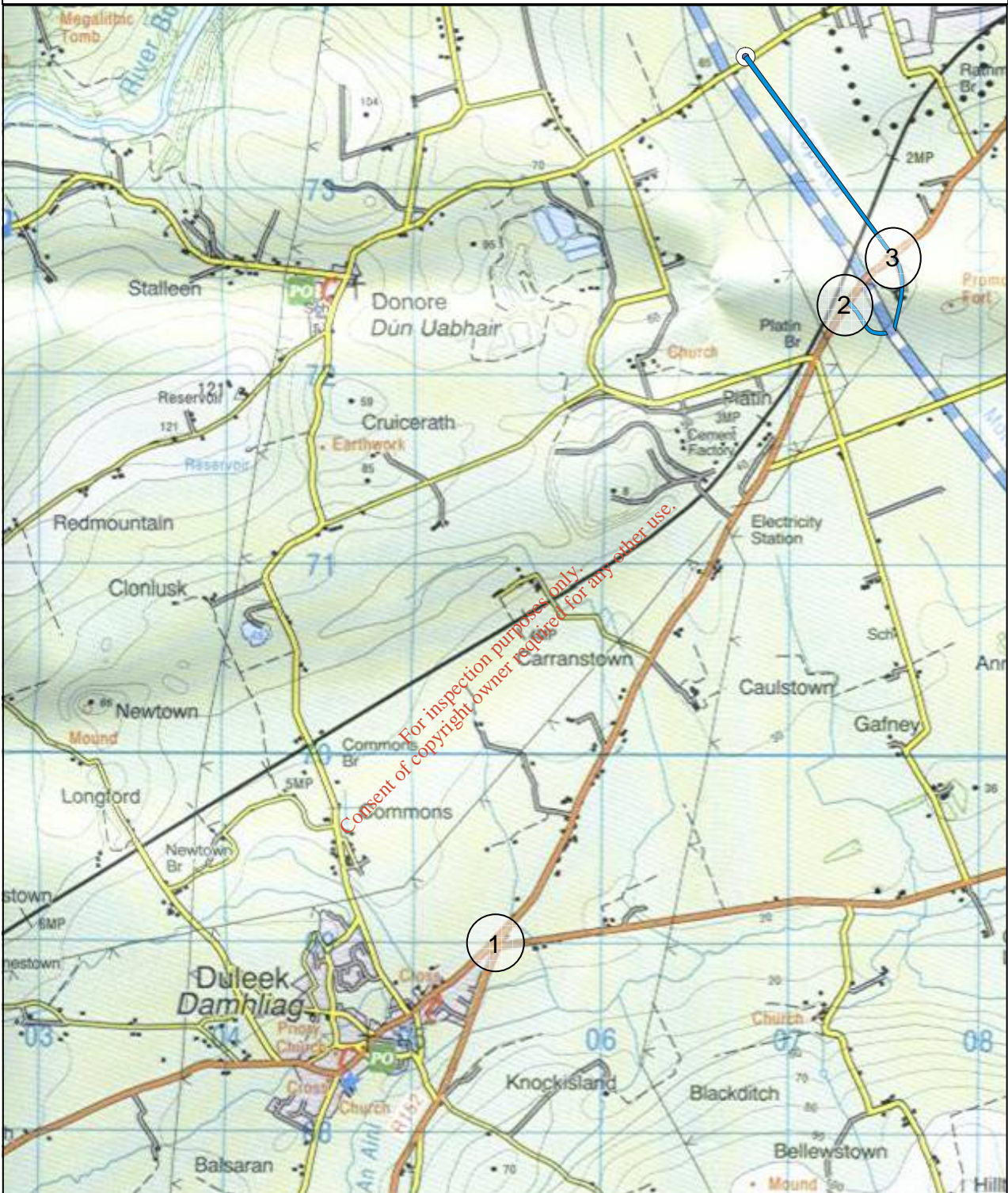
**Roughan & O'Donovan**  
 Consulting Engineers  
 Arena House, Arena Road,  
 Sandyford, Dublin 18.  
 Tel:+353 1 2940800, Fax :+353 1 2940820  
 e-mail : info@rod.ie  
 www.roughanodonovan.com



Project Title		WASTE TO ENERGY FACILITY AT CARRANSTOWN, CO MEATH			
Drawing Title		AM PEAK HOUR ADDITIONAL TRUCK MOVEMENTS			
Date	Jan '06	Scale	NTS	CAD File	05186-Fig17
Project No.	05.186				
Drawn	JC	Checked	GTM	Approved	SMG
Drawing No.	Figure 17			Rev.	-

**Appendix 13.2**  
**Traffic Counts**

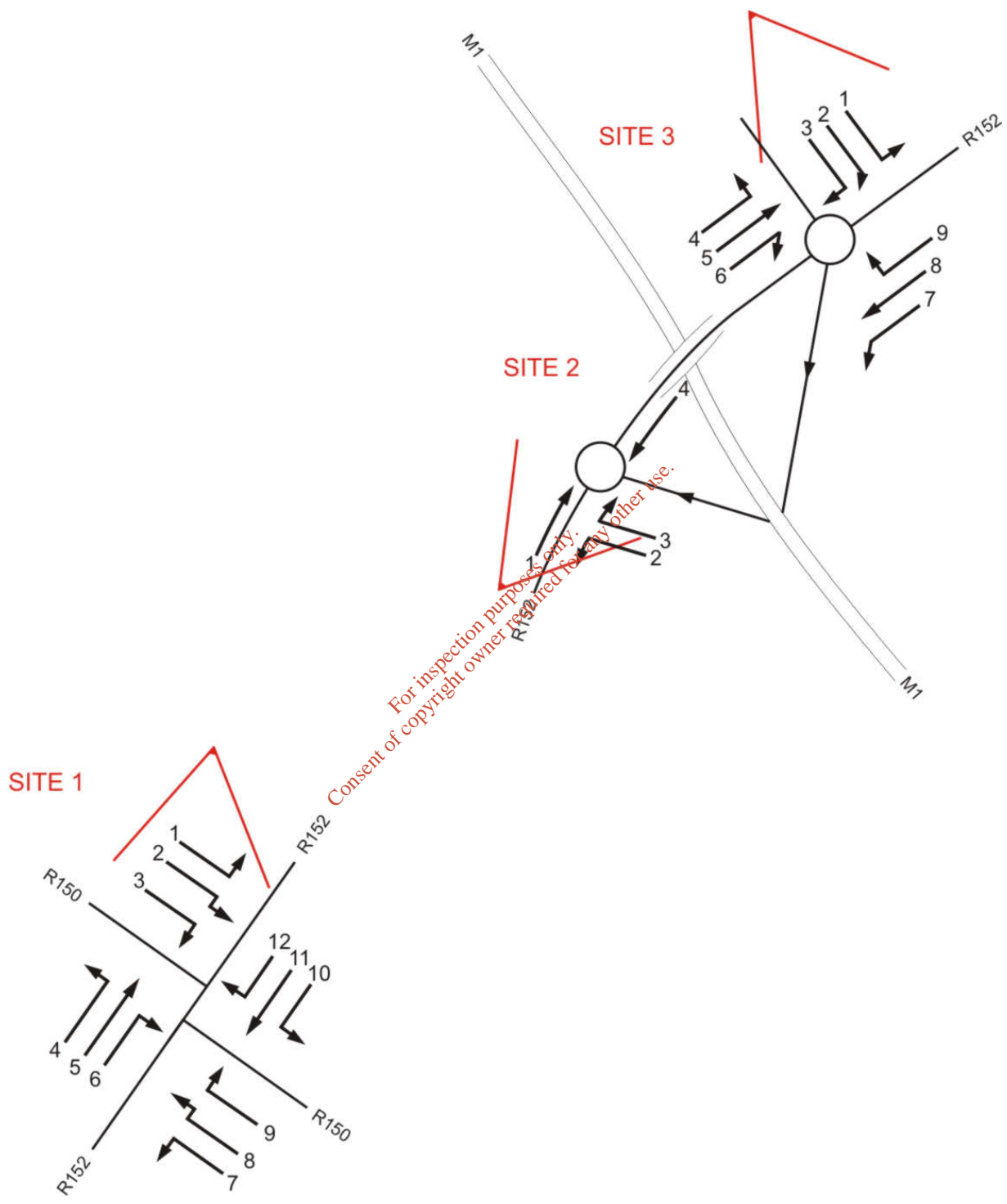
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For inspection purposes only.



# Site Locations



	Job number: ATH/05/268	Job date: 17 <sup>th</sup> November 2005	Drawing No: ATH/05/268-1	
	Client: Roughan & O'Donovan	Job day: Thursday	Author: JPD	

# Movement Numbers & Directions



	Job number: ATH/05/268	Job date: 17 <sup>th</sup> November 2005	Drawing No: ATH/05/268-2	
	Client: Roughan & O'Donovan	Job day: Thursday	Author: JPD	

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	26	9	0	9	0	44	13	3	1	1	0	18	4	0	2	0	0	6			
07:15	27	9	1	6	0	43	20	6	1	2	0	29	1	1	0	0	0	2			
07:30	54	26	5	11	1	97	13	7	0	1	0	21	1	0	1	0	0	2			
07:45	60	23	7	7	2	99	17	2	0	1	1	21	2	0	0	0	0	2			
<b>H/TOT</b>	<b>167</b>	<b>67</b>	<b>13</b>	<b>33</b>	<b>3</b>	<b>283</b>	<b>63</b>	<b>18</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>89</b>	<b>8</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>12</b>			
08:00	52	12	5	6	3	78	9	8	0	0	0	17	4	1	0	0	0	5			
08:15	63	10	6	8	1	88	12	2	0	1	0	15	0	1	0	0	0	1			
08:30	84	14	2	7	1	108	10	4	0	1	0	15	0	0	0	0	0	0			
08:45	57	10	4	8	0	79	10	2	0	0	0	12	0	0	1	2	0	3			
<b>H/TOT</b>	<b>256</b>	<b>46</b>	<b>17</b>	<b>29</b>	<b>5</b>	<b>353</b>	<b>41</b>	<b>16</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>59</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>9</b>			
09:00	48	7	3	11	0	69	10	3	0	0	0	14	3	0	0	1	0	4			
09:15	41	4	0	6	0	51	7	3	0	1	0	11	1	0	0	0	0	1			
09:30	46	13	1	10	0	70	5	3	0	0	0	8	1	0	0	0	0	1			
09:45	40	5	4	8	0	57	3	0	0	0	0	3	2	0	0	0	0	2			
<b>H/TOT</b>	<b>175</b>	<b>29</b>	<b>8</b>	<b>35</b>	<b>0</b>	<b>247</b>	<b>25</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>36</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>8</b>			
10:00	35	10	4	7	0	56	2	3	1	0	0	6	1	1	0	0	0	2			
10:15	52	11	1	7	1	72	6	0	0	0	0	6	1	2	0	1	0	4			
10:30	42	6	6	5	0	59	8	3	0	0	0	11	1	0	0	0	0	1			
10:45	29	9	2	10	0	50	8	2	0	0	0	10	1	0	1	0	0	2			
<b>H/TOT</b>	<b>158</b>	<b>36</b>	<b>13</b>	<b>29</b>	<b>1</b>	<b>237</b>	<b>24</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>9</b>			
11:00	28	8	2	14	0	52	6	0	1	1	0	8	0	0	0	0	0	0			
11:15	28	10	6	15	1	60	4	1	0	0	0	5	1	0	0	0	0	1			
11:30	32	2	4	7	1	46	5	0	1	0	0	6	1	0	0	0	0	1			
11:45	27	5	3	9	0	44	7	2	1	0	0	10	1	0	1	0	0	2			
<b>H/TOT</b>	<b>115</b>	<b>25</b>	<b>15</b>	<b>45</b>	<b>2</b>	<b>202</b>	<b>22</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>29</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>			
12:00	30	6	3	5	0	44	5	3	0	0	0	8	0	1	0	0	0	1			
12:15	38	5	2	7	0	52	6	2	0	0	0	8	0	0	1	0	0	1			
12:30	37	6	2	14	1	60	6	2	0	0	0	8	1	1	0	0	0	2			
12:45	35	5	1	6	0	47	8	0	0	1	0	9	1	0	0	1	0	2			
<b>H/TOT</b>	<b>140</b>	<b>22</b>	<b>8</b>	<b>32</b>	<b>1</b>	<b>203</b>	<b>25</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>33</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>6</b>			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	29	9	2	5	0	45	4	2	1	0	0	7	1	0	0	1	0	2			
13:15	31	11	3	3	0	48	7	2	0	0	0	9	1	0	0	0	0	1			
13:30	25	3	3	9	1	41	7	2	1	0	1	11	3	0	0	0	0	3			
13:45	29	8	3	5	0	45	8	1	0	0	0	9	2	0	0	0	0	2			
<b>H/TOT</b>	<b>114</b>	<b>31</b>	<b>11</b>	<b>22</b>	<b>1</b>	<b>179</b>	<b>26</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>36</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>8</b>			
14:00	43	14	0	5	0	62	4	1	0	0	0	5	3	1	0	0	0	4			
14:15	32	10	3	9	0	54	5	1	0	0	0	7	2	1	0	0	0	3			
14:30	40	6	4	7	0	57	8	3	1	0	0	12	0	0	0	0	0	0			
14:45	21	7	3	3	1	35	4	2	0	0	0	6	1	0	1	0	0	2			
<b>H/TOT</b>	<b>136</b>	<b>37</b>	<b>10</b>	<b>24</b>	<b>1</b>	<b>208</b>	<b>21</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>30</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>9</b>			
15:00	35	6	3	9	0	53	5	0	0	0	0	6	0	0	0	0	0	0			
15:15	30	4	4	7	0	45	3	0	0	0	0	3	1	0	0	0	0	1			
15:30	36	5	2	7	2	52	2	0	0	0	0	4	1	0	1	0	0	2			
15:45	36	7	2	7	0	52	9	1	0	1	0	11	3	0	0	0	0	3			
<b>H/TOT</b>	<b>137</b>	<b>22</b>	<b>11</b>	<b>30</b>	<b>2</b>	<b>202</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>			
16:00	44	10	3	11	1	69	8	0	0	0	0	8	1	0	0	0	0	1			
16:15	41	6	2	3	1	53	2	3	1	1	0	7	3	0	0	0	0	3			
16:30	43	8	0	13	0	64	7	2	0	1	0	10	2	0	0	0	0	2			
16:45	46	14	1	7	1	69	14	2	0	0	2	18	3	0	0	0	0	3			
<b>H/TOT</b>	<b>174</b>	<b>38</b>	<b>6</b>	<b>34</b>	<b>3</b>	<b>255</b>	<b>31</b>	<b>7</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>43</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>			
17:00	51	12	5	5	2	75	5	1	1	0	0	7	1	1	1	0	0	3			
17:15	51	19	0	5	0	75	10	3	0	0	0	13	3	1	0	1	0	5			
17:30	50	8	1	6	0	65	7	1	0	0	0	8	5	0	0	0	0	5			
17:45	60	7	2	4	0	73	4	0	0	1	0	5	0	0	0	0	0	0			
<b>H/TOT</b>	<b>212</b>	<b>46</b>	<b>8</b>	<b>20</b>	<b>2</b>	<b>288</b>	<b>26</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>33</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>13</b>			
18:00	48	6	2	3	0	59	13	0	0	0	0	13	2	0	0	0	0	2			
18:15	35	4	0	1	1	41	5	3	0	0	0	8	0	0	0	0	0	0			
18:30	33	2	1	0	0	36	4	1	0	0	0	5	1	0	0	0	0	1			
18:45	28	2	0	0	1	31	3	1	0	0	0	4	0	0	0	0	0	0			
<b>H/TOT</b>	<b>144</b>	<b>14</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>167</b>	<b>25</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>			
<b>P/TOT</b>	<b>1928</b>	<b>413</b>	<b>123</b>	<b>337</b>	<b>23</b>	<b>2824</b>	<b>348</b>	<b>97</b>	<b>11</b>	<b>15</b>	<b>4</b>	<b>475</b>	<b>67</b>	<b>12</b>	<b>10</b>	<b>7</b>	<b>0</b>	<b>96</b>			



## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 4					TOT	MOVEMENT 5					TOT	MOVEMENT 6					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	5	1	0	0	0	6	21	3	1	7	0	32	10	3	0	0	0	13
07:15	1	0	0	0	0	1	14	4	0	0	0	18	10	1	0	1	0	12
07:30	5	2	0	0	0	7	28	5	2	4	0	39	4	2	1	0	0	7
07:45	4	2	1	0	0	7	36	9	0	7	0	52	1	2	0	0	0	3
H/TOT	15	5	1	0	0	21	99	21	3	18	0	141	25	8	1	1	0	35
08:00	1	1	0	1	0	3	24	8	3	6	0	42	3	1	0	0	0	4
08:15	4	0	0	0	1	5	44	5	4	3	0	56	2	0	0	0	0	2
08:30	3	0	0	0	0	3	51	4	2	3	0	60	5	1	0	1	0	7
08:45	1	0	1	0	0	2	26	6	3	6	0	41	3	2	0	0	0	5
H/TOT	9	1	1	1	1	13	145	23	12	18	1	199	13	4	0	1	0	18
09:00	4	0	0	1	0	5	31	3	5	4	0	43	1	0	0	1	0	2
09:15	5	1	0	2	0	8	29	7	2	6	0	44	1	2	1	0	0	4
09:30	0	0	0	0	0	0	36	4	0	10	0	50	1	1	0	0	0	2
09:45	0	0	1	0	0	1	20	3	3	2	1	29	2	0	1	0	0	3
H/TOT	9	1	1	3	0	14	116	17	10	22	1	166	5	3	2	1	0	11
10:00	0	0	0	0	0	0	25	3	3	4	0	35	2	0	0	0	0	2
10:15	1	1	0	0	0	2	20	5	0	7	0	32	2	0	0	0	0	2
10:30	1	0	0	0	0	1	31	2	2	3	0	38	0	1	0	0	0	1
10:45	1	1	0	0	0	2	18	3	5	6	0	32	0	0	0	0	1	1
H/TOT	3	2	0	0	0	5	94	13	10	20	0	137	4	1	0	0	1	6
11:00	2	0	2	0	0	4	16	5	1	3	0	25	3	3	0	0	0	6
11:15	1	0	0	0	0	1	20	8	1	11	0	40	1	0	0	0	0	1
11:30	2	0	1	0	0	3	15	4	3	5	0	27	2	0	0	0	0	2
11:45	1	0	0	0	0	1	14	6	0	3	0	23	0	0	0	0	0	0
H/TOT	6	0	3	0	0	9	65	23	5	22	0	115	6	3	0	0	0	9
12:00	4	2	0	0	0	6	22	7	1	10	0	40	4	0	0	0	0	4
12:15	2	0	0	0	0	2	22	0	2	5	2	31	0	0	0	0	0	0
12:30	1	0	1	0	0	2	20	0	0	7	0	27	0	0	0	0	0	0
12:45	2	0	0	0	0	2	15	5	2	5	0	27	2	0	0	0	0	2
H/TOT	9	2	1	0	0	12	79	12	5	27	2	125	6	0	0	0	0	6

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 4						TOT	MOVEMENT 5						TOT	MOVEMENT 6						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	2	0	0	0	0	2	15	1	2	8	0	26	0	0	0	0	0	0	0		
13:15	1	0	0	0	0	1	22	6	3	3	0	34	1	0	0	0	0	0	1		
13:30	0	0	0	0	0	0	22	5	1	3	0	31	0	1	0	0	0	0	1		
13:45	0	0	0	0	0	0	24	2	3	4	0	33	1	0	0	0	0	0	1		
H/TOT	3	0	0	0	0	3	83	14	9	18	0	124	2	1	0	0	0	0	3		
14:00	3	0	0	0	0	3	17	2	2	7	0	28	5	0	0	0	0	0	5		
14:15	1	1	0	0	0	2	31	4	2	4	0	41	4	0	0	0	0	0	4		
14:30	3	0	0	0	0	3	22	3	3	5	0	33	1	0	0	0	0	0	1		
14:45	1	0	0	0	0	1	29	8	1	1	0	39	2	0	0	0	0	0	2		
H/TOT	8	1	0	0	0	9	99	17	8	17	0	141	12	0	0	0	0	0	12		
15:00	1	0	0	0	0	1	21	4	2	6	0	33	2	1	0	0	0	0	3		
15:15	1	0	0	0	0	1	30	4	4	7	0	45	0	0	0	0	0	0	0		
15:30	1	1	0	0	0	2	29	5	2	2	0	38	2	1	0	0	0	0	3		
15:45	4	1	0	1	0	6	38	6	2	4	0	50	1	1	0	0	0	0	2		
H/TOT	7	2	0	1	0	10	118	19	10	19	0	166	5	3	0	0	0	0	8		
16:00	0	0	1	0	0	1	37	5	8	6	0	56	4	0	0	0	0	0	4		
16:15	0	1	0	1	0	2	31	14	2	4	1	52	4	2	0	0	0	0	6		
16:30	4	2	0	0	0	6	35	11	2	3	1	52	1	1	0	0	0	0	2		
16:45	6	0	0	0	0	6	76	10	4	4	1	95	8	1	0	0	0	0	9		
H/TOT	10	3	1	1	0	15	179	40	16	17	3	255	17	4	0	0	0	0	21		
17:00	16	2	3	0	0	21	54	12	2	7	1	76	3	2	0	0	0	0	5		
17:15	7	0	0	0	0	7	76	12	1	2	1	92	8	2	0	0	0	0	10		
17:30	9	3	0	0	0	12	109	14	0	2	0	125	11	0	1	0	0	0	12		
17:45	4	0	0	0	0	4	69	7	0	4	0	80	5	0	0	0	0	0	5		
H/TOT	36	5	3	0	0	44	308	45	3	15	2	373	27	4	1	0	0	0	32		
18:00	2	1	1	0	0	4	80	12	4	2	1	99	6	0	0	0	0	0	6		
18:15	5	0	0	0	0	5	34	7	1	3	0	45	4	2	0	0	0	0	6		
18:30	2	0	0	0	0	2	44	5	1	0	0	50	1	1	0	0	0	0	2		
18:45	3	0	0	0	0	3	37	3	2	0	0	42	2	0	0	0	0	0	2		
H/TOT	12	1	1	0	0	14	195	27	8	5	1	236	13	3	0	0	0	0	16		
P/TOT	127	23	12	6	1	169	1580	271	99	218	10	2178	135	34	4	3	1	0	177		

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	2	1	0	0	0	3	6	1	0	0	0	7	0	0	0	0	0	0			
07:15	8	1	0	0	0	9	5	1	0	0	0	6	1	0	0	0	0	0			
07:30	4	0	0	0	0	4	8	3	1	0	0	12	2	0	0	1	0	0			
07:45	4	2	0	0	0	6	6	2	0	0	0	8	1	0	0	1	0	0			
H/TOT	18	4	0	0	0	22	25	7	1	0	0	33	4	0	0	2	0	0			
08:00	5	1	0	0	0	6	3	2	0	0	0	5	1	0	0	1	0	0			
08:15	4	0	0	0	0	4	8	4	0	0	1	13	3	1	1	0	0	0			
08:30	2	0	0	0	0	2	3	1	0	0	0	4	1	0	0	1	0	0			
08:45	2	1	0	0	0	3	4	1	0	0	0	5	1	0	0	3	0	0			
H/TOT	13	2	0	0	0	15	18	8	0	0	1	27	6	1	1	5	0	0			
09:00	2	0	0	0	0	2	4	2	0	1	0	7	0	0	0	0	0	0			
09:15	1	0	0	0	0	1	11	0	1	0	0	12	0	0	1	0	0	0			
09:30	3	1	1	0	0	5	10	1	0	0	0	11	2	0	0	0	0	0			
09:45	2	1	0	1	0	4	5	3	1	0	0	9	1	0	0	0	0	0			
H/TOT	8	2	1	1	0	12	30	6	2	1	0	39	3	0	1	0	0	0			
10:00	1	0	1	0	0	2	7	2	0	0	0	9	1	0	0	0	0	0			
10:15	0	1	1	0	0	2	10	1	1	1	0	13	1	0	0	0	0	0			
10:30	2	1	0	0	0	3	5	1	0	0	0	6	1	0	0	0	0	0			
10:45	1	1	0	0	0	2	10	2	0	0	0	12	1	0	0	0	0	0			
H/TOT	4	3	2	0	0	9	32	6	1	1	0	40	4	0	0	0	0	0			
11:00	1	0	0	0	0	1	2	0	0	0	0	2	1	0	0	1	0	0			
11:15	1	1	1	0	0	3	3	4	1	1	0	9	4	0	1	1	0	0			
11:30	1	1	1	0	0	3	4	0	0	0	0	4	2	0	0	0	0	0			
11:45	1	1	1	0	0	3	3	0	0	1	0	4	1	0	0	0	0	0			
H/TOT	4	3	3	0	0	10	12	4	1	2	0	19	8	0	1	2	0	0			
12:00	0	0	0	0	0	0	9	3	0	0	0	12	1	1	0	1	0	0			
12:15	2	0	1	0	0	3	3	1	1	0	0	5	1	0	0	0	0	0			
12:30	2	0	0	0	0	2	6	2	0	0	0	8	2	0	0	0	0	0			
12:45	0	0	1	0	0	1	8	1	1	0	0	10	0	0	0	1	0	0			
H/TOT	4	0	2	0	0	6	26	7	2	0	0	35	4	1	0	2	0	0			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	0	0	1	0	0	1	5	3	1	0	0	9	2	0	1	0	0	3			
13:15	5	0	1	0	0	6	6	1	0	1	0	8	0	2	0	0	0	2			
13:30	0	0	1	0	0	1	8	0	0	0	0	8	0	0	1	0	0	1			
13:45	1	0	0	1	0	2	7	0	0	0	0	7	3	0	0	0	0	3			
<b>H/TOT</b>	<b>6</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>26</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>32</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>			
14:00	3	0	1	0	0	4	13	2	2	1	0	18	1	1	0	0	0	2			
14:15	1	0	0	0	0	1	4	2	0	0	0	6	5	0	0	1	0	6			
14:30	2	0	0	0	0	2	4	0	2	0	0	6	1	0	0	0	0	1			
14:45	1	0	0	0	0	1	3	0	1	1	0	5	0	0	0	0	0	0			
<b>H/TOT</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>24</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>35</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>			
15:00	2	0	1	0	0	3	9	2	1	0	0	12	0	0	0	0	0	0			
15:15	3	0	0	0	0	3	4	0	0	0	0	4	1	0	0	1	0	2			
15:30	1	0	0	0	0	1	5	1	1	1	0	6	0	0	0	0	0	0			
15:45	2	0	2	0	0	4	8	3	0	1	0	12	2	2	0	0	0	4			
<b>H/TOT</b>	<b>8</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>24</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>34</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>			
16:00	1	2	1	0	0	4	11	2	1	0	0	14	3	0	1	0	0	4			
16:15	2	0	0	0	0	2	5	5	0	0	0	10	0	0	0	0	0	0			
16:30	1	2	1	0	0	4	14	5	0	0	0	19	1	0	0	1	0	2			
16:45	11	1	0	0	0	12	24	2	2	0	0	28	0	1	0	0	0	1			
<b>H/TOT</b>	<b>15</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>54</b>	<b>14</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>71</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>7</b>			
17:00	6	1	0	0	0	7	19	2	1	0	0	22	4	2	0	0	0	6			
17:15	6	1	1	0	0	8	18	0	1	0	0	19	3	0	0	0	0	3			
17:30	2	2	0	1	0	5	19	10	0	0	0	29	3	0	0	0	0	3			
17:45	3	0	0	0	0	3	11	2	0	1	0	14	0	0	0	0	0	0			
<b>H/TOT</b>	<b>17</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>67</b>	<b>14</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>84</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>			
18:00	1	0	0	0	0	1	10	2	0	0	0	12	2	0	0	0	0	2			
18:15	1	0	0	0	0	1	11	1	0	0	0	12	1	0	0	0	0	1			
18:30	2	0	0	0	0	2	8	1	0	0	0	9	2	0	0	0	0	2			
18:45	1	0	0	0	0	1	5	2	0	0	0	7	3	0	0	0	0	3			
<b>H/TOT</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>34</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>			
<b>P/TOT</b>	<b>109</b>	<b>23</b>	<b>18</b>	<b>3</b>	<b>0</b>	<b>153</b>	<b>372</b>	<b>86</b>	<b>20</b>	<b>10</b>	<b>1</b>	<b>489</b>	<b>66</b>	<b>10</b>	<b>6</b>	<b>14</b>	<b>0</b>	<b>96</b>			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 10						TOT	MOVEMENT 11						TOT	MOVEMENT 12						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	0	0	0	0	0	0	73	11	3	3	1	91	17	7	2	8	0	34			
07:15	1	1	0	0	0	2	79	10	2	4	1	96	22	7	0	7	1	37			
07:30	2	0	0	0	0	2	81	11	3	8	0	103	26	8	0	11	1	46			
07:45	1	0	0	0	0	1	81	13	4	6	0	104	36	8	2	10	1	57			
H/TOT	4	1	0	0	0	5	314	45	12	21	2	394	101	30	4	36	3	174			
08:00	4	0	0	0	0	4	77	8	0	6	0	91	31	7	1	5	0	44			
08:15	3	1	0	1	0	5	67	7	1	6	0	81	34	10	3	9	1	57			
08:30	2	1	0	1	0	4	62	4	1	9	0	76	40	12	2	9	1	64			
08:45	2	0	0	0	0	2	42	6	2	9	0	59	38	6	6	6	0	56			
H/TOT	11	2	0	2	0	15	248	25	4	30	0	307	143	35	12	29	2	221			
09:00	1	0	1	1	0	3	37	6	0	4	0	47	33	9	0	10	0	52			
09:15	0	0	0	1	0	1	32	9	4	8	0	53	28	8	3	8	1	48			
09:30	2	0	0	0	0	2	24	8	3	7	0	42	17	8	3	9	0	37			
09:45	1	0	0	0	0	1	35	7	2	5	0	49	18	5	3	6	0	32			
H/TOT	4	0	1	2	0	7	128	30	9	24	0	191	96	30	9	33	1	169			
10:00	4	1	0	0	0	5	20	3	1	11	1	36	31	8	2	8	0	49			
10:15	4	1	0	0	0	5	23	5	1	2	0	31	32	10	3	9	1	55			
10:30	1	1	0	0	0	2	15	3	2	5	1	26	24	9	2	6	0	41			
10:45	3	0	0	0	0	3	23	2	4	9	0	38	28	6	4	5	0	43			
H/TOT	12	3	0	0	0	15	81	13	8	27	2	131	115	33	11	28	1	188			
11:00	0	0	0	0	0	0	15	4	2	2	0	23	34	8	5	6	0	53			
11:15	2	0	0	0	0	2	12	0	2	2	0	16	27	11	3	8	1	50			
11:30	1	0	0	1	0	2	13	3	3	7	0	26	24	6	1	13	0	44			
11:45	2	1	0	0	0	3	23	5	1	14	0	43	30	0	6	6	0	42			
H/TOT	5	1	0	1	0	7	63	12	8	25	0	108	115	25	15	33	1	189			
12:00	2	0	0	0	0	2	28	4	1	9	0	42	33	6	3	10	0	52			
12:15	1	0	0	1	0	2	22	2	2	7	0	33	26	5	2	9	0	42			
12:30	1	0	0	0	0	1	22	4	3	2	0	31	28	7	4	5	0	44			
12:45	1	0	1	1	0	3	23	4	5	6	0	38	32	7	1	12	1	53			
H/TOT	5	0	1	2	0	8	95	14	11	24	0	144	119	25	10	36	1	191			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 01

DATE: 17th November 2005

LOCATION: R150/R152

DAY: Thursday

TIME	MOVEMENT 10						TOT	MOVEMENT 11						TOT	MOVEMENT 12						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	0	0	0	0	0	0	24	2	1	5	0	32	35	6	3	9	0	53			
13:15	2	0	0	0	0	2	27	1	2	5	0	35	34	8	4	8	0	54			
13:30	2	0	0	1	0	3	20	2	2	9	0	33	30	4	1	3	1	39			
13:45	2	0	0	0	0	2	25	2	1	6	1	35	31	10	2	8	0	51			
H/TOT	6	0	0	1	0	7	96	7	6	25	1	135	130	28	10	28	1	197			
14:00	3	0	0	0	0	3	19	3	3	2	0	27	22	7	5	10	0	44			
14:15	1	0	0	0	0	1	19	0	1	8	0	28	36	3	2	7	1	49			
14:30	3	0	0	0	0	3	29	6	1	6	0	42	25	6	2	9	0	42			
14:45	1	0	0	1	0	2	23	2	2	4	0	31	41	11	1	8	0	61			
H/TOT	8	0	0	1	0	9	90	11	7	20	0	128	124	27	10	34	1	196			
15:00	0	0	0	0	0	0	23	3	3	5	0	34	37	9	4	1	0	51			
15:15	1	0	0	0	0	1	19	3	0	5	0	27	40	7	2	8	1	58			
15:30	5	1	0	0	0	6	19	7	1	7	0	34	44	4	3	9	0	60			
15:45	1	0	0	0	0	1	25	4	4	6	0	39	46	10	2	3	1	62			
H/TOT	7	1	0	0	0	8	86	17	8	23	0	134	167	30	11	21	2	231			
16:00	3	1	2	0	0	6	64	15	8	8	2	97	122	24	7	18	4	175			
16:15	5	0	0	0	0	5	67	12	6	3	0	88	97	27	7	9	1	141			
16:30	1	0	0	0	0	1	28	5	1	1	0	35	60	6	6	5	1	78			
16:45	0	0	0	0	0	0	47	9	3	0	1	60	58	10	5	8	0	81			
H/TOT	9	1	2	0	0	12	206	41	18	12	3	280	337	67	25	40	6	475			
17:00	0	0	0	0	0	0	46	8	2	1	1	58	64	8	3	6	1	82			
17:15	1	0	0	0	0	1	40	7	4	2	0	53	53	7	3	5	0	68			
17:30	1	0	0	0	0	1	46	7	4	1	1	59	51	8	6	6	0	71			
17:45	0	0	0	0	0	0	48	8	5	2	0	63	49	6	4	4	0	63			
H/TOT	2	0	0	0	0	2	180	30	15	6	2	233	217	29	16	21	1	284			
18:00	1	0	0	0	0	1	51	10	4	0	0	65	41	4	4	4	0	53			
18:15	0	0	0	0	0	0	40	4	2	0	0	46	48	5	2	3	0	58			
18:30	1	0	0	0	0	1	37	1	0	0	0	38	40	3	1	0	0	44			
18:45	1	0	0	0	0	1	30	2	0	0	0	32	33	2	2	0	0	37			
H/TOT	3	0	0	0	0	3	158	17	6	0	0	181	162	14	9	7	0	192			
P/TOT	76	9	4	9	0	98	1745	262	112	237	10	2366	1826	373	142	346	20	2707			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 02

DATE: 17th November 2005

LOCATION: R152/Slip from M1

DAY: Thursday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3						MOVEMENT 4					
	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT
07:00	31	6	1	6	0	44	2	0	0	0	0	2	1	0	0	0	0	1	74	14	3	5	1	97
07:15	28	6	1	5	0	40	5	0	0	2	0	7	2	0	1	0	0	3	74	17	0	10	3	104
07:30	71	16	2	12	0	101	2	0	1	1	0	4	2	1	1	0	0	4	100	21	4	8	1	134
07:45	67	17	3	11	1	99	4	0	0	0	0	4	7	3	0	1	0	11	132	9	7	8	1	157
H/TOT	197	45	7	34	1	284	13	0	1	3	0	17	12	4	2	1	0	19	380	61	14	31	6	492
08:00	80	24	2	14	2	122	3	0	0	1	0	4	3	1	1	0	0	5	100	14	1	4	0	119
08:15	103	15	6	7	2	133	7	1	0	1	0	9	9	2	2	2	0	15	70	12	4	13	2	101
08:30	113	12	3	3	2	133	5	0	0	0	0	5	4	0	0	0	0	4	88	12	6	14	1	121
08:45	122	13	0	11	0	146	5	1	0	1	0	7	11	2	1	2	0	16	57	7	3	6	0	73
H/TOT	418	64	11	35	6	534	20	2	0	3	0	25	27	5	4	4	0	40	315	45	14	37	3	414
09:00	94	13	4	13	0	124	5	0	1	1	0	7	4	2	0	0	0	6	62	6	2	6	0	76
09:15	66	13	2	7	1	89	3	1	0	0	0	4	5	2	0	1	0	8	62	5	7	7	0	81
09:30	66	9	2	8	0	85	4	0	0	0	0	4	7	1	0	1	0	9	51	15	2	8	0	76
09:45	58	17	1	6	1	83	1	0	2	0	0	3	4	0	2	1	0	7	52	9	6	5	0	72
H/TOT	284	52	9	34	2	381	13	1	3	1	0	18	20	5	2	3	0	30	227	35	17	26	0	305
10:00	58	15	2	7	0	82	3	0	0	0	0	3	4	1	0	0	0	5	42	11	0	6	2	61
10:15	65	20	0	1	1	87	4	1	0	1	0	6	4	0	1	2	0	7	45	8	4	7	0	64
10:30	59	7	2	5	0	73	3	1	0	0	0	4	2	0	1	0	0	3	27	10	6	11	0	54
10:45	53	18	5	13	0	89	4	1	2	0	0	7	1	0	1	0	0	2	44	7	0	2	0	53
H/TOT	235	60	9	26	1	331	14	3	2	1	0	20	11	1	3	2	0	17	158	36	10	26	2	232
11:00	39	8	2	15	0	64	3	1	0	1	0	5	7	3	0	0	0	10	38	8	3	2	0	51
11:15	54	14	3	14	1	86	3	1	0	0	0	4	2	0	0	0	0	2	33	5	3	14	1	56
11:30	39	10	1	10	0	60	3	1	0	0	0	4	5	0	1	1	0	7	51	10	2	12	0	75
11:45	43	8	0	10	1	62	6	0	0	0	0	6	6	3	2	0	0	11	47	5	2	8	0	62
H/TOT	175	40	6	49	2	272	15	3	0	1	0	19	20	6	3	1	0	30	169	28	10	36	1	244
12:00	47	6	1	7	0	61	2	1	0	0	0	3	2	0	0	1	0	3	56	7	5	10	0	78
12:15	60	12	2	7	0	81	3	1	0	0	0	4	1	2	0	0	0	3	45	3	5	8	0	61
12:30	42	7	1	13	0	63	6	0	2	0	0	8	5	0	1	1	0	7	44	7	9	5	0	65
12:45	46	11	1	14	1	73	5	0	0	0	1	6	4	1	1	1	0	7	48	12	6	8	0	74
H/TOT	195	36	5	41	1	278	16	2	2	0	1	21	12	3	2	3	0	20	193	29	25	31	0	278

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 02

DATE: 17th November 2005

LOCATION: R152/Slip from M1

DAY: Thursday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3						MOVEMENT 4					
	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT	CAR	LGV	OGV1	OGV2	BUS	TOT
13:00	44	16	0	8	0	68	2	0	0	0	0	2	3	2	4	3	0	12	51	5	2	8	0	66
13:15	54	16	3	3	0	76	3	1	2	0	0	6	5	4	0	1	0	10	55	11	3	3	0	72
13:30	49	9	4	8	0	70	3	0	0	0	0	3	4	0	0	0	0	4	63	7	2	4	3	79
13:45	44	10	2	10	1	67	1	0	0	1	0	2	7	0	0	0	0	7	49	7	1	9	0	66
H/TOT	191	51	9	29	1	281	9	1	2	1	0	13	19	6	4	4	0	33	218	30	8	24	3	283
14:00	65	11	0	7	0	83	3	2	1	0	0	6	4	4	1	0	0	9	49	9	2	7	0	67
14:15	50	6	4	6	0	66	6	0	0	1	0	7	10	1	1	1	0	14	49	6	2	5	2	64
14:30	56	7	4	6	0	73	4	0	0	0	0	4	4	2	0	3	0	9	50	11	4	7	1	73
14:45	42	13	1	5	1	62	3	1	0	1	0	5	8	0	1	1	0	10	53	12	2	6	0	73
H/TOT	213	37	9	24	1	284	16	3	1	2	0	22	27	7	3	5	0	42	201	38	10	25	3	277
15:00	52	15	2	2	1	72	6	1	0	0	0	7	4	2	2	1	0	9	52	6	7	4	1	70
15:15	57	7	7	15	1	87	1	1	0	0	0	4	8	3	0	1	0	12	54	5	1	9	0	69
15:30	48	19	3	7	2	79	4	3	0	0	0	7	2	1	0	3	0	6	73	9	4	8	0	94
15:45	51	22	3	1	0	77	5	1	0	0	0	7	10	4	2	3	0	19	67	5	3	4	0	79
H/TOT	208	63	15	25	4	315	16	6	1	2	0	25	24	10	4	8	0	46	246	25	15	25	1	312
16:00	77	23	6	18	1	125	8	2	0	1	0	11	9	1	0	0	0	10	60	16	3	6	1	86
16:15	82	21	7	3	2	115	8	1	0	1	0	10	11	2	0	0	0	13	75	12	4	11	2	104
16:30	84	15	2	5	0	106	13	5	1	1	0	20	9	0	0	0	0	9	69	12	5	4	1	91
16:45	84	11	1	8	3	107	11	1	1	0	0	13	7	5	0	0	0	12	89	11	4	7	2	113
H/TOT	327	70	16	34	6	453	40	9	2	3	0	54	36	8	0	0	0	44	293	51	16	28	6	394
17:00	124	39	2	6	2	173	9	1	2	1	0	13	14	1	1	0	0	16	89	5	3	7	0	104
17:15	111	21	1	10	2	145	13	4	1	1	0	19	15	11	0	0	0	26	71	12	1	3	0	87
17:30	118	18	1	3	1	141	12	2	1	1	0	16	19	1	1	0	0	21	90	8	9	7	1	115
17:45	120	26	7	5	0	158	9	2	2	1	0	14	17	1	0	0	0	18	75	4	0	2	0	81
H/TOT	473	104	11	24	5	617	43	9	6	4	0	62	65	14	2	0	0	81	325	29	13	19	1	387
18:00	96	13	2	3	0	114	7	3	0	0	0	10	18	5	0	0	0	23	85	3	3	2	0	93
18:15	71	13	3	1	0	88	13	1	0	0	0	14	10	1	0	1	0	12	89	6	3	2	0	100
18:30	76	10	2	2	1	91	16	0	0	3	0	19	11	1	0	0	0	12	49	3	2	3	0	57
18:45	90	10	0	2	0	102	10	3	0	0	0	13	7	1	0	0	0	8	57	2	1	0	0	60
H/TOT	333	46	7	8	1	395	46	7	0	3	0	56	46	8	0	1	0	55	280	14	9	7	0	310
P/TOT	3249	668	114	363	31	4425	261	46	20	24	1	352	319	77	29	32	0	457	3005	421	161	315	26	3928



## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 03

DATE: 17th November 2005

LOCATION: R152/Slip to M1

DAY: Thursday

TIME	MOVEMENT 1					TOT	MOVEMENT 2					TOT	MOVEMENT 3					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	2	0	0	0	0	2	20	3	0	0	1	24	28	9	1	0	1	39
07:15	3	0	0	0	0	3	26	4	1	0	1	32	32	14	0	3	2	51
07:30	0	0	0	0	0	0	25	0	0	0	1	26	35	9	0	5	1	50
07:45	0	0	0	0	0	0	19	4	0	0	0	23	39	2	3	2	0	46
H/TOT	5	0	0	0	0	5	90	11	1	0	3	105	134	34	4	10	4	186
08:00	0	0	0	0	0	0	29	2	0	0	0	31	41	9	0	1	0	51
08:15	1	0	0	0	0	1	26	1	1	1	1	30	24	9	0	4	1	38
08:30	2	1	0	0	0	3	17	1	0	0	0	18	26	4	1	5	1	37
08:45	2	0	0	0	0	2	10	1	0	0	1	12	21	4	0	2	0	27
H/TOT	5	1	0	0	0	6	82	5	1	1	2	91	112	26	1	12	2	153
09:00	3	1	0	0	0	4	18	4	2	3	0	27	16	3	1	0	0	20
09:15	2	0	0	0	0	2	14	3	1	0	1	19	23	3	1	2	0	29
09:30	1	0	0	1	0	2	21	2	1	0	0	24	18	5	1	2	0	26
09:45	0	0	0	0	0	0	11	1	0	0	1	13	17	6	2	3	0	28
H/TOT	6	1	0	1	0	8	64	10	4	3	2	83	74	17	5	7	0	103
10:00	3	1	0	0	0	4	12	1	1	2	1	17	17	4	0	1	1	23
10:15	1	0	0	0	0	1	11	1	0	1	1	14	18	4	1	0	0	23
10:30	2	0	0	0	0	2	12	0	1	1	0	14	9	3	3	3	0	18
10:45	0	0	0	0	0	0	13	1	0	0	0	14	14	2	0	1	0	17
H/TOT	6	1	0	0	0	7	48	3	2	4	2	59	58	13	4	5	1	81
11:00	0	0	0	0	0	0	7	2	3	1	0	13	9	2	0	1	0	12
11:15	5	0	0	0	0	5	9	0	1	0	0	10	10	4	1	5	1	21
11:30	0	0	0	0	0	0	7	2	0	1	0	10	18	7	1	7	0	33
11:45	3	0	0	0	0	3	10	1	0	0	1	12	14	4	0	1	0	19
H/TOT	8	0	0	0	0	8	33	5	4	2	1	45	51	17	2	14	1	85
12:00	3	0	0	0	0	3	12	1	0	0	0	13	21	4	3	5	0	33
12:15	0	1	0	0	0	1	11	2	1	0	0	14	15	2	2	1	0	20
12:30	1	0	0	0	0	1	4	1	0	0	0	5	12	2	3	2	0	19
12:45	1	0	0	0	0	1	7	3	1	0	1	12	12	7	0	3	0	22
H/TOT	5	1	0	0	0	6	34	7	2	0	1	44	60	15	8	11	0	94

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 03

DATE: 17th November 2005

LOCATION: R152/Slip to M1

DAY: Thursday

TIME	MOVEMENT 1					TOT	MOVEMENT 2					TOT	MOVEMENT 3					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
13:00	2	0	0	0	0	2	11	1	0	0	1	13	18	0	0	3	0	21
13:15	0	0	0	0	0	0	11	3	1	0	0	15	22	8	1	1	0	32
13:30	2	0	0	0	0	2	6	2	0	0	0	8	14	6	1	1	1	23
13:45	1	0	0	0	0	1	10	5	0	1	1	17	14	4	0	3	0	21
H/TOT	5	0	0	0	0	5	38	11	1	1	2	53	68	18	2	8	1	97
14:00	0	0	0	0	0	0	6	1	0	0	0	7	19	6	0	1	0	26
14:15	3	0	0	0	0	3	3	0	0	1	2	6	19	5	0	0	1	25
14:30	2	0	0	0	0	2	7	0	2	1	0	10	19	5	2	2	1	29
14:45	0	1	1	0	0	2	8	0	1	1	1	11	16	8	0	2	0	26
H/TOT	5	1	1	0	0	7	24	1	3	3	3	34	73	24	2	5	2	106
15:00	1	0	0	0	0	1	7	1	1	0	0	10	18	3	0	1	0	22
15:15	2	0	0	0	0	2	15	1	1	0	0	17	22	1	0	5	0	28
15:30	1	0	0	0	0	1	14	4	1	1	0	20	29	5	2	2	0	38
15:45	2	0	0	0	0	2	14	2	2	0	2	20	23	1	1	2	0	27
H/TOT	6	0	0	0	0	6	50	9	5	1	2	67	92	10	3	10	0	115
16:00	0	0	0	0	0	0	9	1	1	0	0	11	15	4	2	3	0	24
16:15	2	0	0	0	0	2	8	1	0	0	0	9	21	6	0	6	0	33
16:30	7	0	0	0	0	7	8	3	0	1	1	13	21	7	2	2	1	33
16:45	6	0	0	0	0	6	11	0	0	0	1	12	26	8	0	1	0	35
H/TOT	15	0	0	0	0	15	36	5	1	1	2	45	83	25	4	12	1	125
17:00	6	0	0	0	0	6	5	1	0	0	0	6	29	2	2	4	0	37
17:15	1	0	0	0	0	1	15	4	1	0	0	20	30	4	1	0	0	35
17:30	0	0	0	0	0	0	16	1	0	0	0	17	27	4	2	2	1	36
17:45	2	0	0	0	0	2	12	4	0	0	2	18	28	2	0	0	0	30
H/TOT	9	0	0	0	0	9	48	10	1	0	2	61	114	12	5	6	1	138
18:00	1	0	0	0	0	1	7	0	0	0	2	9	18	1	1	0	0	20
18:15	2	0	0	0	0	2	4	1	0	0	0	5	27	4	1	0	0	32
18:30	1	0	0	0	0	1	11	0	0	1	0	12	14	1	0	1	0	16
18:45	2	0	0	0	0	2	8	0	0	1	1	10	19	1	0	0	0	20
H/TOT	6	0	0	0	0	6	30	1	0	2	3	36	78	7	2	1	0	88
P/TOT	81	5	1	1	0	88	577	78	25	18	25	723	997	218	42	101	13	1371

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 03

DATE: 17th November 2005

LOCATION: R152/Slip to M1

DAY: Thursday

TIME	MOVEMENT 4					TOT	MOVEMENT 5					TOT	MOVEMENT 6					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	9	3	0	1	0	13	18	2	1	5	0	26	5	1	0	0	0	6
07:15	11	2	0	0	0	13	14	3	2	5	0	24	5	1	0	0	0	6
07:30	24	8	2	4	0	38	37	4	0	6	0	47	12	5	1	2	0	20
07:45	33	11	0	6	1	51	35	7	3	6	0	51	6	2	0	0	0	8
H/TOT	77	24	2	11	1	115	104	16	6	22	0	148	28	9	1	2	0	40
08:00	34	9	0	7	1	51	38	14	2	6		61	11	2	1	1	0	15
08:15	56	7	2	2	1	68	41	10	5	7	1	64	15	0	1	0	0	16
08:30	63	3	1	2	0	69	44	8	1	1	2	56	10	1	1	0	0	12
08:45	61	6	0	6	0	73	64	8	1	6	0	79	8	1	0	1	0	10
H/TOT	214	25	3	17	2	261	187	40	9	20	4	260	44	4	3	2	0	53
09:00	47	5	1	7	0	60	39	8	2	4	0	53	12	2	1	2	0	17
09:15	33	3	2	3	1	42	33	11	0	4	0	48	5	1	0	1	0	7
09:30	37	5	0	2	0	44	34	5	1	7	0	47	2	0	1	0	0	3
09:45	25	6	1	3	1	36	35	8	2	4	0	49	2	3	0	0	0	5
H/TOT	142	19	4	15	2	182	141	32	5	19	0	197	21	6	2	3	0	32
10:00	30	3	0	0	0	33	30	13	2	7	0	52	2	0	0	0	0	2
10:15	26	7	0	1	0	34	36	13	1	1	1	52	7	0	0	1	0	8
10:30	28	3	0	3	0	34	28	4	3	1	0	36	5	0	0	1	0	6
10:45	20	5	3	5	0	33	31	11	3	7	0	52	3	2	0	1	0	6
H/TOT	104	18	3	9	0	134	125	41	9	16	1	192	17	2	0	3	0	22
11:00	10	4	1	7	0	22	33	7	1	7	0	48	3	0	0	1	0	4
11:15	21	6	1	6	1	35	33	8	2	6	0	49	2	0	0	2	0	4
11:30	21	4	2	6	0	33	21	6	0	5	0	32	2	0	0	0	0	2
11:45	19	5	1	1	0	26	27	6	1	8	1	43	3	0	0	1	0	4
H/TOT	71	19	5	20	1	116	114	27	4	26	1	172	10	0	0	4	0	14
12:00	22	2	1	3	0	28	25	4	0	4	0	33	2	0	0	1	0	3
12:15	21	3	0	1	0	25	37	11	2	6	0	56	3	0	0	0	0	3
12:30	21	3	0	3	0	27	23	3	2	8	0	36	3	1	0	3	0	7
12:45	18	3	1	10	1	33	30	8	1	4	0	43	2	1	0	1	0	4
H/TOT	82	11	2	17	1	113	115	26	5	22	0	168	10	2	0	5	0	17

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 03

DATE: 17th November 2005

LOCATION: R152/Slip to M1

DAY: Thursday

TIME	MOVEMENT 4						TOT	MOVEMENT 5						TOT	MOVEMENT 6						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	15	7	1	1	0	24	27	9	3	9	0	48	5	2	0	1	0	8			
13:15	27	4	2	1	0	34	25	13	1	3	0	42	7	3	0	0	0	10			
13:30	20	5	2	3	0	30	29	2	2	5	0	38	4	2	0	0	0	6			
13:45	22	8	0	3	0	33	28	2	0	5	1	36	1	0	2	2	0	5			
<b>H/TOT</b>	<b>84</b>	<b>24</b>	<b>5</b>	<b>8</b>	<b>0</b>	<b>121</b>	<b>109</b>	<b>26</b>	<b>6</b>	<b>22</b>	<b>1</b>	<b>164</b>	<b>17</b>	<b>7</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>29</b>			
14:00	31	6	0	2	0	39	35	9	1	5	0	50	3	0	0	0	0	3			
14:15	25	2	2	3	0	32	34	5	3	4	0	46	2	0	0	0	0	2			
14:30	27	5	2	0	0	34	30	4	2	9	0	45	3	0	0	0	0	3			
14:45	14	5	2	3	1	25	35	8	0	3	0	46	1	0	0	0	0	1			
<b>H/TOT</b>	<b>97</b>	<b>18</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>130</b>	<b>134</b>	<b>26</b>	<b>6</b>	<b>21</b>	<b>0</b>	<b>187</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>			
15:00	28	9	0	2	1	40	26	4	3	0	0	33	2	4	1	1	0	8			
15:15	32	4	3	7	1	47	29	6	4	8	0	47	4	0	0	1	0	5			
15:30	21	10	2	4	1	38	28	8	1	5	1	43	1	2	0	1	0	4			
15:45	24	7	2	1	0	34	32	17	3	3	0	55	5	2	0	0	0	7			
<b>H/TOT</b>	<b>105</b>	<b>30</b>	<b>7</b>	<b>14</b>	<b>3</b>	<b>159</b>	<b>115</b>	<b>35</b>	<b>11</b>	<b>16</b>	<b>1</b>	<b>178</b>	<b>12</b>	<b>8</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>24</b>			
16:00	43	9	4	9	1	66	37	13	2	8	0	60	6	2	0	1	0	9			
16:15	43	17	3	0	1	64	41	5	4	3	0	53	9	1	0	0	1	11			
16:30	55	8	2	1	0	66	36	7	0	4	0	47	2	0	0	0	0	2			
16:45	42	8	0	3	3	56	39	8	1	4	0	52	10	0	0	1	0	11			
<b>H/TOT</b>	<b>183</b>	<b>42</b>	<b>9</b>	<b>13</b>	<b>5</b>	<b>252</b>	<b>153</b>	<b>33</b>	<b>7</b>	<b>19</b>	<b>0</b>	<b>212</b>	<b>27</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>33</b>			
17:00	80	19	1	6	2	108	50	19	2	0	0	71	8	2	0	0	0	10			
17:15	65	13	1	5	2	86	53	19	0	3	0	75	8	0	0	2	0	10			
17:30	66	11	2	1	1	81	66	8	0	2	0	76	5	0	0	0	0	5			
17:45	68	16	2	3	0	89	64	10	4	2	0	80	5	1	1	0	0	7			
<b>H/TOT</b>	<b>279</b>	<b>59</b>	<b>6</b>	<b>15</b>	<b>5</b>	<b>364</b>	<b>233</b>	<b>56</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>302</b>	<b>26</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>32</b>			
18:00	60	12	1	1	0	74	50	6	1	1	0	58	4	0	0	1	0	5			
18:15	48	6	1	0	0	55	32	7	2	2	0	43	1	1	0	0	0	2			
18:30	45	4	1	2	1	53	41	7	1	0	0	49	1	0	0	0	0	1			
18:45	53	7	0	1	0	61	43	4	0	1	0	48	1	0	0	0	0	1			
<b>H/TOT</b>	<b>206</b>	<b>29</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>243</b>	<b>166</b>	<b>24</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>198</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>			
<b>P/TOT</b>	<b>1644</b>	<b>318</b>	<b>55</b>	<b>151</b>	<b>22</b>	<b>2190</b>	<b>1696</b>	<b>382</b>	<b>78</b>	<b>214</b>	<b>8</b>	<b>2378</b>	<b>228</b>	<b>45</b>	<b>10</b>	<b>30</b>	<b>1</b>	<b>314</b>			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 03

DATE: 17th November 2005

LOCATION: R152/Slip to M1

DAY: Thursday

TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	22	5	0	0	0	27	46	5	2	5	0	58	0	0	0	0	0	0			
07:15	37	2	0	0	0	39	42	3	0	7	1	53	1	0	0	0	0	1			
07:30	26	0	1	0	0	27	65	12	4	3	0	84	2	0	0	0	0	2			
07:45	18	2	0	0	0	20	93	7	4	6	1	111	0	0	0	0	0	0			
<b>H/TOT</b>	<b>103</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>113</b>	<b>246</b>	<b>27</b>	<b>10</b>	<b>21</b>	<b>2</b>	<b>306</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>			
08:00	23	2	1	0	0	26	59	5	1	3	0	68	1	0	0	0	0	1			
08:15	34	0	2	0	1	37	46	3	4	9	1	63	3	0	0	0	0	3			
08:30	32	1	1	1	0	35	62	8	5	9	0	84	3	0	0	0	0	3			
08:45	20	1	1	1	0	23	36	3	3	4	0	46	9	0	0	0	0	9			
<b>H/TOT</b>	<b>109</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>121</b>	<b>203</b>	<b>19</b>	<b>13</b>	<b>25</b>	<b>1</b>	<b>261</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>			
09:00	14	3	0	1	0	18	46	3	1	6	0	56	5	0	0	2	0	7			
09:15	17	3	2	0	0	22	39	2	6	5	0	52	5	1	0	0	0	6			
09:30	8	1	3	1	0	13	33	10	1	6	0	50	2	1	0	0	0	3			
09:45	6	0	0	1	0	7	35	3	4	2	0	44	1	1	0	0	0	2			
<b>H/TOT</b>	<b>45</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>60</b>	<b>153</b>	<b>18</b>	<b>12</b>	<b>19</b>	<b>0</b>	<b>202</b>	<b>13</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>18</b>			
10:00	5	0	1	1	0	7	25	7	0	5	1	38	0	1	0	2	0	3			
10:15	8	0	0	0	0	8	27	4	3	7	0	41	2	0	0	0	0	2			
10:30	4	1	0	1	0	6	18	7	3	8	0	36	1	0	0	0	0	1			
10:45	3	1	2	0	0	6	30	5	0	1	0	36	2	0	0	0	0	2			
<b>H/TOT</b>	<b>20</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>27</b>	<b>100</b>	<b>23</b>	<b>6</b>	<b>21</b>	<b>1</b>	<b>151</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>8</b>			
11:00	10	0	1	0	0	11	29	6	3	1	0	39	2	0	0	0	0	2			
11:15	6	1	1	0	0	8	23	1	2	9	0	35	1	0	0	0	0	1			
11:30	8	0	0	0	0	8	33	3	1	5	0	42	2	0	0	0	0	2			
11:45	5	0	0	0	0	5	33	1	2	7	0	43	2	0	0	0	0	2			
<b>H/TOT</b>	<b>29</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>118</b>	<b>11</b>	<b>8</b>	<b>22</b>	<b>0</b>	<b>159</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>			
12:00	4	2	0	0	0	6	35	3	2	5	0	45	2	0	0	0	0	2			
12:15	6	2	0	0	0	8	30	1	3	7	0	41	1	0	0	0	0	1			
12:30	5	0	0	1	0	6	32	5	6	3	0	46	1	0	1	0	0	2			
12:45	2	0	1	0	0	3	36	5	6	5	0	52	3	1	1	0	0	5			
<b>H/TOT</b>	<b>17</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>133</b>	<b>14</b>	<b>17</b>	<b>20</b>	<b>0</b>	<b>184</b>	<b>7</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

NOVEMBER 2005  
ATH/05/268

SITE: 03

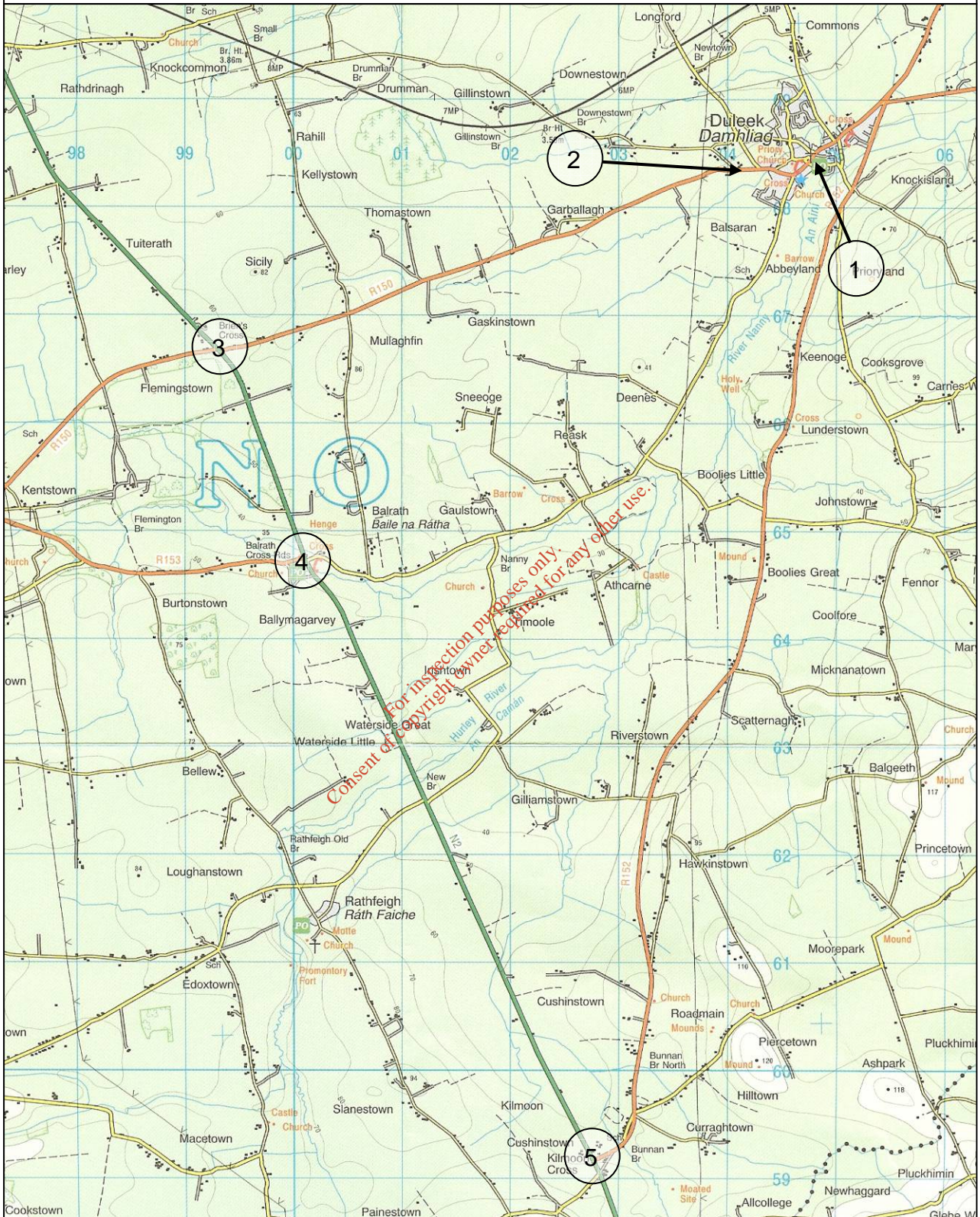
DATE: 17th November 2005



LOCATION: R152/Slip to M1

DAY: Thursday

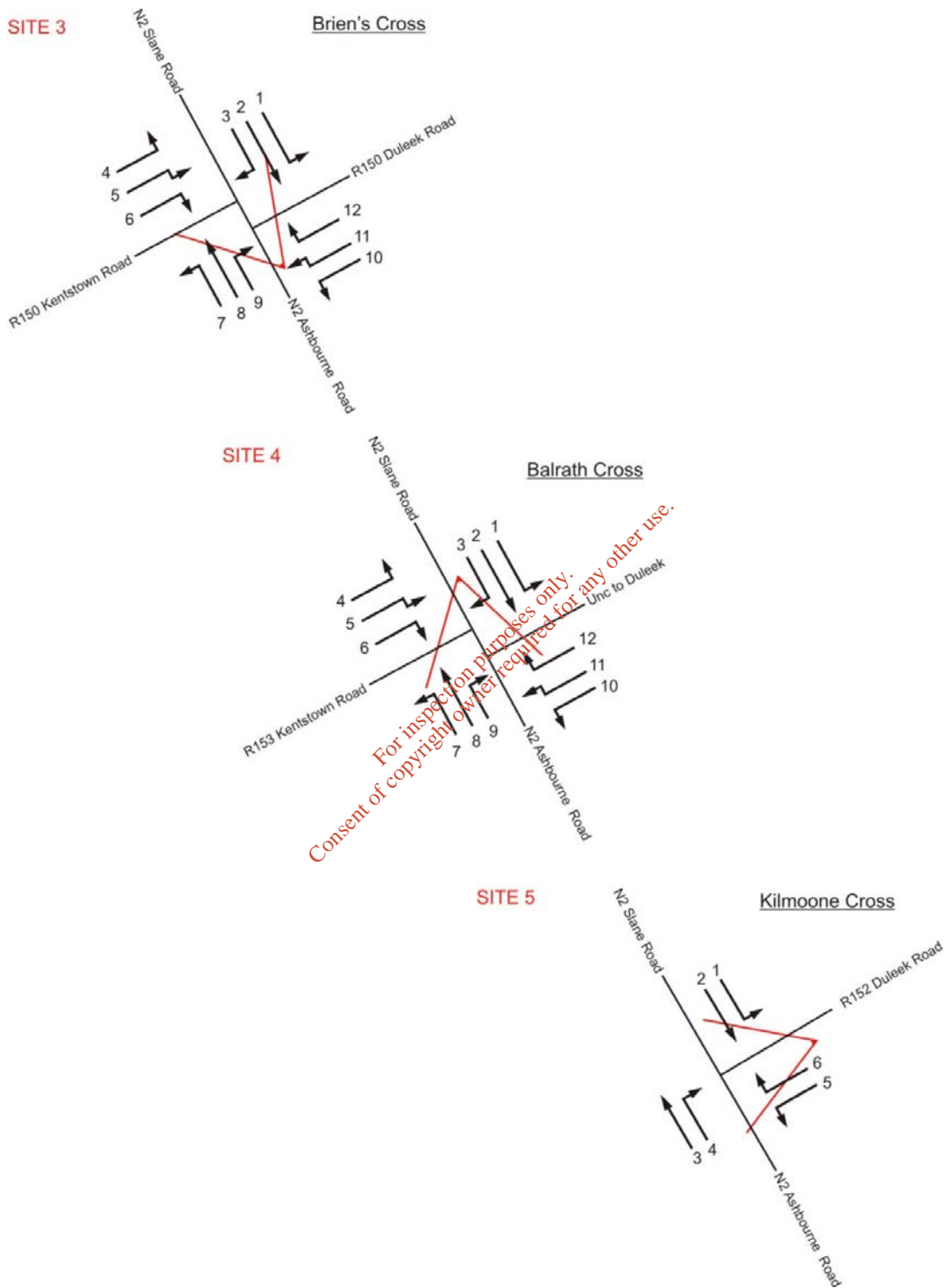
TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	4	0	0	1	0	5	33	5	2	5	0	45	4	0	2	0	0	6			
13:15	6	3	1	0	0	10	33	3	2	2	0	40	4	1	0	0	0	5			
13:30	10	2	1	1	0	14	49	1	1	3	2	56	1	1	0	0	0	2			
13:45	5	1	2	0	0	8	35	3	1	6	0	45	4	0	0	0	0	4			
H/TOT	25	6	4	2	0	37	150	12	6	16	2	186	13	2	2	0	0	17			
14:00	4	0	0	0	0	4	30	3	2	6	0	41	4	1	0	0	0	5			
14:15	3	1	0	0	0	4	30	1	2	5	1	39	1	1	0	0	0	2			
14:30	5	1	0	0	0	6	31	6	2	5	0	44	4	0	1	0	0	5			
14:45	6	1	0	1	0	8	37	4	2	4	0	47	2	0	0	0	0	2			
H/TOT	18	3	0	1	0	22	128	14	8	20	1	171	11	2	1	0	0	14			
15:00	8	1	0	0	0	9	34	3	7	3	1	48	5	2	0	0	0	7			
15:15	7	1	0	0	0	8	32	4	1	4	0	41	2	0	0	0	0	2			
15:30	10	0	1	0	0	11	44	4	2	6	0	56	0	1	1	0	0	2			
15:45	9	1	0	0	0	10	44	4	2	2	0	52	2	1	4	0	0	7			
H/TOT	34	3	1	0	0	38	154	15	12	15	1	197	9	4	5	0	0	18			
16:00	12	1	2	0	0	15	45	12	1	3	1	62	6	2	0	0	0	8			
16:15	10	3	4	0	0	17	54	6	4	5	2	71	6	0	1	0	0	7			
16:30	7	0	0	4	0	11	48	5	3	2	0	58	3	2	1	0	0	6			
16:45	7	1	0	1	0	9	63	3	4	6	2	78	2	2	0	0	0	4			
H/TOT	36	5	6	5	0	52	210	26	12	16	5	269	17	6	2	0	0	25			
17:00	7	1	0	0	0	8	60	3	1	3	0	67	13	3	0	0	0	16			
17:15	7	0	0	0	0	7	41	8	0	3	0	52	8	0	0	1	0	9			
17:30	12	1	0	1	0	14	63	4	7	5	0	79	2	2	0	0	0	4			
17:45	6	0	0	0	0	6	47	2	0	2	0	51	3	0	0	0	0	3			
H/TOT	32	2	0	1	0	35	211	17	8	13	0	249	26	5	0	1	0	32			
18:00	13	0	0	0	0	13	67	2	2	2	0	73	3	2	0	0	0	5			
18:15	7	0	0	0	0	7	62	2	2	2	0	68	3	1	0	0	0	4			
18:30	7	0	0	0	0	7	35	2	2	2	0	41	1	0	1	0	0	2			
18:45	5	0	0	0	0	5	38	1	1	0	0	40	1	0	0	0	0	1			
H/TOT	32	0	0	0	0	32	202	7	7	6	0	222	8	3	1	0	0	12			
P/TOT	500	46	28	17	1	592	2008	203	119	214	13	2557	135	27	13	5	0	180			



# Site Locations



	Job number: ATH/06/005	Job date: 11 <sup>th</sup> January 2006	Drawing No: ATH/06/005-1	
	Client: ROD	Job day: Wednesday	Author: ITK	

# Movement Numbers & Directions



	Job number: ATH/06/005	Job date: 11 <sup>th</sup> January 2006	Drawing No: ATH/06/005-2	
	Client: ROD	Job day: Wednesday	Author: ITK	



## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 01

DATE: 11th January 2006

LOCATION: R150 Duleek Town Centre

DAY: Wednesday

TIME	EASTBOUND					TOT	WESTBOUND					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	39	3	3	5	2	52	24	8	3	7	1	43
07:15	44	10	1	12	0	67	32	6	1	6	1	46
07:30	37	7	1	7	1	53	31	13	2	2	1	49
07:45	72	13	1	6	3	95	45	16	4	9	1	75
H/TOT	192	33	6	30	6	267	132	43	10	24	4	213
08:00	65	11	1	7	1	85	35	3	3	4	0	51
08:15	66	5	5	6	2	84	32	15	1	6	0	54
08:30	68	11	0	10	1	90	44	7	1	7	1	60
08:45	62	5	5	6	0	78	44	9	4	3	0	60
H/TOT	261	32	11	29	4	337	155	40	9	20	1	225
09:00	41	10	5	8	0	64	46	7	3	6	0	62
09:15	66	11	4	4	0	85	37	11	2	5	0	55
09:30	48	6	4	8	0	66	39	7	6	8	1	61
09:45	28	10	2	6	0	46	41	11	3	3	1	59
H/TOT	183	37	15	26	0	261	163	36	14	22	2	237
10:00	28	3	1	4	1	37	42	4	5	4	0	55
10:15	39	8	5	5	0	57	34	9	1	0	1	45
10:30	31	6	6	5	0	48	32	6	2	4	0	44
10:45	41	4	2	3	0	50	39	3	1	4	0	47
H/TOT	139	21	14	17	1	192	147	22	9	12	1	191
11:00	40	3	0	4	0	47	35	11	1	9	0	56
11:15	43	4	2	7	0	56	36	8	3	6	2	55
11:30	34	4	4	2	1	45	47	7	5	2	1	62
11:45	27	6	3	8	0	44	31	5	2	5	0	43
H/TOT	144	17	9	21	1	192	149	31	11	22	3	216
12:00	46	8	1	6	1	62	50	11	2	7	0	70
12:15	34	4	2	5	0	45	45	8	3	6	0	62
12:30	54	5	4	3	0	66	35	4	4	3	0	46
12:45	38	12	2	2	0	54	47	10	1	4	0	62
H/TOT	172	29	9	16	1	227	177	33	10	20	0	240

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 01

DATE: 11th January 2006

LOCATION: R150 Duleek Town Centre

DAY: Wednesday

TIME	EASTBOUND					TOT	WESTBOUND					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
13:00	41	5	4	6	0	56	48	15	4	4	0	71
13:15	34	11	0	6	0	51	37	9	1	5	0	52
13:30	36	4	3	4	3	50	32	5	6	4	2	49
13:45	43	9	5	4	0	61	37	6	4	7	0	54
H/TOT	154	29	12	20	3	218	154	35	15	20	2	226
14:00	42	10	3	7	0	62	40	11	0	4	1	51
14:15	52	5	2	7	1	67	55	11	2	6	0	74
14:30	37	6	2	1	0	46	38	10	2	7	0	57
14:45	34	12	1	5	1	53	39	9	1	7	0	56
H/TOT	165	33	8	20	2	228	172	36	5	24	1	238
15:00	50	8	5	8	0	71	52	11	3	2	0	68
15:15	45	6	3	5	0	59	49	12	3	6	1	71
15:30	37	5	5	2	2	51	57	4	4	6	0	71
15:45	49	5	6	5	0	65	50	10	6	5	0	71
H/TOT	181	24	19	20	2	246	208	37	16	19	1	281
16:00	44	10	0	9	1	64	68	6	3	3	1	81
16:15	43	12	2	8	0	65	76	14	4	6	2	102
16:30	57	17	0	3	0	77	79	10	5	9	3	106
16:45	75	6	0	2	2	85	67	14	3	2	0	86
H/TOT	219	45	2	22	3	291	290	44	15	20	6	375
17:00	80	7	4	5	0	96	83	17	2	7	1	110
17:15	76	6	1	2	0	85	84	17	1	8	0	110
17:30	59	6	1	6	0	72	102	12	3	0	0	117
17:45	69	3	1	5	1	79	76	13	4	2	1	96
H/TOT	284	22	7	18	1	332	345	59	10	17	2	433
18:00	70	1	0	1	1	73	74	9	2	1	0	86
18:15	60	2	0	1	0	63	59	7	4	0	1	71
18:30	49	2	0	1	0	52	70	6	0	0	0	76
18:45	68	0	1	0	2	71	57	10	0	3	0	70
H/TOT	247	5	1	3	3	259	260	32	6	4	1	303
P/TOT	2341	327	113	242	27	3050	2352	448	130	224	24	3178

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 02

DATE: 11th January 2006

LOCATION: R150, Western Extent of Duleek

DAY: Wednesday

TIME	EASTBOUND					TOT	WESTBOUND					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	17	3	2	2	0	24	15	4	1	4	0	24
07:15	22	3	2	5	1	33	19	3	1	8	0	31
07:30	25	7	1	3	0	36	30	10	1	4	0	45
07:45	29	5	3	3	1	41	44	6	1	4	2	57
H/TOT	93	18	8	13	2	134	108	23	4	20	2	157
08:00	38	4	4	1	0	47	38	4	2	5	0	49
08:15	37	4	1	3	0	45	44	6	3	5	2	60
08:30	26	3	1	2	1	33	34	4	0	7	0	45
08:45	29	5	2	6	0	42	23	3	3	2	0	31
H/TOT	130	16	8	12	1	167	139	17	8	19	2	185
09:00	23	5	1	6	0	35	34	4	4	4	0	46
09:15	22	10	0	6	0	38	26	5	1	5	0	37
09:30	27	4	2	5	0	38	22	2	3	4	0	31
09:45	19	3	1	3	0	26	18	5	2	4	0	29
H/TOT	91	22	4	20	0	137	100	16	10	17	0	143
10:00	22	4	2	5	0	33	8	3	2	3	1	17
10:15	15	5	0	1	1	22	20	4	4	3	0	31
10:30	13	4	1	4	0	22	12	1	4	3	0	20
10:45	18	4	0	3	0	25	18	6	2	1	0	27
H/TOT	68	17	3	13	1	102	58	14	12	10	1	95
11:00	22	7	0	5	0	34	24	1	2	1	0	28
11:15	19	4	0	4	2	29	20	3	4	5	0	32
11:30	24	4	1	3	0	32	13	2	2	3	0	20
11:45	16	4	2	3	0	25	15	6	0	8	0	29
H/TOT	81	19	3	15	2	120	72	12	8	17	0	109
12:00	21	6	0	1	0	28	16	1	1	2	0	20
12:15	18	2	3	3	0	26	10	2	1	3	0	16
12:30	15	2	0	5	0	22	18	2	1	2	0	23
12:45	22	3	1	1	0	27	21	3	0	4	0	28
H/TOT	76	13	4	10	0	103	65	8	3	11	0	87

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 02

DATE: 11th January 2006

LOCATION: R150, Western Extent of Duleek

DAY: Wednesday

TIME	EASTBOUND					TOT	WESTBOUND					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
13:00	20	5	2	4	0	31	22	3	2	3	0	30
13:15	18	5	1	2	0	26	30	3	0	7	0	40
13:30	21	3	2	2	0	28	15	5	1	4	0	25
13:45	11	6	1	5	1	24	24	1	2	6	0	33
H/TOT	70	19	6	13	1	109	91	12	5	20	0	128
14:00	15	7	0	3	0	25	13	0	0	4	0	18
14:15	29	5	1	5	0	40	18	3	1	5	0	27
14:30	19	4	1	5	0	29	18	0	2	1	0	21
14:45	23	4	0	3	0	30	21	4	3	4	1	33
H/TOT	86	20	2	16	0	124	70	8	6	14	1	99
15:00	24	7	1	4	0	36	22	6	1	2	0	31
15:15	19	8	2	5	0	34	24	1	1	3	0	29
15:30	21	2	0	4	0	27	23	3	4	3	2	35
15:45	24	6	2	7	0	39	22	3	4	4	0	33
H/TOT	88	23	5	20	0	136	91	13	10	12	2	128
16:00	44	4	0	0	0	48	26	8	0	8	0	42
16:15	36	5	3	7	1	52	26	8	2	5	0	41
16:30	33	8	1	7	1	50	27	3	0	0	0	30
16:45	42	8	3	0	1	54	33	4	0	1	2	40
H/TOT	155	25	7	14	3	204	112	23	2	14	2	153
17:00	45	4	2	3	1	55	45	4	1	3	1	54
17:15	56	6	2	6	1	71	51	7	0	1	0	59
17:30	39	6	1	1	0	47	36	2	4	1	0	43
17:45	41	1	3	2	0	47	28	3	0	3	1	35
H/TOT	181	17	8	12	2	220	160	16	5	8	2	191
18:00	34	3	2	1	0	40	34	3	1	1	0	39
18:15	26	4	3	0	0	33	30	2	0	1	0	33
18:30	32	3	0	0	1	36	21	0	0	2	0	23
18:45	27	3	0	2	0	32	29	4	1	1	1	36
H/TOT	119	13	5	3	1	141	114	9	2	5	1	131
P/TOT	1238	222	63	161	13	1697	1180	171	75	167	13	1606



## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 03

DATE: 11th January 2006

LOCATION: Brien's Cross (N2/R150)

DAY: Wednesday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	8	0	0	1	0	9	25	3	4	9	0	41	1	0	0	0	0	1			
13:15	2	0	0	1	0	3	20	4	7	5	1	37	2	0	0	1	0	3			
13:30	5	1	1	0	0	7	18	5	3	3	0	29	2	0	0	1	0	3			
13:45	5	1	0	2	0	8	25	0	3	0	0	28	1	0	0	0	0	1			
<b>H/TOT</b>	<b>20</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>27</b>	<b>88</b>	<b>12</b>	<b>17</b>	<b>17</b>	<b>1</b>	<b>135</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>8</b>			
14:00	3	2	0	3	0	8	17	2	2	4	0	25	1	0	0	0	0	1			
14:15	2	0	0	2	0	4	25	3	2	4	0	34	0	0	0	0	0	0			
14:30	2	0	3	1	1	7	23	4	4	8	0	39	1	0	0	1	0	2			
14:45	4	0	0	0	0	4	31	6	7	2	0	46	2	0	0	0	0	2			
<b>H/TOT</b>	<b>11</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>23</b>	<b>96</b>	<b>15</b>	<b>15</b>	<b>18</b>	<b>0</b>	<b>144</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>			
15:00	3	2	1	0	0	6	23	4	6	2	0	35	2	0	0	0	0	2			
15:15	5	0	0	1	0	6	20	3	7	5	0	35	1	0	0	0	0	1			
15:30	3	0	1	1	0	5	20	7	3	2	0	32	1	0	0	1	0	2			
15:45	8	1	1	3	0	13	29	6	7	2	0	44	4	0	0	0	0	4			
<b>H/TOT</b>	<b>19</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>30</b>	<b>92</b>	<b>20</b>	<b>23</b>	<b>11</b>	<b>0</b>	<b>146</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>			
16:00	6	2	1	1	0	10	28	2	4	4	0	38	1	0	0	0	0	1			
16:15	5	1	0	1	0	7	36	6	4	3	0	49	1	0	0	0	0	1			
16:30	7	0	0	0	0	7	33	1	1	2	1	38	3	1	1	0	0	5			
16:45	12	3	0	0	1	16	31	5	5	5	0	46	3	0	0	0	0	3			
<b>H/TOT</b>	<b>30</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>40</b>	<b>128</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>1</b>	<b>171</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>			
17:00	10	1	0	2	0	13	22	4	5	11	0	42	0	0	0	0	0	0			
17:15	12	1	0	1	0	14	30	6	2	2	0	40	3	0	0	0	0	3			
17:30	6	4	1	1	1	13	29	2	3	2	0	36	2	1	0	1	0	4			
17:45	8	2	0	1	0	11	37	4	3	4	0	48	4	0	0	0	0	4			
<b>H/TOT</b>	<b>36</b>	<b>8</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>51</b>	<b>118</b>	<b>16</b>	<b>13</b>	<b>19</b>	<b>0</b>	<b>166</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>			
18:00	5	0	0	0	0	5	12	0	5	4	0	21	1	1	0	0	0	2			
18:15	3	2	0	1	0	6	24	1	4	4	0	33	1	1	1	0	0	3			
18:30	8	1	0	2	0	11	20	2	3	4	0	29	1	0	0	0	0	1			
18:45	5	0	0	0	0	5	21	1	4	1	0	27	4	1	0	0	0	5			
<b>H/TOT</b>	<b>21</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>27</b>	<b>77</b>	<b>4</b>	<b>16</b>	<b>13</b>	<b>0</b>	<b>110</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>11</b>			
<b>P/TOT</b>	<b>266</b>	<b>40</b>	<b>26</b>	<b>53</b>	<b>5</b>	<b>390</b>	<b>1691</b>	<b>225</b>	<b>257</b>	<b>198</b>	<b>10</b>	<b>2381</b>	<b>78</b>	<b>10</b>	<b>5</b>	<b>15</b>	<b>0</b>	<b>108</b>			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 03

DATE: 11th January 2006

LOCATION: Brien's Cross (N2/R150)

DAY: Wednesday

TIME	MOVEMENT 4					TOT	MOVEMENT 5					TOT	MOVEMENT 6					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	0	0	0	0	0	0	11	2	0	3	1	17	6	1	0	0	0	7
07:15	1	0	0	0	0	1	13	2	0	6	0	21	7	2	0	0	0	9
07:30	0	0	0	0	0	0	30	7	0	4	0	41	6	2	0	0	0	8
07:45	0	0	0	0	0	0	20	8	0	1	0	29	6	0	0	0	0	6
H/TOT	1	0	0	0	0	1	74	19	0	14	1	108	25	5	0	0	0	30
08:00	2	1	0	0	0	3	34	5	0	4	0	43	5	0	0	0	0	5
08:15	2	2	0	0	0	4	17	6	0	2	0	25	3	0	0	0	0	3
08:30	1	0	0	0	0	1	28	1	0	4	0	33	3	0	0	1	0	4
08:45	3	0	0	0	0	3	15	2	2	3	0	22	5	1	0	0	0	6
H/TOT	8	3	0	0	0	11	94	14	2	13	0	123	16	1	0	1	0	18
09:00	3	0	0	0	0	3	18	5	1	3	0	27	7	0	0	0	0	7
09:15	0	2	1	0	0	3	13	5	1	5	0	24	4	0	0	0	0	4
09:30	4	0	0	2	0	6	8	0	0	4	0	12	0	1	0	0	0	1
09:45	2	0	0	1	0	3	9	2	1	2	0	14	6	0	0	0	0	6
H/TOT	9	2	1	3	0	15	48	12	3	14	0	77	17	1	0	0	0	18
10:00	0	0	0	0	0	0	8	1	1	2	0	12	3	2	0	0	0	5
10:15	3	0	0	0	0	3	8	1	2	4	0	15	1	0	1	0	0	2
10:30	1	0	0	0	0	1	5	1	3	4	0	13	2	0	0	0	0	2
10:45	2	1	0	1	0	4	15	1	1	0	0	17	1	0	0	0	0	1
H/TOT	6	1	0	1	0	8	36	4	7	10	0	57	7	2	1	0	0	10
11:00	3	1	1	0	0	5	13	1	1	1	0	16	3	0	1	0	0	4
11:15	1	0	0	1	0	2	14	1	1	4	0	20	1	0	1	0	0	2
11:30	1	0	0	0	0	1	4	2	2	2	0	10	2	0	0	0	0	2
11:45	3	0	0	0	0	3	7	2	0	7	0	16	4	0	0	0	0	4
H/TOT	8	1	1	1	0	11	38	6	4	14	0	62	10	0	2	0	0	12
12:00	2	0	0	0	0	2	12	1	0	1	0	14	2	0	1	0	0	3
12:15	2	0	0	0	0	2	4	1	0	0	0	5	0	0	0	0	0	0
12:30	0	0	0	0	0	0	13	0	1	2	0	16	1	0	0	0	0	1
12:45	1	0	0	1	0	2	14	3	0	3	0	20	1	0	0	1	0	2
H/TOT	5	0	0	1	0	6	43	5	1	6	0	55	4	0	1	1	0	6

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 03

DATE: 11th January 2006

LOCATION: Brien's Cross (N2/R150)

DAY: Wednesday

TIME	MOVEMENT 4						TOT	MOVEMENT 5						TOT	MOVEMENT 6						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	1	0	0	0	0	1	11	2	1	4	0	18	0	1	0	0	0	1			
13:15	3	0	1	1	0	5	18	1	1	3	0	23	1	0	0	0	0	1			
13:30	2	0	0	0	0	2	7	2	0	3	0	12	2	0	0	0	0	2			
13:45	2	1	0	0	0	3	8	0	0	4	0	12	2	0	1	0	0	3			
H/TOT	8	1	1	1	0	11	44	5	2	14	0	65	5	1	1	0	0	7			
14:00	2	1	0	0	0	3	7	0	0	0	0	7	1	0	0	0	0	1			
14:15	2	0	0	0	0	2	10	0	1	2	0	13	1	0	0	0	0	1			
14:30	2	0	0	0	0	2	10	2	0	2	0	14	2	0	0	0	0	2			
14:45	5	0	0	0	0	5	19	1	0	4	0	24	4	0	0	0	0	4			
H/TOT	11	1	0	0	0	12	46	3	1	8	0	58	8	0	0	0	0	8			
15:00	2	0	0	1	0	3	17	0	1	1	0	19	3	0	0	0	0	3			
15:15	2	2	0	0	0	4	18	1	0	4	1	24	2	0	0	0	0	2			
15:30	0	0	0	0	0	0	7	4	1	1	0	17	4	0	0	0	0	4			
15:45	3	0	0	0	0	3	10	3	3	3	0	19	1	1	0	0	0	2			
H/TOT	7	2	0	1	0	10	56	8	5	9	1	79	10	1	0	0	0	11			
16:00	3	0	0	2	0	5	11	3	0	6	0	20	3	0	0	0	0	3			
16:15	2	0	0	1	0	3	22	3	0	0	0	25	2	0	0	0	0	2			
16:30	5	0	0	0	0	5	19	2	0	0	0	21	1	0	1	0	0	2			
16:45	2	0	0	0	0	2	18	3	0	2	0	23	1	1	0	0	0	2			
H/TOT	12	0	0	3	0	15	70	11	0	8	0	89	7	1	1	0	0	9			
17:00	3	0	1	0	0	4	23	5	0	2	0	30	2	0	0	0	0	2			
17:15	2	0	0	0	0	2	29	2	0	1	0	32	2	0	0	0	0	2			
17:30	1	0	0	0	0	1	26	4	2	1	0	33	0	0	0	0	0	0			
17:45	2	2	0	0	0	4	22	2	1	0	0	25	1	1	0	0	0	2			
H/TOT	8	2	1	0	0	11	100	13	3	4	0	120	5	1	0	0	0	6			
18:00	0	0	0	1	0	1	15	0	0	0	0	15	1	0	0	0	0	1			
18:15	1	0	0	0	0	1	13	2	0	0	0	15	0	0	0	0	0	0			
18:30	2	0	0	0	0	2	20	2	0	1	0	23	1	0	0	0	0	1			
18:45	1	0	0	0	0	1	14	2	1	0	0	17	1	0	0	1	0	2			
H/TOT	4	0	0	1	0	5	62	6	1	1	0	70	3	0	0	1	0	4			
P/TOT	87	13	4	12	0	116	711	106	29	115	2	963	117	13	6	3	0	139			



## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 03

DATE: 11th January 2006

LOCATION: Brien's Cross (N2/R150)

DAY: Wednesday

TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	1	0	1	0	0	2	9	3	0	4	0	16	1	0	0	0	0	1			
07:15	2	0	0	0	0	2	7	1	3	4	2	17	2	0	0	0	0	2			
07:30	1	0	0	0	0	1	21	6	1	0	1	29	3	1	0	0	0	4			
07:45	0	0	0	0	0	0	25	8	4	5	1	43	5	0	0	0	0	5			
H/TOT	4	0	1	0	0	5	62	18	8	13	4	105	11	1	0	0	0	12			
08:00	1	0	0	0	0	1	12	5	4	10	0	31	3	0	0	0	0	3			
08:15	0	0	0	0	0	0	19	6	2	10	0	37	2	0	0	0	0	2			
08:30	2	1	0	0	0	3	18	6	5	5	1	35	2	0	0	0	0	2			
08:45	4	1	0	0	0	5	17	1	5	2	1	26	0	1	0	0	0	1			
H/TOT	7	2	0	0	0	9	66	18	16	27	2	129	7	1	0	0	0	8			
09:00	2	1	0	0	0	3	21	5	3	17	0	47	2	0	0	0	0	2			
09:15	2	0	0	0	0	2	20	8	4	10	0	42	0	0	0	0	0	0			
09:30	4	0	0	0	0	4	21	9	10	5	0	45	3	0	0	0	0	3			
09:45	0	1	0	0	0	1	16	6	6	5	0	33	4	0	0	0	0	4			
H/TOT	8	2	0	0	0	10	78	29	23	37	0	167	9	0	0	0	0	9			
10:00	1	0	0	0	0	1	15	7	3	7	1	33	2	0	0	0	0	2			
10:15	2	0	0	0	0	2	24	5	5	13	0	47	1	0	0	0	0	1			
10:30	0	0	0	0	0	0	15	1	6	7	2	31	0	0	0	0	0	0			
10:45	0	0	0	0	0	0	17	8	7	6	1	39	2	0	0	0	0	2			
H/TOT	3	0	0	0	0	3	71	21	21	33	4	150	5	0	0	0	0	5			
11:00	0	0	0	0	0	0	15	8	7	8	0	38	2	0	0	0	0	2			
11:15	0	0	0	0	0	0	14	5	5	7	0	31	0	0	0	1	0	1			
11:30	1	0	0	0	0	1	19	5	6	8	0	38	1	0	0	0	0	1			
11:45	1	0	0	0	0	1	20	2	8	11	0	41	2	0	0	0	0	2			
H/TOT	2	0	0	0	0	2	68	20	26	34	0	148	5	0	0	1	0	6			
12:00	0	0	0	0	0	0	14	4	5	12	0	35	2	0	0	0	0	2			
12:15	0	0	0	0	0	0	22	9	5	7	1	44	1	0	0	0	0	1			
12:30	3	0	0	0	0	3	20	9	4	9	2	44	1	0	0	0	0	1			
12:45	1	0	0	0	0	1	15	8	3	12	0	38	0	0	0	0	0	0			
H/TOT	4	0	0	0	0	4	71	30	17	40	3	161	4	0	0	0	0	4			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 03

DATE: 11th January 2006

LOCATION: Brien's Cross (N2/R150)

DAY: Wednesday

TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	3	0	0	0	0	3	12	6	2	11	0	31	3	0	1	1	0	5			
13:15	0	0	0	0	0	0	21	8	3	11	0	43	2	0	0	0	0	2			
13:30	1	0	0	0	0	1	24	4	5	10	0	43	6	0	0	1	0	7			
13:45	3	0	0	0	0	3	23	9	5	9	1	47	2	0	0	0	0	2			
H/TOT	7	0	0	0	0	7	80	27	15	41	1	164	13	0	1	2	0	16			
14:00	2	1	0	0	0	3	20	9	9	6	0	44	2	0	0	0	0	2			
14:15	1	0	0	0	0	1	22	7	9	8	0	46	3	1	0	0	0	4			
14:30	2	0	0	0	0	2	26	9	6	8	1	50	2	0	0	0	0	2			
14:45	5	0	0	0	0	5	16	6	6	6	0	34	2	3	0	0	0	5			
H/TOT	10	1	0	0	0	11	84	31	30	28	1	174	9	4	0	0	0	13			
15:00	6	0	0	1	0	7	25	12	7	9	0	53	2	0	0	1	0	3			
15:15	8	0	0	0	0	8	24	14	9	10	0	57	8	0	0	0	0	8			
15:30	3	0	0	0	0	3	21	8	8	7	1	45	5	0	0	1	0	6			
15:45	1	0	1	0	0	2	36	11	4	6	0	57	3	1	0	0	0	4			
H/TOT	18	0	1	1	0	20	106	45	28	32	1	212	18	1	0	2	0	21			
16:00	5	1	0	0	0	6	48	7	3	3	1	62	5	1	0	1	0	7			
16:15	5	0	0	0	0	5	52	15	5	7	0	79	2	1	0	0	0	3			
16:30	3	1	0	0	0	4	43	16	6	7	0	72	4	1	0	0	0	5			
16:45	5	1	0	0	0	6	61	24	5	8	0	98	2	0	0	0	0	2			
H/TOT	18	3	0	0	0	21	204	62	19	25	1	311	13	3	0	1	0	17			
17:00	2	0	0	0	0	2	54	36	7	3	3	103	8	0	0	0	0	8			
17:15	6	0	0	0	0	6	82	30	8	1	0	121	10	2	0	0	0	12			
17:30	2	0	0	0	0	2	86	14	2	3	0	105	9	0	0	0	0	9			
17:45	5	0	0	0	0	5	83	14	4	5	0	106	8	2	0	0	0	10			
H/TOT	15	0	0	0	0	15	305	94	21	12	3	435	35	4	0	0	0	39			
18:00	5	0	0	0	0	5	70	10	2	6	0	88	7	0	0	0	0	7			
18:15	7	0	0	0	0	7	56	3	3	2	1	65	8	0	0	0	0	8			
18:30	5	0	0	0	0	5	65	1	1	4	0	71	3	1	0	0	0	4			
18:45	4	0	0	0	0	4	49	2	0	2	0	53	5	0	1	0	0	6			
H/TOT	21	0	0	0	0	21	240	16	6	14	1	277	23	1	1	0	0	25			
P/TOT	117	8	2	1	0	128	1435	411	230	336	21	2433	152	15	2	6	0	175			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 03

DATE: 11th January 2006

LOCATION: Brien's Cross (N2/R150)

DAY: Wednesday

TIME	MOVEMENT 10						TOT	MOVEMENT 11						TOT	MOVEMENT 12						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	6	1	0	0	0	7	6	3	2	0	0	11	4	0	1	0	0	5			
07:15	9	0	0	0	0	9	18	2	1	0	0	21	5	1	0	0	0	6			
07:30	12	0	0	0	0	12	21	4	2	1	0	28	3	0	0	1	0	4			
07:45	7	1	0	1	0	9	19	3	1	3	0	26	4	0	0	0	0	4			
H/TOT	34	2	0	1	0	37	64	12	6	4	0	86	16	1	1	1	0	19			
08:00	6	0	0	0	0	6	20	3	2	2	0	27	5	1	2	0	1	9			
08:15	6	1	2	0	0	9	18	1	1	1	0	21	8	1	0	0	0	9			
08:30	9	3	0	1	0	13	22	3	0	4	0	29	5	1	0	0	0	6			
08:45	5	1	0	0	0	6	24	4	3	1	0	32	9	2	0	3	0	14			
H/TOT	26	5	2	1	0	34	84	11	6	8	0	109	27	5	2	3	1	38			
09:00	2	0	0	0	0	2	16	3	1	5	0	25	10	0	0	2	0	12			
09:15	6	0	0	0	0	6	24	6	0	3	0	33	5	2	1	2	0	10			
09:30	3	0	0	0	0	3	14	1	0	3	0	18	8	1	1	1	0	11			
09:45	0	1	0	0	0	1	11	1	2	1	0	15	3	2	1	2	0	8			
H/TOT	11	1	0	0	0	12	65	11	3	12	0	91	26	5	3	7	0	41			
10:00	4	0	0	0	0	4	14	0	0	3	0	17	1	0	0	2	0	3			
10:15	1	1	0	0	0	2	10	1	0	1	0	12	4	0	1	3	0	8			
10:30	3	1	0	0	0	4	10	2	0	3	0	15	4	0	0	1	1	6			
10:45	5	0	0	1	0	6	7	0	0	1	0	8	2	0	0	0	0	2			
H/TOT	13	2	0	1	0	16	41	3	0	8	0	52	11	0	1	6	1	19			
11:00	2	0	0	0	0	2	11	2	0	4	0	17	8	2	0	1	0	11			
11:15	1	1	0	0	0	2	10	3	0	5	1	19	6	0	0	0	0	6			
11:30	5	0	0	0	0	5	12	1	3	1	1	18	5	0	1	0	0	6			
11:45	2	0	0	0	0	2	11	2	1	4	0	18	5	0	1	0	0	6			
H/TOT	10	1	0	0	0	11	44	8	4	14	2	72	24	2	2	1	0	29			
12:00	3	0	0	0	0	3	11	3	2	1	0	17	4	0	0	0	0	4			
12:15	2	1	0	0	0	3	15	3	0	3	0	21	4	0	1	1	0	6			
12:30	1	0	0	0	0	1	8	1	2	3	0	14	5	3	1	1	0	10			
12:45	2	1	0	0	0	3	6	3	0	1	0	10	10	0	0	1	0	11			
H/TOT	8	2	0	0	0	10	40	10	4	8	0	62	23	3	2	3	0	31			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 03

DATE: 11th January 2006

LOCATION: Brien's Cross (N2/R150)

DAY: Wednesday

TIME	MOVEMENT 10						TOT	MOVEMENT 11					TOT	MOVEMENT 12					TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS		
13:00	4	0	0	0	0	4	13	0	1	0	0	14	4	2	0	1	0	7	
13:15	0	1	0	0	0	1	10	2	0	4	0	16	2	0	0	1	0	3	
13:30	2	0	0	0	0	2	10	2	3	2	0	17	1	0	0	1	0	2	
13:45	1	0	0	1	0	2	7	2	0	2	0	11	4	2	1	0	1	8	
H/TOT	7	1	0	1	0	9	40	6	4	8	0	58	11	4	1	3	1	20	
14:00	0	1	0	0	0	1	13	2	0	2	0	17	4	1	1	1	0	7	
14:15	3	0	0	1	0	4	19	3	0	5	0	27	6	0	0	0	0	6	
14:30	3	1	0	0	0	4	12	0	1	3	0	16	9	0	0	2	0	11	
14:45	6	1	1	0	0	8	13	4	0	3	0	20	4	2	0	0	0	6	
H/TOT	12	3	1	1	0	17	57	9	1	13	0	80	23	3	1	3	0	30	
15:00	1	1	0	0	0	2	13	4	0	2	0	19	7	4	0	3	0	14	
15:15	3	2	0	0	0	5	15	3	0	1	0	19	6	1	1	1	0	9	
15:30	3	0	2	0	0	5	12	4	1	3	0	20	6	0	2	0	0	8	
15:45	3	0	0	0	0	3	15	1	1	2	0	19	3	1	1	4	0	9	
H/TOT	10	3	2	0	0	15	55	12	2	8	0	77	22	6	4	8	0	40	
16:00	2	0	0	0	0	2	20	0	0	0	0	20	13	1	0	1	0	15	
16:15	9	1	0	0	0	10	21	1	0	1	0	23	9	1	0	4	1	15	
16:30	2	1	0	0	0	3	22	4	0	4	0	30	4	1	0	3	0	8	
16:45	4	1	1	0	0	6	20	1	0	1	0	22	7	1	1	1	1	11	
H/TOT	17	3	1	0	0	21	83	6	0	6	0	95	33	4	1	9	2	49	
17:00	1	0	0	0	0	1	37	5	3	1	0	46	16	7	1	1	0	25	
17:15	3	2	0	0	0	5	24	3	0	4	0	31	13	2	1	3	0	19	
17:30	1	0	0	0	0	1	20	4	0	1	0	25	12	2	0	2	0	16	
17:45	0	0	0	0	0	0	27	2	2	1	0	32	11	0	0	0	0	11	
H/TOT	5	2	0	0	0	7	108	14	5	7	0	134	52	11	2	6	0	71	
18:00	8	0	0	0	0	8	18	0	1	2	0	21	8	0	1	0	0	9	
18:15	0	1	0	0	0	1	21	1	1	0	0	23	4	0	0	0	0	4	
18:30	3	1	0	0	0	4	16	0	0	0	0	16	6	0	0	1	0	7	
18:45	4	0	0	0	0	4	15	0	0	1	0	16	7	0	0	0	0	7	
H/TOT	15	2	0	0	0	17	70	1	2	3	0	76	25	0	1	1	0	27	
P/TOT	168	27	6	5	0	206	751	103	37	99	2	992	293	44	21	51	5	414	

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 1					TOT	MOVEMENT 2					TOT	MOVEMENT 3					TOT			
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS				
07:00	1	0	0	0	0	1	92	8	7	0	0	107	0	0	0	0	0	0	0	0	0
07:15	4	0	0	0	0	4	96	2	2	0	1	101	2	1	0	0	0	0	0	0	3
07:30	5	0	0	0	0	5	115	8	5	0	1	129	5	2	0	0	0	0	0	0	7
07:45	0	1	0	0	0	1	97	7	8	2	0	114	3	2	1	0	0	0	0	0	6
<b>H/TOT</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>400</b>	<b>25</b>	<b>22</b>	<b>2</b>	<b>2</b>	<b>451</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>
08:00	0	0	0	0	0	0	68	18	7	3	0	97	1	0	0	0	0	0	0	0	1
08:15	1	2	1	0	0	4	65	15	6	6	0	92	3	0	1	0	0	0	0	0	4
08:30	0	0	0	0	0	0	75	13	12	7	0	107	4	1	1	0	0	0	0	0	6
08:45	0	1	0	1	0	2	66	14	10	5	0	95	4	1	0	1	0	0	0	0	6
<b>H/TOT</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>274</b>	<b>60</b>	<b>35</b>	<b>21</b>	<b>1</b>	<b>391</b>	<b>12</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>
09:00	0	0	0	0	0	0	53	5	7	5	0	80	1	0	0	0	0	0	0	0	1
09:15	1	1	0	0	0	2	47	3	4	6	1	61	0	0	0	0	0	0	0	0	0
09:30	2	0	0	0	0	2	42	6	6	4	0	58	4	0	1	1	0	0	0	0	6
09:45	3	0	0	0	0	3	45	9	5	4	1	64	3	2	0	0	0	0	0	0	5
<b>H/TOT</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>187</b>	<b>33</b>	<b>22</b>	<b>19</b>	<b>2</b>	<b>263</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>
10:00	0	0	0	0	0	0	47	3	6	10	0	66	4	0	0	0	0	0	0	0	4
10:15	0	1	0	0	0	1	23	4	6	5	1	39	0	1	0	1	0	0	0	0	2
10:30	1	0	0	0	0	1	34	6	8	6	0	54	3	0	0	0	0	0	0	0	3
10:45	0	0	0	0	0	0	24	3	9	7	0	43	4	0	0	0	0	0	0	0	4
<b>H/TOT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>128</b>	<b>16</b>	<b>29</b>	<b>28</b>	<b>1</b>	<b>202</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>
11:00	0	0	0	0	0	0	23	1	7	4	0	35	0	0	0	1	0	0	0	0	1
11:15	0	0	1	0	0	1	28	3	8	6	0	45	2	0	0	1	0	0	0	0	3
11:30	2	0	0	0	0	2	26	1	11	3	0	41	1	0	0	0	0	0	0	0	1
11:45	0	0	0	0	0	0	33	4	11	2	1	51	5	0	0	1	0	0	0	0	6
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>110</b>	<b>9</b>	<b>37</b>	<b>15</b>	<b>1</b>	<b>172</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>
12:00	1	0	0	0	0	1	25	2	4	6	0	37	2	0	0	0	0	0	0	0	2
12:15	3	0	1	0	0	4	19	1	3	2	1	26	0	0	0	0	0	0	0	0	0
12:30	1	0	0	0	0	1	32	2	1	6	0	41	1	1	0	0	0	0	0	0	2
12:45	1	0	0	0	0	1	24	3	5	4	0	36	2	0	0	1	0	0	0	0	3
<b>H/TOT</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>100</b>	<b>8</b>	<b>13</b>	<b>18</b>	<b>1</b>	<b>140</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	1	1	0	0	0	2	25	2	5	9	0	41	1	0	0	0	0	1			
13:15	0	0	0	0	0	0	20	5	7	5	0	37	0	1	0	0	0	1			
13:30	0	2	0	0	0	2	20	3	2	3	1	29	1	1	0	0	0	2			
13:45	0	0	0	0	0	0	27	0	4	1	0	32	2	0	0	0	0	2			
<b>H/TOT</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>92</b>	<b>10</b>	<b>18</b>	<b>18</b>	<b>1</b>	<b>139</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>			
14:00	0	0	0	0	0	0	11	3	2	5	0	21	6	0	0	0	0	6			
14:15	3	0	0	0	0	3	21	3	2	3	0	29	4	0	0	1	0	5			
14:30	0	1	0	1	0	2	25	3	4	6	0	38	2	1	0	1	0	4			
14:45	1	0	0	0	0	1	35	6	8	1	0	50	4	1	0	1	0	6			
<b>H/TOT</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>92</b>	<b>15</b>	<b>16</b>	<b>15</b>	<b>0</b>	<b>138</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>21</b>			
15:00	0	1	0	0	0	1	23	3	6	1	0	33	3	0	0	0	0	3			
15:15	2	1	0	0	0	3	20	4	7	6	0	37	2	1	1	0	0	4			
15:30	1	0	0	0	0	1	23	5	3	3	0	34	4	2	1	0	0	7			
15:45	0	0	0	0	0	0	28	4	5	1	0	38	6	2	2	0	0	10			
<b>H/TOT</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>94</b>	<b>16</b>	<b>21</b>	<b>11</b>	<b>0</b>	<b>142</b>	<b>15</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>24</b>			
16:00	5	0	0	0	0	5	25	3	4	4	0	36	1	0	0	0	0	1			
16:15	0	1	0	0	0	1	40	6	4	3	0	53	5	0	0	0	0	5			
16:30	3	0	0	0	0	3	27	2	2	2	1	34	6	0	0	0	0	6			
16:45	0	1	0	0	0	1	32	5	6	3	0	46	3	2	0	1	0	6			
<b>H/TOT</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>124</b>	<b>16</b>	<b>16</b>	<b>12</b>	<b>1</b>	<b>169</b>	<b>15</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>18</b>			
17:00	0	0	0	0	0	0	21	3	5	11	0	40	1	1	0	1	0	3			
17:15	0	1	0	0	0	1	32	6	1	2	0	41	3	1	1	0	0	5			
17:30	2	0	0	0	0	2	24	2	3	2	0	31	3	0	0	0	0	3			
17:45	0	0	0	1	0	1	36	5	3	3	0	47	1	0	0	0	0	1			
<b>H/TOT</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>113</b>	<b>16</b>	<b>12</b>	<b>18</b>	<b>0</b>	<b>159</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>12</b>			
18:00	2	0	1	0	0	3	14	0	4	4	0	22	4	0	0	0	0	4			
18:15	1	0	0	0	0	1	21	2	4	4	0	31	2	0	0	0	0	2			
18:30	3	0	0	0	0	3	17	2	3	4	0	26	4	0	0	0	0	4			
18:45	2	0	1	0	0	3	21	2	3	2	0	28	4	0	0	0	0	4			
<b>H/TOT</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>73</b>	<b>6</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>107</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>			
<b>P/TOT</b>	<b>52</b>	<b>15</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>75</b>	<b>1787</b>	<b>230</b>	<b>255</b>	<b>191</b>	<b>10</b>	<b>2473</b>	<b>126</b>	<b>24</b>	<b>9</b>	<b>12</b>	<b>0</b>	<b>171</b>			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 4					TOT	MOVEMENT 5					TOT	MOVEMENT 6					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	2	0	0	0	0	2	6	0	0	0	0	6	98	9	0	2	1	110
07:15	1	0	0	0	0	1	7	1	0	0	0	8	80	10	0	1	0	91
07:30	3	0	0	0	0	3	10	6	0	0	0	16	62	7	0	2	1	72
07:45	4	0	0	0	1	5	10	4	1	0	0	15	53	13	1	2	0	69
H/TOT	10	0	0	0	1	11	33	11	1	0	0	45	293	39	1	7	2	342
08:00	0	0	0	0	0	0	8	4	0	1	0	13	48	13	1	1	0	63
08:15	1	0	0	1	0	2	6	0	0	1	0	7	57	12	0	0	0	69
08:30	3	0	0	0	0	3	9	2	0	2	0	13	53	5	1	1	0	60
08:45	5	1	1	1	0	8	8	1	0	1	0	10	36	4	2	2	0	44
H/TOT	9	1	1	2	0	13	31	7	0	5	0	43	194	34	4	4	0	236
09:00	4	0	0	2	0	6	3	2	1	0	0	6	40	6	2	0	0	48
09:15	1	2	0	1	0	4	8	2	0	1	0	11	28	4	2	2	0	36
09:30	5	1	1	1	0	8	9	2	0	0	0	11	24	4	3	3	0	34
09:45	2	0	0	0	0	2	5	0	0	0	0	5	27	4	3	1	0	35
H/TOT	12	3	1	4	0	20	25	6	1	1	0	33	119	18	10	6	0	153
10:00	1	3	0	0	0	4	3	2	0	0	0	5	21	6	3	1	0	31
10:15	6	1	1	1	0	9	3	1	0	1	0	5	8	5	1	0	0	14
10:30	5	0	0	0	0	5	4	0	1	0	0	5	20	4	2	0	0	26
10:45	3	1	0	0	0	4	7	2	1	1	0	11	17	4	1	1	0	23
H/TOT	15	5	1	1	0	22	17	5	2	2	0	26	66	19	7	2	0	94
11:00	0	0	0	1	0	1	4	0	0	0	0	4	12	1	0	1	0	14
11:15	1	0	0	0	0	1	2	1	0	0	0	3	12	3	2	1	0	18
11:30	1	0	1	0	0	2	5	1	1	0	0	7	14	0	1	0	0	15
11:45	2	0	0	0	0	2	5	1	1	0	0	7	14	1	1	1	0	17
H/TOT	4	0	1	1	0	6	16	3	2	0	0	21	52	5	4	3	0	64
12:00	1	0	0	0	1	2	5	0	0	0	0	5	16	1	1	4	0	22
12:15	4	1	0	0	0	5	7	1	0	0	0	8	5	0	1	2	0	8
12:30	7	0	0	0	0	7	5	1	0	0	0	6	15	0	1	1	0	17
12:45	4	0	0	2	0	6	8	0	0	0	0	8	19	2	2	1	0	24
H/TOT	16	1	0	2	1	20	25	2	0	0	0	27	55	3	5	8	0	71

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 4						TOT	MOVEMENT 5						TOT	MOVEMENT 6						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	0	0	0	0	0	0	2	2	0	0	0	4	22	2	0	1	0	25			
13:15	2	0	0	1	0	3	5	2	1	0	0	8	14	2	0	2	0	18			
13:30	3	0	0	1	0	4	3	2	0	0	0	5	23	1	0	2	0	26			
13:45	3	1	0	1	0	5	5	1	0	0	0	6	24	0	2	2	0	28			
H/TOT	8	1	0	3	0	12	15	7	1	0	0	23	83	5	2	7	0	97			
14:00	2	0	0	0	0	2	6	2	0	0	0	8	11	5	2	0	0	18			
14:15	3	0	0	0	0	3	7	2	0	0	0	9	22	1	5	1	0	29			
14:30	4	0	0	0	0	4	2	0	0	1	0	3	13	0	0	1	1	15			
14:45	1	1	1	1	0	4	4	1	0	0	0	5	16	5	0	1	0	22			
H/TOT	10	1	1	1	0	13	19	5	0	1	0	25	62	11	7	3	1	84			
15:00	4	0	0	0	0	4	3	1	0	1	0	6	9	1	1	1	0	12			
15:15	5	2	0	1	0	8	3	1	0	0	0	4	11	2	1	2	0	16			
15:30	4	1	0	0	0	5	5	0	0	0	0	7	11	3	0	2	1	17			
15:45	4	0	0	1	0	5	9	1	0	0	0	10	18	1	0	1	0	20			
H/TOT	17	3	0	2	0	22	22	4	0	1	0	27	49	7	2	6	1	65			
16:00	4	1	0	0	0	5	6	0	1	1	0	8	19	4	3	1	0	27			
16:15	7	0	0	0	0	7	8	1	0	0	0	9	22	1	0	2	0	25			
16:30	2	1	0	0	0	3	7	3	2	1	0	13	23	4	1	2	0	30			
16:45	1	1	0	1	0	3	4	1	0	0	0	5	13	5	1	1	0	20			
H/TOT	14	3	0	1	0	18	25	5	3	2	0	35	77	14	5	6	0	102			
17:00	3	3	0	0	1	7	9	0	1	0	0	10	15	0	1	0	0	16			
17:15	7	2	0	0	0	9	13	1	1	0	0	15	16	4	3	2	0	25			
17:30	5	0	0	0	0	5	13	0	0	2	0	15	18	1	0	0	0	19			
17:45	2	0	0	0	0	2	16	1	0	0	0	17	16	1	0	1	0	18			
H/TOT	17	5	0	0	1	23	51	2	2	2	0	57	65	6	4	3	0	78			
18:00	3	1	0	0	0	4	5	2	0	0	0	7	24	1	1	2	0	28			
18:15	3	0	0	0	0	3	10	2	0	0	0	12	8	3	0	0	0	11			
18:30	4	0	0	0	0	4	7	1	0	0	0	8	13	2	1	0	0	16			
18:45	1	0	0	0	0	1	5	0	0	1	0	6	13	1	0	0	0	14			
H/TOT	11	1	0	0	0	12	27	5	0	1	0	33	58	7	2	2	0	69			
P/TOT	143	24	5	17	3	192	306	62	12	15	0	395	1173	168	53	57	4	1455			



## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	13	0	1	0	0	14	10	3	1	4	0	18	1	0	0	0	0	1			
07:15	14	2	0	0	0	16	9	1	3	3	2	18	1	0	0	1	0	2			
07:30	15	3	3	1	0	22	23	6	1	0	1	31	1	0	0	0	0	1			
07:45	9	3	1	4	0	17	26	8	4	5	0	43	2	0	0	0	0	2			
H/TOT	51	8	5	5	0	69	68	18	9	12	3	110	5	0	0	1	0	6			
08:00	8	2	4	1	0	15	16	5	4	10	0	35	1	2	0	0	0	3			
08:15	11	3	0	1	0	15	20	6	2	9	0	37	1	0	0	0	0	1			
08:30	14	4	3	2	0	23	20	7	5	5	1	38	2	0	0	0	0	2			
08:45	19	3	1	2	0	25	16	2	4	1	1	24	1	0	0	0	0	1			
H/TOT	52	12	8	6	0	78	72	20	15	25	2	134	5	2	0	0	0	7			
09:00	16	5	2	1	0	24	20	7	3	15	0	45	0	0	1	0	0	1			
09:15	13	4	1	2	1	21	21	7	4	9	0	41	0	1	0	0	0	1			
09:30	14	3	2	2	0	21	24	8	10	4	0	46	1	1	0	0	0	2			
09:45	16	1	0	1	0	18	16	7	5	5	0	33	0	0	0	0	0	0			
H/TOT	59	13	5	6	1	84	81	29	22	33	0	165	1	2	1	0	0	4			
10:00	11	3	3	0	0	17	15	4	2	7	1	29	1	1	1	0	0	3			
10:15	13	4	0	1	0	18	19	4	4	13	0	40	0	0	0	0	0	0			
10:30	15	4	4	1	0	24	9	1	6	6	2	24	0	0	1	0	0	1			
10:45	8	1	0	1	0	10	15	7	6	6	1	35	0	1	0	0	0	1			
H/TOT	47	12	7	3	0	69	58	16	18	32	4	128	1	2	2	0	0	5			
11:00	8	1	1	1	0	11	16	8	7	7	0	38	3	0	0	0	0	3			
11:15	11	5	0	2	0	18	11	5	4	8	0	28	2	0	0	0	0	2			
11:30	19	5	1	2	1	28	17	5	5	8	0	35	3	0	0	0	0	3			
11:45	6	2	1	1	0	10	22	2	8	11	0	43	0	0	0	0	0	0			
H/TOT	44	13	3	6	1	67	66	20	24	34	0	144	8	0	0	0	0	8			
12:00	8	1	1	1	1	12	15	3	5	12	0	35	3	1	0	0	0	4			
12:15	12	2	0	2	0	16	19	8	5	7	0	39	1	0	0	0	0	1			
12:30	10	3	3	1	0	17	17	9	4	9	2	41	5	2	1	0	0	8			
12:45	21	7	0	0	0	28	12	8	3	10	0	33	1	0	0	0	0	1			
H/TOT	51	13	4	4	1	73	63	28	17	38	2	148	10	3	1	0	0	14			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 7						TOT	MOVEMENT 8						TOT	MOVEMENT 9						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	8	2	1	1	0	12	18	5	3	13	0	39	3	0	0	0	0	3			
13:15	21	3	1	2	0	27	23	7	3	9	0	42	4	0	0	0	0	4			
13:30	16	1	0	2	0	19	29	4	5	11	0	49	2	0	0	0	0	2			
13:45	16	3	1	1	0	21	24	8	5	7	1	45	1	0	0	0	0	1			
H/TOT	61	9	3	6	0	79	94	24	16	40	1	175	10	0	0	0	0	10			
14:00	21	7	1	2	0	31	20	10	9	6	0	45	1	2	1	0	0	4			
14:15	19	3	1	0	0	23	22	8	9	7	0	46	2	0	0	0	0	2			
14:30	22	3	2	1	0	28	25	10	6	8	1	50	0	1	0	0	0	1			
14:45	21	3	1	0	0	25	21	7	5	4	0	37	1	1	1	0	0	3			
H/TOT	83	16	5	3	0	107	88	35	29	25	1	178	4	4	2	0	0	10			
15:00	32	6	1	4	0	43	29	7	8	12	0	60	3	1	0	0	0	4			
15:15	30	3	3	0	0	36	33	11	8	8	0	60	2	0	0	0	0	2			
15:30	29	4	0	1	0	34	23	7	8	8	1	47	0	0	0	0	0	0			
15:45	27	7	2	1	0	37	35	12	5	5	0	57	4	0	0	0	0	4			
H/TOT	118	20	6	6	0	150	120	41	29	33	1	224	9	1	0	0	0	10			
16:00	31	4	0	2	0	37	53	8	3	4	1	69	1	1	0	0	0	2			
16:15	37	8	2	1	0	48	54	17	5	7	0	83	4	3	0	0	0	7			
16:30	56	6	2	1	1	66	47	16	6	5	0	74	3	1	0	0	0	4			
16:45	45	9	3	1	0	58	67	24	5	8	0	104	7	0	0	0	0	7			
H/TOT	169	27	7	5	1	209	221	65	19	24	1	330	15	5	0	0	0	20			
17:00	59	6	2	0	0	67	59	33	8	2	2	104	4	1	0	0	0	5			
17:15	74	17	0	1	0	92	91	29	7	1	0	128	6	1	0	0	0	7			
17:30	68	8	1	0	0	77	91	14	2	3	0	110	4	0	0	0	0	4			
17:45	86	4	1	1	0	92	91	15	4	5	0	115	2	0	0	0	0	2			
H/TOT	287	35	4	2	0	328	332	91	21	11	2	457	16	2	0	0	0	18			
18:00	66	6	0	1	0	73	81	9	2	6	0	98	4	0	0	0	0	4			
18:15	74	2	1	1	0	78	65	3	4	2	1	75	3	0	0	0	0	3			
18:30	59	2	0	0	0	61	72	2	0	4	0	78	3	0	0	0	0	3			
18:45	58	0	2	1	0	61	56	2	1	2	0	61	6	0	0	0	0	6			
H/TOT	257	10	3	3	0	273	274	16	7	14	1	312	16	0	0	0	0	16			
P/TOT	1279	188	60	55	4	1586	1537	403	226	321	18	2505	100	21	6	1	0	128			

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 10						TOT	MOVEMENT 11						TOT	MOVEMENT 12						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
07:00	4	0	0	0	0	4	4	1	0	1	0	6	0	0	0	0	0	0	0	0	
07:15	6	0	0	0	0	6	6	1	0	1	0	8	1	0	0	1	0	0	0	2	
07:30	2	0	0	0	0	2	8	0	1	0	0	9	0	1	0	0	0	0	0	1	
07:45	5	0	0	0	0	5	5	3	0	0	0	8	0	1	0	0	0	0	0	1	
H/TOT	17	0	0	0	0	17	23	5	1	2	0	31	1	2	0	1	0	0	0	4	
08:00	3	1	0	0	0	4	10	4	2	0	0	16	0	0	0	0	0	0	0	0	
08:15	8	1	0	0	0	9	5	3	0	0	0	8	0	0	0	0	0	0	0	0	
08:30	7	0	1	0	0	8	10	4	0	0	0	14	1	0	0	0	0	0	0	1	
08:45	3	0	0	0	0	3	5	1	0	0	0	6	1	0	0	0	0	0	0	1	
H/TOT	21	2	1	0	0	24	30	12	2	0	0	44	2	0	0	0	0	0	0	2	
09:00	6	2	1	0	0	9	6	2	0	0	0	8	1	0	0	0	0	0	0	1	
09:15	5	0	1	0	0	6	8	0	0	0	0	8	1	1	0	0	0	0	0	2	
09:30	0	1	0	0	0	1	4	0	0	0	0	4	0	0	0	0	0	0	0	0	
09:45	4	2	0	0	0	6	2	5	2	0	0	9	3	0	0	0	0	0	0	3	
H/TOT	15	5	2	0	0	22	20	7	2	0	0	29	5	1	0	0	0	0	0	6	
10:00	0	0	0	0	0	0	8	1	0	0	0	9	2	0	1	0	0	0	0	3	
10:15	4	0	0	0	0	4	4	0	0	0	0	4	1	0	0	0	0	0	0	1	
10:30	7	0	0	0	0	7	8	2	0	0	0	10	2	0	0	0	0	0	0	2	
10:45	2	0	0	0	0	2	12	1	0	0	0	13	2	0	1	0	0	0	0	3	
H/TOT	13	0	0	0	0	13	32	4	0	0	0	36	7	0	2	0	0	0	0	9	
11:00	2	1	0	0	0	3	2	3	2	0	0	7	1	0	0	0	0	0	0	1	
11:15	2	0	0	0	0	2	3	3	0	0	0	6	1	0	1	0	0	0	0	2	
11:30	1	0	0	0	0	1	8	0	1	0	0	9	4	0	0	0	0	0	0	4	
11:45	0	0	0	0	0	0	3	2	0	1	0	6	0	0	0	0	0	0	0	0	
H/TOT	5	1	0	0	0	6	16	8	3	1	0	28	6	0	1	0	0	0	0	7	
12:00	1	0	0	0	0	1	3	1	1	1	0	6	1	1	0	0	0	0	0	2	
12:15	2	0	0	0	0	2	7	0	0	0	0	7	2	0	0	0	0	0	0	2	
12:30	1	0	0	0	0	1	7	1	0	1	0	9	1	0	0	0	0	0	0	1	
12:45	2	1	0	0	0	3	4	2	0	0	0	6	0	0	0	0	0	0	0	0	
H/TOT	6	1	0	0	0	7	21	4	1	2	0	28	4	1	0	0	0	0	0	5	

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 04

DATE: 11th January 2006

LOCATION: Balrath Cross (N2/R153)

DAY: Wednesday

TIME	MOVEMENT 10						TOT	MOVEMENT 11					TOT	MOVEMENT 12					TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS		
13:00	1	0	0	0	0	1	2	0	1	1	0	4	1	1	0	0	0	2	
13:15	0	0	0	0	0	0	2	1	2	0	0	5	0	1	0	0	0	1	
13:30	4	0	0	0	0	4	3	1	2	1	0	7	0	0	0	0	0	0	
13:45	1	0	0	0	0	1	1	0	1	0	0	2	0	0	0	0	0	0	
H/TOT	6	0	0	0	0	6	8	2	6	2	0	18	1	2	0	0	0	3	
14:00	0	1	0	0	0	1	2	1	1	0	0	4	2	0	0	0	0	2	
14:15	1	1	0	0	0	2	6	1	0	0	0	8	2	0	0	1	0	3	
14:30	0	0	0	0	0	0	6	0	0	0	0	6	1	0	0	0	0	1	
14:45	4	1	0	0	0	5	9	2	0	2	0	13	1	0	0	1	0	2	
H/TOT	5	3	0	0	0	8	23	4	1	3	0	31	6	0	0	2	0	8	
15:00	1	0	0	0	0	1	5	0	0	0	0	7	0	1	0	0	0	1	
15:15	0	0	0	0	0	0	10	3	0	0	0	13	3	1	0	0	0	4	
15:30	0	2	1	0	0	3	2	0	0	0	0	4	1	0	0	0	0	1	
15:45	3	3	0	0	0	6	4	0	1	1	0	6	1	0	0	0	0	1	
H/TOT	4	5	1	0	0	10	21	7	1	1	0	30	5	2	0	0	0	7	
16:00	1	1	0	0	0	2	9	0	1	0	0	10	2	0	0	0	0	2	
16:15	4	0	0	0	0	4	12	0	0	0	0	12	1	0	0	1	0	2	
16:30	1	1	0	0	0	2	9	3	0	0	0	12	0	0	0	1	0	1	
16:45	3	1	0	0	0	4	12	4	1	2	0	19	2	2	0	0	0	4	
H/TOT	9	3	0	0	0	12	42	7	2	2	0	53	5	2	0	2	0	9	
17:00	3	1	0	0	0	4	7	3	1	0	0	11	2	1	0	0	0	3	
17:15	2	0	0	0	0	2	13	6	0	0	0	19	2	1	0	0	0	3	
17:30	6	0	0	0	0	6	13	0	0	0	0	13	3	0	0	0	0	3	
17:45	0	0	0	0	0	0	16	1	0	1	0	18	0	1	0	0	0	1	
H/TOT	11	1	0	0	0	12	49	10	1	1	0	61	7	3	0	0	0	10	
18:00	0	0	0	0	0	0	8	2	0	0	0	10	0	1	0	0	0	1	
18:15	0	0	0	0	0	0	7	1	1	1	0	10	1	0	0	0	0	1	
18:30	2	0	0	0	0	2	4	0	1	0	0	5	1	0	0	0	0	1	
18:45	1	0	0	0	0	1	3	0	0	0	0	3	0	0	0	0	0	0	
H/TOT	3	0	0	0	0	3	22	3	2	1	0	28	2	1	0	0	0	3	
P/TOT	115	21	4	0	0	140	307	73	22	15	0	417	51	14	3	5	0	73	

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 05

DATE: 11th January 2006

LOCATION: Kilmoone Cross (N2/R152)

DAY: Wednesday

TIME	MOVEMENT 1					TOT	MOVEMENT 2					TOT	MOVEMENT 3					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	4	1	0	0	0	5	166	31	7	7	1	212	26	3	2	2	0	33
07:15	5	1	0	0	0	6	167	27	5	4	1	204	27	2	3	2	0	34
07:30	2	1	0	0	0	3	126	44	4	7	2	183	29	7	5	4	0	45
07:45	3	1	0	0	0	4	143	40	5	7	0	195	29	8	3	7	0	47
<b>H/TOT</b>	<b>14</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>602</b>	<b>142</b>	<b>21</b>	<b>25</b>	<b>4</b>	<b>794</b>	<b>111</b>	<b>20</b>	<b>13</b>	<b>15</b>	<b>0</b>	<b>159</b>
08:00	4	0	0	0	0	4	108	40	4	11	0	164	29	8	5	11	0	53
08:15	6	0	1	1	0	8	122	42	9	5	0	178	31	10	4	10	1	56
08:30	0	1	0	0	0	1	113	30	6	9	0	158	36	8	6	4	0	54
08:45	1	1	2	0	0	4	129	26	5	13	0	173	36	5	6	8	2	57
<b>H/TOT</b>	<b>11</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>17</b>	<b>472</b>	<b>138</b>	<b>24</b>	<b>38</b>	<b>1</b>	<b>673</b>	<b>132</b>	<b>31</b>	<b>21</b>	<b>33</b>	<b>3</b>	<b>220</b>
09:00	6	0	1	0	0	7	83	35	5	10	0	123	31	9	3	9	1	53
09:15	2	2	0	0	0	4	70	18	11	8	1	108	40	10	4	7	1	62
09:30	2	0	3	0	0	5	65	19	9	6	0	99	34	12	9	7	0	62
09:45	5	1	0	1	0	7	63	20	8	10	1	102	30	5	4	4	0	43
<b>H/TOT</b>	<b>15</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>281</b>	<b>82</b>	<b>33</b>	<b>34</b>	<b>2</b>	<b>432</b>	<b>135</b>	<b>36</b>	<b>20</b>	<b>27</b>	<b>2</b>	<b>220</b>
10:00	3	0	0	0	0	3	69	12	13	8	0	102	27	5	4	9	1	46
10:15	2	0	0	0	0	2	47	7	7	3	1	65	32	6	8	10	2	58
10:30	1	0	1	0	0	2	40	19	6	9	0	74	22	5	10	5	0	42
10:45	2	0	0	0	0	2	39	13	7	2	0	61	19	2	6	7	1	35
<b>H/TOT</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>195</b>	<b>51</b>	<b>33</b>	<b>22</b>	<b>1</b>	<b>302</b>	<b>100</b>	<b>18</b>	<b>28</b>	<b>31</b>	<b>4</b>	<b>181</b>
11:00	3	2	0	0	0	5	35	7	7	10	0	59	23	10	8	5	0	46
11:15	2	1	1	0	0	4	33	11	9	6	0	59	31	9	8	9	0	57
11:30	2	1	0	0	0	3	34	5	9	6	0	54	40	10	8	13	0	71
11:45	1	1	0	0	0	2	34	11	6	5	1	57	32	6	5	10	1	54
<b>H/TOT</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>136</b>	<b>34</b>	<b>31</b>	<b>27</b>	<b>1</b>	<b>229</b>	<b>126</b>	<b>35</b>	<b>29</b>	<b>37</b>	<b>1</b>	<b>228</b>
12:00	4	0	1	2	0	7	34	6	11	8	0	59	32	2	4	11	0	49
12:15	0	2	0	0	0	2	34	6	5	7	1	53	34	6	8	3	1	52
12:30	2	1	0	0	0	3	39	5	4	5	0	53	39	8	7	10	1	65
12:45	0	1	0	0	0	1	34	6	8	3	0	51	39	4	8	10	0	61
<b>H/TOT</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>13</b>	<b>141</b>	<b>23</b>	<b>28</b>	<b>23</b>	<b>1</b>	<b>216</b>	<b>144</b>	<b>20</b>	<b>27</b>	<b>34</b>	<b>2</b>	<b>227</b>

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 05

DATE: 11th January 2006

LOCATION: Kilmoone Cross (N2/R152)

DAY: Wednesday

TIME	MOVEMENT 1					TOT	MOVEMENT 2					TOT	MOVEMENT 3					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
13:00	3	0	1	0	0	4	52	11	9	6	0	78	38	4	13	7	0	62
13:15	4	0	0	0	0	4	30	9	3	8	0	50	48	9	5	4	0	66
13:30	4	0	0	1	0	5	47	6	7	0	1	61	49	5	6	10	1	71
13:45	4	0	0	0	0	4	46	4	3	6	0	59	44	10	7	8	0	69
<b>H/TOT</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>17</b>	<b>175</b>	<b>30</b>	<b>22</b>	<b>20</b>	<b>1</b>	<b>248</b>	<b>179</b>	<b>28</b>	<b>31</b>	<b>29</b>	<b>1</b>	<b>268</b>
14:00	1	1	0	0	0	2	36	6	5	8	0	55	48	10	10	6	0	74
14:15	6	0	1	0	0	7	34	7	6	4	0	51	53	6	9	5	1	74
14:30	3	0	1	0	0	4	29	5	6	2	1	43	35	8	7	9	0	59
14:45	4	0	0	0	0	4	41	15	8	3	0	67	46	8	8	4	0	66
<b>H/TOT</b>	<b>14</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>140</b>	<b>33</b>	<b>25</b>	<b>17</b>	<b>1</b>	<b>216</b>	<b>182</b>	<b>32</b>	<b>34</b>	<b>24</b>	<b>1</b>	<b>273</b>
15:00	2	1	0	0	0	3	30	7	7	2	0	46	80	9	5	14	0	108
15:15	2	0	1	0	0	3	27	5	8	4	0	44	63	9	12	7	0	91
15:30	0	0	1	0	0	1	29	12	4	7	1	53	62	9	7	5	1	84
15:45	1	1	1	0	0	3	40	8	2	4	0	54	69	10	6	5	0	90
<b>H/TOT</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>126</b>	<b>32</b>	<b>21</b>	<b>17</b>	<b>1</b>	<b>197</b>	<b>274</b>	<b>37</b>	<b>30</b>	<b>31</b>	<b>1</b>	<b>373</b>
16:00	5	1	0	0	0	6	36	11	10	5	0	62	97	16	5	6	1	125
16:15	0	1	1	0	0	2	52	7	3	8	0	70	93	18	6	6	0	123
16:30	0	0	0	0	0	0	42	6	2	3	1	54	110	22	9	7	0	148
16:45	2	2	1	0	0	5	47	17	8	5	0	77	117	34	6	10	1	168
<b>H/TOT</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>177</b>	<b>41</b>	<b>23</b>	<b>21</b>	<b>1</b>	<b>263</b>	<b>417</b>	<b>90</b>	<b>26</b>	<b>29</b>	<b>2</b>	<b>564</b>
17:00	6	0	1	0	0	7	37	10	3	9	0	59	158	24	9	2	1	194
17:15	3	1	0	0	0	4	43	11	5	7	0	66	177	15	6	3	0	201
17:30	4	0	0	0	0	4	45	5	3	2	0	55	157	8	6	4	0	175
17:45	4	0	0	0	0	4	44	10	3	3	0	60	175	15	3	4	0	197
<b>H/TOT</b>	<b>17</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>169</b>	<b>36</b>	<b>14</b>	<b>21</b>	<b>0</b>	<b>240</b>	<b>667</b>	<b>62</b>	<b>24</b>	<b>13</b>	<b>1</b>	<b>767</b>
18:00	1	0	0	0	0	1	37	5	2	6	0	50	163	7	5	4	1	180
18:15	3	2	0	0	0	5	35	6	1	7	0	49	134	3	4	3	1	145
18:30	2	0	1	1	0	4	27	5	4	3	0	39	111	3	1	2	2	119
18:45	1	0	0	0	0	1	36	2	1	5	0	44	105	6	3	2	1	117
<b>H/TOT</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>135</b>	<b>18</b>	<b>8</b>	<b>21</b>	<b>0</b>	<b>182</b>	<b>513</b>	<b>19</b>	<b>13</b>	<b>11</b>	<b>5</b>	<b>561</b>
<b>P/TOT</b>	<b>127</b>	<b>28</b>	<b>20</b>	<b>6</b>	<b>0</b>	<b>181</b>	<b>2749</b>	<b>660</b>	<b>283</b>	<b>286</b>	<b>14</b>	<b>3992</b>	<b>2980</b>	<b>428</b>	<b>296</b>	<b>314</b>	<b>23</b>	<b>4041</b>

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 05

DATE: 11th January 2006

LOCATION: Kilmoone Cross (N2/R152)

DAY: Wednesday

TIME	MOVEMENT 4					TOT	MOVEMENT 5					TOT	MOVEMENT 6					TOT
	CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS		CAR	LGV	OGV1	OGV2	BUS	
07:00	18	3	1	1	0	23	96	21	3	3	2	125	2	1	0	0	0	3
07:15	25	6	0	6	0	37	77	24	3	4	0	108	1	0	0	0	0	1
07:30	27	8	4	8	0	47	90	19	4	2	0	115	1	0	0	0	0	1
07:45	28	7	5	1	1	42	83	16	4	7	1	111	4	1	0	1	0	6
H/TOT	98	24	10	16	1	149	346	80	14	16	3	459	8	2	0	1	0	11
08:00	28	7	3	3	0	41	113	17	3	13	0	146	0	3	0	0	0	3
08:15	40	10	1	5	0	56	91	13	3	5	0	112	1	2	0	1	0	4
08:30	41	15	1	4	1	62	89	13	3	7	1	113	1	3	1	0	0	5
08:45	27	10	3	7	0	47	82	14	2	0	0	98	2	2	0	0	0	4
H/TOT	136	42	8	19	1	206	375	57	11	25	1	469	4	10	1	1	0	16
09:00	29	6	1	12	1	49	60	8	5	8	0	81	3	0	1	0	0	4
09:15	29	10	3	7	0	49	33	7	1	6	0	47	5	0	0	0	0	5
09:30	20	6	3	6	0	35	41	9	4	4	0	58	1	1	0	0	0	2
09:45	18	8	2	9	0	37	32	8	1	14	0	55	2	0	1	0	0	3
H/TOT	96	30	9	34	1	170	166	32	11	32	0	241	11	1	2	0	0	14
10:00	11	7	0	4	0	22	25	7	2	7	1	42	5	2	0	0	0	7
10:15	16	8	1	3	0	28	28	5	4	6	0	43	3	0	0	0	0	3
10:30	13	5	3	4	0	25	25	7	0	10	0	42	3	3	0	1	0	7
10:45	22	4	3	12	1	42	24	8	6	8	0	46	0	0	0	0	0	0
H/TOT	62	24	7	23	1	117	102	27	12	31	1	173	11	5	0	1	0	17
11:00	21	4	2	6	0	33	32	6	1	5	1	45	0	0	0	0	0	0
11:15	26	5	3	11	0	45	35	8	4	2	0	49	2	0	0	0	0	2
11:30	22	4	3	5	0	34	17	12	5	2	0	36	4	0	0	0	0	4
11:45	24	5	4	0	1	34	14	8	4	9	1	36	2	1	1	1	0	5
H/TOT	93	18	12	22	1	146	98	34	14	18	2	166	8	1	1	1	0	11
12:00	28	8	0	10	0	46	31	4	3	7	0	45	0	1	0	1	0	2
12:15	22	6	4	3	0	35	28	11	2	5	1	47	1	1	0	1	0	3
12:30	12	6	1	6	0	25	17	3	3	4	0	27	2	1	0	0	0	3
12:45	21	6	2	4	0	33	19	4	2	5	0	30	4	2	0	1	0	7
H/TOT	83	26	7	23	0	139	95	22	10	21	1	149	7	5	0	3	0	15

## ABACUS TRANSPORTATION SURVEYS

DULEEK TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION COUNTS

JANUARY 2006  
ATH/06/005

SITE: 05

DATE: 11th January 2006

LOCATION: Kilmoone Cross (N2/R152)

DAY: Wednesday

TIME	MOVEMENT 4						TOT	MOVEMENT 5						TOT	MOVEMENT 6						TOT
	CAR	LGV	OGV1	OGV2	BUS	CAR		LGV	OGV1	OGV2	BUS	CAR	LGV		OGV1	OGV2	BUS				
13:00	24	5	6	7	0	42	33	4	1	4	0	42	3	0	1	1	0	5			
13:15	15	6	3	5	0	29	21	8	3	4	0	36	3	1	0	0	0	4			
13:30	24	5	4	6	0	39	24	7	2	5	0	38	2	0	0	0	0	2			
13:45	36	6	0	8	1	51	29	8	2	8	0	47	5	0	1	1	0	7			
<b>H/TOT</b>	<b>99</b>	<b>22</b>	<b>13</b>	<b>26</b>	<b>1</b>	<b>161</b>	<b>107</b>	<b>27</b>	<b>8</b>	<b>21</b>	<b>0</b>	<b>163</b>	<b>13</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>18</b>			
14:00	34	3	1	5	0	43	30	3	2	1	0	36	4	0	3	0	0	7			
14:15	23	7	3	7	0	40	29	10	0	8	1	48	3	1	0	0	0	4			
14:30	32	6	1	8	0	47	41	5	1	7	0	54	1	0	0	0	0	1			
14:45	26	3	3	4	1	37	27	1	0	5	0	33	2	0	0	0	0	2			
<b>H/TOT</b>	<b>115</b>	<b>19</b>	<b>8</b>	<b>24</b>	<b>1</b>	<b>167</b>	<b>127</b>	<b>19</b>	<b>3</b>	<b>21</b>	<b>1</b>	<b>171</b>	<b>10</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>14</b>			
15:00	44	10	1	4	0	59	38	3	0	6	0	47	3	4	0	2	0	9			
15:15	32	5	2	2	0	41	21	1	4	3	0	29	3	1	1	0	0	5			
15:30	56	8	1	8	0	73	34	3	2	2	0	41	2	0	0	1	0	3			
15:45	38	7	6	6	1	58	29	8	4	4	0	45	4	1	0	1	0	6			
<b>H/TOT</b>	<b>170</b>	<b>30</b>	<b>10</b>	<b>20</b>	<b>1</b>	<b>231</b>	<b>122</b>	<b>15</b>	<b>10</b>	<b>15</b>	<b>0</b>	<b>162</b>	<b>12</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>23</b>			
16:00	48	8	4	6	0	66	24	8	0	5	1	38	3	0	1	0	0	4			
16:15	51	21	1	7	0	80	32	5	2	7	0	46	2	0	0	0	0	2			
16:30	60	17	4	1	0	82	30	11	3	9	0	53	3	1	1	1	0	6			
16:45	63	14	4	4	0	85	39	9	4	2	0	54	3	3	0	2	0	8			
<b>H/TOT</b>	<b>222</b>	<b>60</b>	<b>13</b>	<b>18</b>	<b>0</b>	<b>313</b>	<b>125</b>	<b>33</b>	<b>9</b>	<b>23</b>	<b>1</b>	<b>191</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>20</b>			
17:00	105	29	2	1	1	138	47	8	2	6	0	63	3	1	0	0	0	4			
17:15	104	17	1	1	0	123	34	9	3	2	1	49	4	3	0	0	0	7			
17:30	99	20	4	1	1	125	42	15	1	4	1	63	5	0	0	0	0	5			
17:45	93	15	2	2	1	113	44	4	2	2	0	52	5	0	0	0	0	5			
<b>H/TOT</b>	<b>401</b>	<b>81</b>	<b>9</b>	<b>5</b>	<b>3</b>	<b>499</b>	<b>167</b>	<b>36</b>	<b>8</b>	<b>14</b>	<b>2</b>	<b>227</b>	<b>17</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>			
18:00	81	12	1	2	0	96	34	4	0	1	2	41	3	0	1	1	0	5			
18:15	70	10	1	4	0	85	35	2	1	2	0	40	5	1	0	0	0	6			
18:30	56	10	1	0	1	68	22	4	0	2	0	28	2	1	0	0	0	3			
18:45	72	7	3	2	0	84	19	3	1	1	0	24	4	3	0	0	0	7			
<b>H/TOT</b>	<b>279</b>	<b>39</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>333</b>	<b>110</b>	<b>13</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>133</b>	<b>14</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>21</b>			
<b>P/TOT</b>	<b>1854</b>	<b>415</b>	<b>112</b>	<b>238</b>	<b>12</b>	<b>2631</b>	<b>1940</b>	<b>395</b>	<b>112</b>	<b>243</b>	<b>14</b>	<b>2704</b>	<b>126</b>	<b>45</b>	<b>13</b>	<b>17</b>	<b>0</b>	<b>201</b>			



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## **Appendix 13.3**

### **Traffic Generation**

No. Trucks /Yr

13  
16  
22

Location	Population	% of Total Waste	200,000			No. of 12 tonne Trucks	No. of 16 tonne Trucks	No. of 22 tonne Trucks	Total No. of Trucks	Travelling East on R150	Travelling West on R150	Travelling South on R152	Travelling North on R152	Travelling R153	Junction R153/150	Junction M1/R152	Junction R150/152	Junction N2/R150	Junction N2/R152	Junction R152/R150
			Proportion of Incoming Waste	Size of Truck	Size of Truck															
Carranstown	200	0.13%	253	13	16	9.7	7.9		18				18							
Drogheda	31020	19.62%	39,245	13	16	1509.4	1226.4		2,736							2,736				
Ardee	3948	2.50%	4,995	13	16	192.1	156.1		348						348					
Duleek	2507	1.59%	3,172	13	16	122.0	99.1		221				221							
Dunleer	1014	0.64%	1,283	13	16	49.3	40.1		89			89				89				
Navan	19417	12.28%	24,565	13	16	944.8	767.7		1,712	1,712		1,712	1,712	1,712			1,712			1,712
Dundalk	32505	20.56%	41,123	13	16	1581.7	1285.1		2,867			2,867				2,867				
Kingscourt	1307	0.83%	1,654	0	0			75.2	75	75				75				75		
Kells	6943	4.39%	8,784	13	16	337.8	274.5		612	612				612	612	612		612		612
Carrickmacross	3832	2.42%	4,848	0	0			220.4	220			220				220				
Laytown	5597	3.54%	7,081	13	16	272.3	221.3		494		494					494				494
Ashbourne	6362	4.02%	8,049	13	16	309.6	251.5		561										561	
Dunshaughlin	3063	1.94%	3,875	13	16	149.0	121.1		270										270	
Ratoath	3794	2.40%	4,800	13	16	184.6	150.0		335										335	
Athboy	1538	0.97%	1,946	13	16	74.8	60.8		136	136		136	136	136			136			136
Enfield	1072	0.68%	1,356	13	16	52.2	42.4		95	95		95	95	95			95			95
Baillieborough	1660	1.05%	2,100	0	0			95.5	95		95		95					95		
Trim	5894	3.73%	7,457	13	16	286.8	233.0		520	520				520	520			520		520
Castleblaney	2936	1.86%	3,714	0	0			168.8	169			169				169				
Dunboyne	5363	3.39%	6,785	13	16	261.0	212.0		473										473	
Coothill	1744	1.10%	2,206	0	0			100.3	100	100				100	100			100		100
Virigina	1093	0.69%	1,383	0	0			62.9	63	63				63	63			63		63
Monaghan	5936	3.75%	7,510	0	0			341.4	341			341				341				
Cavan	6098	3.86%	7,715	0	0			350.7	351	351				351	351	351			351	351
Clones	1947	1.23%	2,463	0	0			112.0	112	112				112	112	112			112	112
Belturbet	1295	0.82%	1,638	0	0			74.5	74	74				74	74	74			74	74
	158085	100.00%	200,000						13,088	3,850	589	6,771	6,317	3,775	3,775	6,771	4,269	171	1,639	4,269

% Traffic travelling on each road 29.42% 4.50% 51.73% 48.27% 28.84% 28.84% 51.73% 32.62% 1.30% 12.52% 32.62%

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# 1 TRUCK MOVEMENTS FOR CONSUMABLES AND RESIDUAL WASTE

truck movements	consumption/production			trucks per		
	kg/hour	kg/week	kg/year	ton/truck	week	year
NaOH 50 % (demin)	3.45	496	25,875	6	0.1	4
HCl 30 % (demin)	3.81	548	28,575	6	0.1	5
NH4OH 25 % (boiler)	3.81	548	28,575	6	0.1	5
Na3PO4 (boiler)	0.76	109	5,700	6	0.0	1
Hydrated Lime	262	37,685	1,965,000	20	1.9	98
Caustic 50 %	62.5	8,990	468,750	20	0.4	23
Urea 40 %	71.5	10,284	536,250	20	0.5	27
Ammonia 25 %	0	0	0	20	0.0	0
Cokes	51.12	7,353	383,400	20	0.4	19
Fuel	36.94	5,313	277,050	20	0.3	14
bottom ash (15 % wet)	6505	935,651	48,787,500	20	46.8	2439
boiler and fly ash	324	46,603	2,430,000	20	2.3	122
residue flue gas cleaning	1325	190,582	9,937,500	20	9.5	497
Ferro 5%	533	76,664	3,997,500	4	19.2	999
Non-ferro 0.5 %	0	0	0	4	0.0	0
<b>TOTAL</b>					<b>82</b>	<b>4253</b>

**Appendix 13.4**  
**Junction Capacity Analysis**

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

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Run with file:-

"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\Site access.vpi"  
(drive-on-the-left ) at 16:56:17 on Thursday, 10 November 2005

RUN TITLE  
\*\*\*\*\*

Site Access Junction

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

INPUT DATA  
-----

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

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ARM A IS R152 to Duleek  
ARM B IS Site Access  
ARM C IS R152 to Drogheda

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  
-----

-----  
I DATA ITEM I MINOR ROAD B I  
-----

```

I TOTAL MAJOR ROAD CARRIAGEWAY WIDTH I ( W ) 7.00 M. I
I CENTRAL RESERVE WIDTH I (WCR ) 0.00 M. I
I I I
I MAJOR ROAD RIGHT TURN - WIDTH I (WC-B) 3.00 M. I
I - VISIBILITY I (VC-B) 250.0 M. I
I - BLOCKS TRAFFIC I NO I
I I I
I MINOR ROAD - VISIBILITY TO LEFT I (VB-C) 0.0 M. I
I - VISIBILITY TO RIGHT I (VB-A) 0.0 M. I
I - LANE 1 WIDTH I (WB-C) 3.50 M. I
I - LANE 2 WIDTH I (WB-A) 0.00 M. I
-----

```

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 09.00 AND ENDS 10.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

```

-----
I TIME INTERVAL I ARM A I ARM B I ARM C I
-----
I 09.00 - 09.15 I I I I
I ENTRY I 7.4 I 0.3 I 6.5 I
I EXIT I 6.5 I 0.3 I 7.4 I
-----
I 09.15 - 09.30 I I I I
I ENTRY I 7.4 I 0.3 I 6.5 I
I EXIT I 6.5 I 0.3 I 7.4 I
-----
I 09.30 - 09.45 I I I I
I ENTRY I 7.4 I 0.3 I 6.5 I
I EXIT I 6.5 I 0.3 I 7.4 I
-----
I 09.45 - 10.00 I I I I
I ENTRY I 7.4 I 0.3 I 6.5 I
I EXIT I 6.5 I 0.3 I 7.4 I
-----

```

```

-----
I I TURNING PROPORTIONS I
I I (PERCENTAGE OF H.V.S) I
I I
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 09.00 - 10.00 I I I I
I I ARM A I 0.000 I 0.016 I 0.984 I
I I I ( 0.0)I ( 10.0)I ( 10.0)I
I I I I I
I I ARM B I 0.424 I 0.000 I 0.576 I
I I I ( 10.0)I ( 0.0)I ( 10.0)I
I I I I I
I I ARM C I 0.975 I 0.025 I 0.000 I
I I I ( 10.0)I ( 10.0)I ( 0.0)I
I I I I I
-----

```

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.00-09.15								
B-AC	0.28	6.46	0.043		0.0	0.0	0.6	
C-A	6.37							
C-B	0.16	9.70	0.017		0.0	0.0	0.2	
A-B	0.12							
A-C	7.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.15-09.30								
B-AC	0.28	6.46	0.043		0.0	0.0	0.7	
C-A	6.37							
C-B	0.16	9.70	0.017		0.0	0.0	0.3	
A-B	0.12							
A-C	7.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.30-09.45								
B-AC	0.28	6.46	0.043		0.0	0.0	0.7	
C-A	6.37							
C-B	0.16	9.70	0.017		0.0	0.0	0.3	
A-B	0.12							
A-C	7.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.45-10.00								
B-AC	0.28	6.46	0.043		0.0	0.0	0.7	
C-A	6.37							
C-B	0.16	9.70	0.017		0.0	0.0	0.3	
A-B	0.12							
A-C	7.28							

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.0
09.30	0.0
09.45	0.0
10.00	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.0
09.30	0.0
09.45	0.0
10.00	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-AC	16.8	2.7	0.16
C-A	382.1		
C-B	9.7	1.0	0.10
A-B	7.1		
A-C	436.9		
ALL	852.6	3.7	0.00

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .

\* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

\* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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

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

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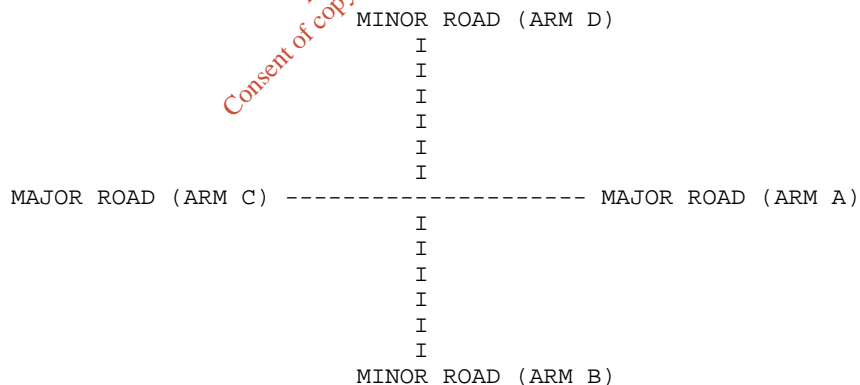
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Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\R150\_R152 pre  
development.vpi"  
(drive-on-the-left ) at 17:05:56 on Thursday, 10 November 2005

RUN TITLE  
\*\*\*\*\*  
R150/ R152 Junction Pre Development

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

INPUT DATA  
-----



ARM A IS R152 North  
ARM B IS R150 East  
ARM C IS R152 South  
ARM D IS R150 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

-----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 7.00 M.	I	( W ) 7.00 M.	I
I	CENTRAL RESERVE WIDTH	I	( WCR ) 0.00 M.	I	( WCR ) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	( WC-B ) 3.00 M.	I	( WA-D ) 3.00 M.	I
I	- VISIBILITY	I	( VC-B ) 250.0 M.	I	( VA-D ) 0.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	( VB-C ) 250.0 M.	I	( VD-A ) 150.0 M.	I
I	- VISIBILITY TO RIGHT	I	( VB-A ) 150.0 M.	I	( VD-C ) 250.0 M.	I
I	- LANE 1 WIDTH	I	( WB-C ) -	I	( WD-A ) -	I
I	- LANE 2 WIDTH	I	( WB-A ) -	I	( WD-C ) -	I
I	- WIDTH AT 0 M FROM JUNC.	I	4.40 M.	I	4.40 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

TRAFFIC DEMAND DATA

-----

TIME PERIOD BEGINS 09.00 AND ENDS 10.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

I	TIME INTERVAL	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
I	09.00 - 09.15	I		I		I		I		I
I	ENTRY	I	6.4	I	1.3	I	4.2	I	4.1	I
I	EXIT	I	7.3	I	1.1	I	3.0	I	4.6	I
I	09.15 - 09.30	I		I		I		I		I
I	ENTRY	I	6.4	I	1.3	I	4.2	I	4.1	I
I	EXIT	I	7.3	I	1.1	I	3.0	I	4.6	I
I	09.30 - 09.45	I		I		I		I		I
I	ENTRY	I	6.4	I	1.3	I	4.2	I	4.1	I
I	EXIT	I	7.3	I	1.1	I	3.0	I	4.6	I
I	09.45 - 10.00	I		I		I		I		I
I	ENTRY	I	6.4	I	1.3	I	4.2	I	4.1	I
I	EXIT	I	7.3	I	1.1	I	3.0	I	4.6	I

I		I	TURNING PROPORTIONS				I
I		I	( PERCENTAGE OF H.V.S )				I
I		I					
I	TIME	I	FROM/TO	ARM A	ARM B	ARM C	ARM D

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TIME	ARM	DEMAND	CAPACITY	DEMAND/CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY	GEOMETRIC DELAY
09.00 - 10.00	ARM A	0.000	0.000	0.000	0.051	0.401	0.547		
		( 0.0)	( 10.0)	( 10.0)	( 10.0)	( 10.0)	( 10.0)		
	ARM B	0.520	0.000	0.114	0.000	0.114	0.366		
		( 10.0)	( 0.0)	( 10.0)	( 10.0)	( 10.0)	( 10.0)		
	ARM C	0.805	0.038	0.000	0.000	0.000	0.157		
		( 10.0)	( 10.0)	( 0.0)	( 10.0)	( 10.0)	( 10.0)		
	ARM D	0.773	0.161	0.066	0.000	0.000	0.000		
		( 10.0)	( 10.0)	( 10.0)	( 10.0)	( 10.0)	( 0.0)		

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
09.00-09.15								
B-CD	0.41	7.01	0.059		0.0	0.1	0.9	
B-AD	0.89	5.88	0.151		0.0	0.2	2.5	
A-B	0.33							
A-C	2.57							
A-D	3.50	8.47	0.414		0.0	0.7	9.7	
D-AB	3.52	9.34	0.377		0.0	0.6	8.4	
D-BC	0.59	5.18	0.113		0.0	0.1	1.8	
C-D	0.66							
C-A	3.38							
C-B	0.16	9.55	0.017		0.0	0.0	0.2	

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)
09.15-09.30								
B-CD	0.41	7.00	0.059		0.1	0.1	0.9	
B-AD	0.89	5.86	0.151		0.2	0.2	2.6	
A-B	0.33							
A-C	2.57							
A-D	3.50	8.47	0.414		0.7	0.7	10.4	
D-AB	3.52	9.33	0.378		0.6	0.6	9.0	
D-BC	0.59	5.15	0.114		0.1	0.1	1.9	
C-D	0.66							
C-A	3.38							
C-B	0.16	9.53	0.017		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
09.30-09.45								
B-CD	0.41	7.00	0.059		0.1	0.1	0.9	
B-AD	0.89	5.86	0.151		0.2	0.2	2.6	
A-B	0.33							
A-C	2.57							
A-D	3.50	8.47	0.414		0.7	0.7	10.5	
D-AB	3.52	9.33	0.378		0.6	0.6	9.0	
D-BC	0.59	5.15	0.114		0.1	0.1	1.9	
C-D	0.66							
C-A	3.38							
C-B	0.16	9.53	0.017		0.0	0.0	0.3	

I	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)	I
I	09.45-10.00									I
I	B-CD	0.41	7.00	0.059		0.1	0.1	0.9		I
I	B-AD	0.89	5.86	0.151		0.2	0.2	2.7		I
I	A-B	0.33								I
I	A-C	2.57								I
I	A-D	3.50	8.47	0.414		0.7	0.7	10.5		I
I	D-AB	3.52	9.33	0.378		0.6	0.6	9.1		I
I	D-BC	0.59	5.15	0.114		0.1	0.1	1.9		I
I	C-D	0.66								I
I	C-A	3.38								I
I	C-B	0.16	9.53	0.017		0.0	0.0	0.3		I

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.1
09.30	0.1
09.45	0.1
10.00	0.1

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.2
09.30	0.2
09.45	0.2
10.00	0.2

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
09.15	0.7	*
09.30	0.7	*
09.45	0.7	*
10.00	0.7	*

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
09.15	0.6	*
09.30	0.6	*
09.45	0.6	*
10.00	0.6	*

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.1
09.30	0.1
09.45	0.1
10.00	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES

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	IN QUEUE
09.15	0.0
09.30	0.0
09.45	0.0
10.00	0.0

-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I						
I	I	I	I	I	* DELAY *	I	* DELAY *	I						
I	I	I	I	I	I	I	I	I						
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)						
I	B-CD	I	24.9	I	24.9	I	3.7	I	0.15	I	3.7	I	0.15	I
I	B-AD	I	53.1	I	53.1	I	10.4	I	0.20	I	10.4	I	0.20	I
I	A-B	I	19.7	I	19.7	I		I		I		I		I
I	A-C	I	154.1	I	154.1	I		I		I		I		I
I	A-D	I	210.2	I	210.2	I	41.2	I	0.20	I	41.2	I	0.20	I
I	D-AB	I	211.4	I	211.4	I	35.5	I	0.17	I	35.5	I	0.17	I
I	D-BC	I	35.2	I	35.2	I	7.5	I	0.21	I	7.5	I	0.21	I
I	C-D	I	39.6	I	39.6	I		I		I		I		I
I	C-A	I	202.9	I	202.9	I		I		I		I		I
I	C-B	I	9.5	I	9.5	I	1.0	I	0.11	I	1.0	I	0.11	I
I	ALL	I	960.6	I	960.6	I	99.3	I	0.10	I	99.4	I	0.10	I

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

END OF JOB

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

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

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Run with file:-

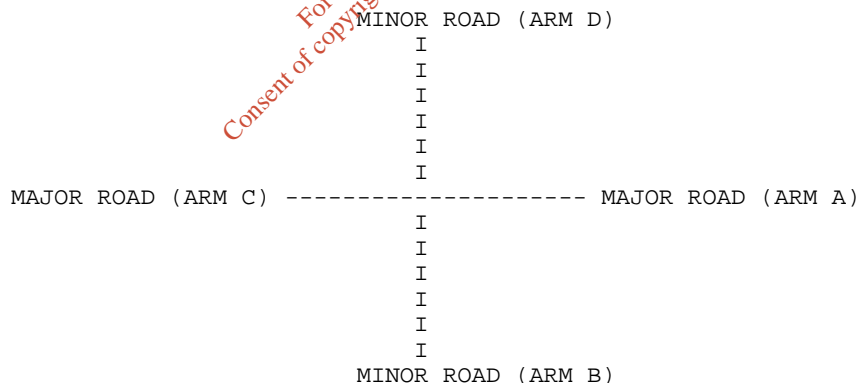
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RUN TITLE  
\*\*\*\*\*

R150/ R152 Junction Post Development

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

INPUT DATA  
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ARM A IS R152 North  
ARM B IS R150 East  
ARM C IS R152 South  
ARM D IS R150 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

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 7.00 M.	I	( W ) 7.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR ) 0.00 M.	I	(WCR ) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.00 M.	I	(WA-D) 3.00 M.	I
I	- VISIBILITY	I	(VC-B) 250.0 M.	I	(VA-D) 0.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 250.0 M.	I	(VD-A) 150.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 150.0 M.	I	(VD-C) 250.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I	(WD-C) -	I
I	- WIDTH AT 0 M FROM JUNC.	I	4.40 M.	I	4.40 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 09.00 AND ENDS 10.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

I	TIME INTERVAL	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
I	09.00 - 09.15	I		I		I		I		I
I	ENTRY	I	6.9	I	1.4	I	4.2	I	4.4	I
I	EXIT	I	7.6	I	1.2	I	3.1	I	4.9	I
I	09.15 - 09.30	I		I		I		I		I
I	ENTRY	I	6.9	I	1.4	I	4.2	I	4.4	I
I	EXIT	I	7.6	I	1.2	I	3.1	I	4.9	I
I	09.30 - 09.45	I		I		I		I		I
I	ENTRY	I	6.9	I	1.4	I	4.2	I	4.4	I
I	EXIT	I	7.6	I	1.2	I	3.1	I	4.9	I
I	09.45 - 10.00	I		I		I		I		I
I	ENTRY	I	6.9	I	1.4	I	4.2	I	4.4	I
I	EXIT	I	7.6	I	1.2	I	3.1	I	4.9	I

I		I	TURNING PROPORTIONS				I
I		I	(PERCENTAGE OF H.V.S)				I
I		I					
I	TIME	I	FROM/TO	ARM A	ARM B	ARM C	ARM D

I	09.00 - 10.00	I		I		I		I		I	
I		I	ARM A	I	0.000	I	0.052	I	0.396	I	0.553
I		I		I	( 0.0)	I	( 10.0)	I	( 10.0)	I	( 10.0)
I		I		I		I		I		I	
I		I	ARM B	I	0.544	I	0.000	I	0.106	I	0.350
I		I		I	( 10.0)	I	( 0.0)	I	( 10.0)	I	( 10.0)
I		I		I		I		I		I	
I		I	ARM C	I	0.803	I	0.038	I	0.000	I	0.159
I		I		I	( 10.0)	I	( 10.0)	I	( 0.0)	I	( 10.0)
I		I		I		I		I		I	
I		I	ARM D	I	0.786	I	0.155	I	0.060	I	0.000
I		I		I	( 10.0)	I	( 10.0)	I	( 10.0)	I	( 0.0)
I		I		I		I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

I	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)	I
I	09.00-09.15									I
I	B-CD	0.41	6.78	0.061		0.0	0.1	0.9		I
I	B-AD	0.94	5.69	0.165		0.0	0.2	2.8		I
I	A-B	0.36								I
I	A-C	2.72								I
I	A-D	3.80	8.47	0.449		0.0	0.8	11.1		I
I	D-AB	3.83	9.34	0.410		0.0	0.0	9.6		I
I	D-BC	0.59	4.95	0.119		0.0	0.1	1.9		I
I	C-D	0.67								I
I	C-A	3.37								I
I	C-B	0.16	9.37	0.017		0.0	0.0	0.3		I

I	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)	I
I	09.15-09.30									I
I	B-CD	0.41	6.76	0.061		0.1	0.1	1.0		I
I	B-AD	0.94	5.66	0.166		0.2	0.2	2.9		I
I	A-B	0.36								I
I	A-C	2.72								I
I	A-D	3.80	8.47	0.449		0.8	0.8	12.0		I
I	D-AB	3.83	9.32	0.411		0.7	0.7	10.3		I
I	D-BC	0.59	4.92	0.119		0.1	0.1	2.0		I
I	C-D	0.67								I
I	C-A	3.37								I
I	C-B	0.16	9.35	0.017		0.0	0.0	0.3		I

I	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)	I
I	09.30-09.45									I
I	B-CD	0.41	6.76	0.061		0.1	0.1	1.0		I
I	B-AD	0.94	5.66	0.166		0.2	0.2	3.0		I
I	A-B	0.36								I
I	A-C	2.72								I
I	A-D	3.80	8.47	0.449		0.8	0.8	12.1		I
I	D-AB	3.83	9.32	0.411		0.7	0.7	10.4		I
I	D-BC	0.59	4.92	0.119		0.1	0.1	2.0		I
I	C-D	0.67								I
I	C-A	3.37								I
I	C-B	0.16	9.35	0.017		0.0	0.0	0.3		I



I	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)	I
I	09.45-10.00								I	
I	B-CD	0.41	6.76	0.061		0.1	0.1	1.0	I	
I	B-AD	0.94	5.66	0.166		0.2	0.2	3.0	I	
I	A-B	0.36							I	
I	A-C	2.72							I	
I	A-D	3.80	8.47	0.449		0.8	0.8	12.1	I	
I	D-AB	3.83	9.32	0.411		0.7	0.7	10.4	I	
I	D-BC	0.59	4.92	0.119		0.1	0.1	2.0	I	
I	C-D	0.67							I	
I	C-A	3.37							I	
I	C-B	0.16	9.35	0.017		0.0	0.0	0.3	I	

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.1
09.30	0.1
09.45	0.1
10.00	0.1

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.2
09.30	0.2
09.45	0.2
10.00	0.2

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
09.15	0.8	*
09.30	0.8	*
09.45	0.8	*
10.00	0.8	*

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
09.15	0.7	*
09.30	0.7	*
09.45	0.7	*
10.00	0.7	*

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
09.15	0.1
09.30	0.1
09.45	0.1
10.00	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE

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09.15 0.0  
 09.30 0.0  
 09.45 0.0  
 10.00 0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-CD	24.7	3.8	0.15
B-AD	56.3	11.6	0.21
A-B	21.3		
A-C	163.4		
A-D	228.1	47.4	0.21
D-AB	229.9	40.7	0.18
D-BC	35.3	7.9	0.22
C-D	40.1		
C-A	202.3		
C-B	9.6	1.0	0.11
ALL	1011.0	112.5	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

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

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

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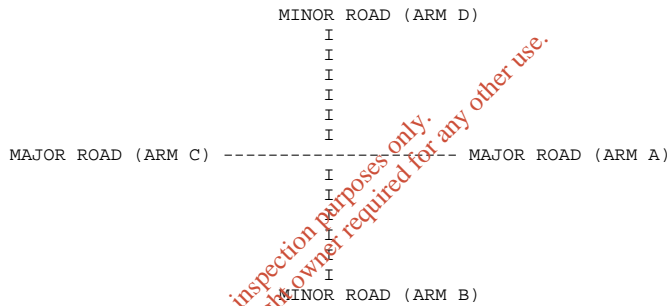
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Run with file:-  
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RUN TITLE  
\*\*\*\*\*  
R150/ R152 Junction Post Development 2010

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

INPUT DATA  
-----



ARM A IS R152 North  
ARM B IS R150 East  
ARM C IS R152 South  
ARM D IS R150 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  
-----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I ( W )	7.00 M.	I ( W )	7.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR )	0.00 M.	I (WCR )	0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.00 M.	I (WA-D)	3.00 M.	I
I	- VISIBILITY	I (VC-B)	250.0 M.	I (VA-D)	0.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	250.0 M.	I (VD-A)	150.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I (VD-C)	250.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I (WD-A)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I (WD-C)	-	I
I	- WIDTH AT 0 M FROM JUNC.	I	4.40 M.	I	4.40 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 08.45

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

TIME INTERVAL	ARM A	ARM B	ARM C	ARM D
07.45 - 08.00	10.5	1.1	4.4	8.1
ENTRY	10.5	1.1	4.4	8.1
EXIT	10.9	1.8	6.4	5.0
08.00 - 08.15	10.5	1.1	4.4	8.1
ENTRY	10.5	1.1	4.4	8.1
EXIT	10.9	1.8	6.4	5.0
08.15 - 08.30	10.5	1.1	4.4	8.1
ENTRY	10.5	1.1	4.4	8.1
EXIT	10.9	1.8	6.4	5.0
08.30 - 08.45	10.5	1.1	4.4	8.1
ENTRY	10.5	1.1	4.4	8.1
EXIT	10.9	1.8	6.4	5.0

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 08.45	ARM A	0.000	0.035	0.549	0.447
	ARM B	0.651	0.000	0.134	0.205
	ARM C	0.857	0.033	0.000	0.111
	ARM D	0.779	0.150	0.067	0.000

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
07.45-08.00								
B-CD	0.28	5.95	0.048		0.0	0.0	0.7	
B-AD	0.79	3.75	0.209		0.0	0.3	3.6	
A-B	0.36							
A-C	5.76							
A-D	4.37	8.41	0.520		0.0	1.0	14.5	
D-AB	7.04	8.41	0.838		0.0	4.1	49.3	
D-BC	1.10	2.52	0.436		0.0	0.7	9.3	
C-D	0.49							
C-A	3.80							
C-B	0.14	8.26	0.018		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-CD	0.29	5.91	0.048		0.0	0.1	0.8	
B-AD	0.78	3.65	0.215		0.3	0.3	4.0	
A-B	0.36							
A-C	5.76							
A-D	4.37	8.41	0.520		1.0	1.1	15.9	
D-AB	7.04	8.32	0.847		4.1	4.7	67.4	
D-BC	1.10	2.21	0.496		0.7	0.9	12.7	
C-D	0.49							
C-A	3.80							
C-B	0.14	8.23	0.018		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.15-08.30								
B-CD	0.29	5.91	0.048		0.1	0.1	0.8	

I	B-AD	0.78	3.63	0.216		0.3	0.3	4.1		I
I	A-B	0.36								I
I	A-C	5.76								I
I	A-D	4.37	8.41	0.520		1.1	1.1	16.0		I
I	D-AB	7.05	8.30	0.849		4.7	5.0	73.4		I
I	D-BC	1.09	2.16	0.508		0.9	1.0	14.1		I
I	C-D	0.49								I
I	C-A	3.80								I
I	C-B	0.14	8.23	0.018		0.0	0.0	0.3		I
I										I

I	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)	I
I	08.30-08.45									I
I	B-CD	0.29	5.91	0.048		0.1	0.1	0.8		I
I	B-AD	0.78	3.63	0.216		0.3	0.3	4.1		I
I	A-B	0.36								I
I	A-C	5.76								I
I	A-D	4.37	8.41	0.520		1.1	1.1	16.1		I
I	D-AB	7.05	8.29	0.850		5.0	5.2	76.5		I
I	D-BC	1.09	2.13	0.513		1.0	1.0	14.8		I
I	C-D	0.49								I
I	C-A	3.80								I
I	C-B	0.14	8.23	0.018		0.0	0.0	0.3		I
I										I

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.3
08.30	0.3
08.45	0.3

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.0 *
08.15	1.1 *
08.30	1.1 *
08.45	1.1 *

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	4.1 ****
08.15	4.7 *****
08.30	5.0 *****
08.45	5.2 *****

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	0.9 *
08.30	1.0 *
08.45	1.0 *

QUEUE FOR STREAM C-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-CD	I	17.1	I	3.0	I	3.0	I
I	B-AD	I	47.1	I	15.7	I	15.7	I
I	A-B	I	21.7	I		I		I
I	A-C	I	345.3	I		I		I
I	A-D	I	262.3	I	62.4	I	62.5	I

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I	D-AB	I	422.7	I	422.7	I	266.6	I	0.63	I	268.2	I	0.63	I
I	D-BC	I	65.7	I	65.7	I	50.9	I	0.77	I	51.2	I	0.78	I
I	C-D	I	29.5	I	29.5	I		I		I		I		I
I	C-A	I	228.3	I	228.3	I		I		I		I		I
I	C-B	I	8.7	I	8.7	I	1.1	I	0.12	I	1.1	I	0.12	I
-----														
I	ALL	I	1448.4	I	1448.4	I	399.7	I	0.28	I	401.6	I	0.28	I
-----														

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

END OF JOB

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

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

PICADY 4.1 ANALYSIS PROGRAM  
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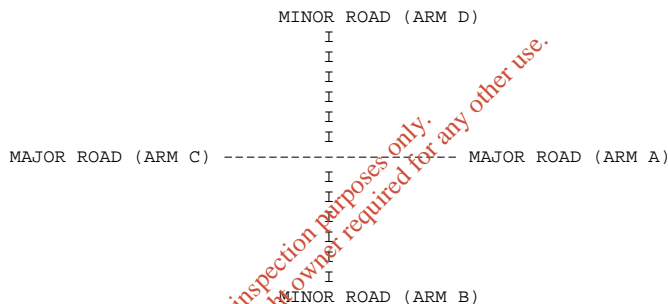
THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
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Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\R150\_R152 post  
development2011.vpi"  
(drive-on-the-left ) at 16:09:05 on Tuesday, 10 January 2006

RUN TITLE  
\*\*\*\*\*  
R150/ R152 Junction Post Development 2011

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

INPUT DATA  
-----



ARM A IS R152 North  
ARM B IS R150 East  
ARM C IS R152 South  
ARM D IS R150 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  
-----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I ( W )	7.00 M.	I ( W )	7.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR )	0.00 M.	I (WCR )	0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.00 M.	I (WA-D)	3.00 M.	I
I	- VISIBILITY	I (VC-B)	250.0 M.	I (VA-D)	0.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	250.0 M.	I (VD-A)	150.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I (VD-C)	250.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I (WD-A)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I (WD-C)	-	I
I	- WIDTH AT 0 M FROM JUNC.	I	4.40 M.	I	4.40 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

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.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 08.45

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

TIME INTERVAL	ARM A	ARM B	ARM C	ARM D
07.45 - 08.00	10.8	1.1	4.6	8.4
ENTRY	11.3	1.8	6.6	5.2
EXIT				
08.00 - 08.15	10.8	1.1	4.6	8.4
ENTRY	11.3	1.8	6.6	5.2
EXIT				
08.15 - 08.30	10.8	1.1	4.6	8.4
ENTRY	11.3	1.8	6.6	5.2
EXIT				
08.30 - 08.45	10.8	1.1	4.6	8.4
ENTRY	11.3	1.8	6.6	5.2
EXIT				

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 08.45	ARM A	0.000	0.035	0.549	0.447
	ARM B	0.653	0.000	0.133	0.204
	ARM C	0.857	0.033	0.000	0.110
	ARM D	0.779	0.150	0.067	0.000

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
07.45-08.00								
B-CD	0.29	5.83	0.050		0.0	0.1	0.8	
B-AD	0.81	3.58	0.225		0.0	0.3	3.9	
A-B	0.38							
A-C	5.93							
A-D	4.50	8.38	0.537		0.0	1.1	15.4	
D-AB	7.25	8.27	0.877		0.0	5.1	58.4	
D-BC	1.13	2.20	0.511		0.0	0.9	11.8	
C-D	0.50							
C-A	3.92							
C-B	0.15	8.15	0.018		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-CD	0.29	5.77	0.051		0.1	0.1	0.8	
B-AD	0.81	3.46	0.233		0.3	0.3	4.4	
A-B	0.38							
A-C	5.93							
A-D	4.50	8.38	0.537		1.1	1.1	17.0	
D-AB	7.26	8.15	0.890		5.1	6.2	86.2	
D-BC	1.12	1.78	0.628		0.9	1.4	18.8	
C-D	0.50							
C-A	3.92							
C-B	0.15	8.12	0.018		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.15-08.30								
B-CD	0.29	5.77	0.051		0.1	0.1	0.8	



I	B-AD	0.81	3.43	0.235		0.3	0.3	4.5		I
I	A-B	0.38								I
I	A-C	5.93								I
I	A-D	4.50	8.38	0.537		1.1	1.1	17.2		I
I	D-AB	7.26	8.11	0.896		6.2	6.9	98.7		I
I	D-BC	1.12	1.67	0.669		1.4	1.7	23.7		I
I	C-D	0.50								I
I	C-A	3.92								I
I	C-B	0.15	8.12	0.018		0.0	0.0	0.3		I
I										I

I	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)	I
I	08.30-08.45									I
I	B-CD	0.29	5.76	0.051		0.1	0.1	0.8		I
I	B-AD	0.81	3.42	0.236		0.3	0.3	4.5		I
I	A-B	0.38								I
I	A-C	5.93								I
I	A-D	4.50	8.38	0.537		1.1	1.2	17.2		I
I	D-AB	7.26	8.08	0.899		6.9	7.3	106.8		I
I	D-BC	1.12	1.60	0.697		1.7	1.9	27.4		I
I	C-D	0.50								I
I	C-A	3.92								I
I	C-B	0.15	8.12	0.018		0.0	0.0	0.3		I
I										I

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.3
08.30	0.3
08.45	0.3

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.1 *
08.15	1.1 *
08.30	1.1 *
08.45	1.2 *

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	5.1 *****
08.15	6.2 *****
08.30	6.9 *****
08.45	7.3 *****

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.4 *
08.30	1.7 **
08.45	1.9 **

QUEUE FOR STREAM C-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I						
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I				
I	B-CD	I	17.7	I	3.2	I	0.18	I	3.2	I	0.18	I		
I	B-AD	I	48.3	I	48.3	I	17.3	I	0.36	I	17.3	I	0.36	I
I	A-B	I	22.6	I	22.6	I		I		I		I		I
I	A-C	I	355.8	I	355.8	I		I		I		I		I
I	A-D	I	270.3	I	270.3	I	66.8	I	0.25	I	66.9	I	0.25	I

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I	D-AB	I	435.6	I	435.6	I	350.2	I	0.80	I	353.5	I	0.81	I
I	D-BC	I	67.2	I	67.2	I	81.7	I	1.22	I	82.9	I	1.23	I
I	C-D	I	30.2	I	30.2	I		I		I		I		I
I	C-A	I	235.1	I	235.1	I		I		I		I		I
I	C-B	I	9.0	I	9.0	I	1.1	I	0.12	I	1.1	I	0.12	I
-----														
I	ALL	I	1491.6	I	1491.6	I	520.3	I	0.35	I	524.9	I	0.35	I
-----														

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

END OF JOB

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

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

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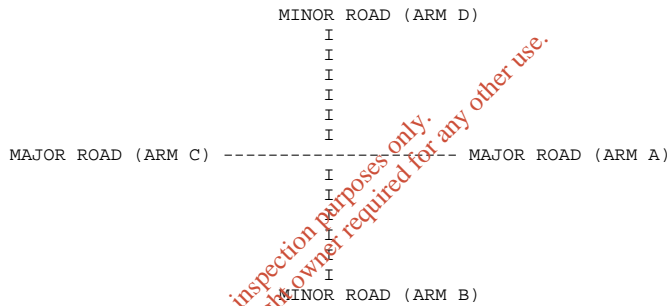
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IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\R150\_R152 post  
development2012.vpi"  
(drive-on-the-left ) at 16:14:38 on Tuesday, 10 January 2006

RUN TITLE  
\*\*\*\*\*  
R150/ R152 Junction Post Development 2012

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

INPUT DATA  
-----



ARM A IS R152 North  
ARM B IS R150 East  
ARM C IS R152 South  
ARM D IS R150 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  
-----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I ( W )	7.00 M.	I ( W )	7.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR )	0.00 M.	I (WCR )	0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.00 M.	I (WA-D)	3.00 M.	I
I	- VISIBILITY	I (VC-B)	250.0 M.	I (VA-D)	0.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	250.0 M.	I (VD-A)	150.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I (VD-C)	250.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I (WD-A)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I (WD-C)	-	I
I	- WIDTH AT 0 M FROM JUNC.	I	4.40 M.	I	4.40 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 08.45

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

TIME INTERVAL	ARM A	ARM B	ARM C	ARM D
07.45 - 08.00	11.1	1.1	4.7	8.6
08.00 - 08.15	11.1	1.1	4.7	8.6
08.15 - 08.30	11.1	1.1	4.7	8.6
08.30 - 08.45	11.1	1.1	4.7	8.6

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 08.45	ARM A	0.000	0.035	0.549	0.477
	ARM B	0.652	0.000	0.133	0.204
	ARM C	0.857	0.032	0.000	0.110
	ARM D	0.779	0.150	0.067	0.000

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
07.45-08.00								
B-CD	0.30	5.70	0.053		0.0	0.1	0.8	
B-AD	0.83	3.41	0.242		0.0	0.3	4.3	
A-B	0.38							
A-C	6.11							
A-D	4.64	8.35	0.556		0.0	1.2	16.5	
D-AB	7.47	8.13	0.920		0.0	6.5	70.7	
D-BC	1.16	1.85	0.623		0.0	1.3	16.0	
C-D	0.52							
C-A	4.04							
C-B	0.15	8.04	0.019		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-CD	0.31	5.63	0.054		0.1	0.1	0.8	
B-AD	0.82	3.26	0.253		0.3	0.3	4.9	
A-B	0.38							
A-C	6.11							
A-D	4.64	8.35	0.556		1.2	1.2	18.3	
D-AB	7.48	7.95	0.941		6.5	8.8	116.9	
D-BC	1.15	1.27	0.907		1.3	3.3	37.1	
C-D	0.52							
C-A	4.04							
C-B	0.15	8.01	0.019		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.15-08.30								
B-CD	0.31	5.61	0.055		0.1	0.1	0.9	

I	B-AD	0.82	3.19	0.258		0.3	0.3	5.1		I
I	A-B	0.38								I
I	A-C	6.11								I
I	A-D	4.64	8.35	0.556		1.2	1.2	18.5		I
I	D-AB	7.49	7.84	0.956		8.8	10.9	148.7		I
I	D-BC	1.14	1.28	0.890		3.3	4.0	55.1		I
I	C-D	0.52								I
I	C-A	4.04								I
I	C-B	0.15	8.01	0.019		0.0	0.0	0.3		I
I										I

I	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)	I
I	08.30-08.45									I
I	B-CD	0.31	5.60	0.055		0.1	0.1	0.9		I
I	B-AD	0.82	3.14	0.262		0.3	0.3	5.2		I
I	A-B	0.38								I
I	A-C	6.11								I
I	A-D	4.64	8.35	0.556		1.2	1.2	18.6		I
I	D-AB	7.50	7.80	0.961		10.9	12.5	175.8		I
I	D-BC	1.13	1.29	0.882		4.0	4.5	64.0		I
I	C-D	0.52								I
I	C-A	4.04								I
I	C-B	0.15	8.01	0.019		0.0	0.0	0.3		I
I										I

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.3
08.30	0.3
08.45	0.3

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.2 *
08.15	1.2 *
08.30	1.2 *
08.45	1.2 *

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	6.5 *****
08.15	8.8 *****
08.30	10.9 *****
08.45	12.5 *****

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.3 *
08.15	3.3 ***
08.30	4.0 ****
08.45	4.5 ****

QUEUE FOR STREAM C-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-CD	I	18.3	I	3.4	I	3.4	I
I	B-AD	I	49.5	I	19.4	I	19.4	I
I	A-B	I	23.1	I		I		I
I	A-C	I	366.3	I		I		I
I	A-D	I	278.4	I	71.8	I	71.9	I

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I	D-AB	I	449.2	I	449.2	I	512.1	I	1.14	I	522.1	I	1.16	I
I	D-BC	I	68.6	I	68.6	I	172.2	I	2.51	I	180.0	I	2.62	I
I	C-D	I	31.2	I	31.2	I		I		I		I		I
I	C-A	I	242.2	I	242.2	I		I		I		I		I
I	C-B	I	9.2	I	9.2	I	1.2	I	0.13	I	1.2	I	0.13	I
-----														
I	ALL	I	1536.0	I	1536.0	I	780.0	I	0.51	I	797.9	I	0.52	I
-----														

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

END OF JOB

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

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

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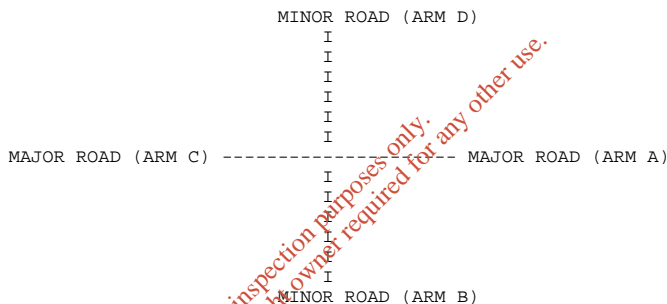
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Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\R150\_R152 post  
development2013.vpi"  
(drive-on-the-left ) at 16:25:13 on Tuesday, 10 January 2006

RUN TITLE  
\*\*\*\*\*  
R150/ R152 Junction Post Development 2013

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

INPUT DATA  
-----



ARM A IS R152 North  
ARM B IS R150 East  
ARM C IS R152 South  
ARM D IS R150 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  
-----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I ( W )	7.00 M.	I ( W )	7.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR )	0.00 M.	I (WCR )	0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.00 M.	I (WA-D)	3.00 M.	I
I	- VISIBILITY	I (VC-B)	250.0 M.	I (VA-D)	0.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	250.0 M.	I (VD-A)	150.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I (VD-C)	250.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I (WD-A)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I (WD-C)	-	I
I	- WIDTH AT 0 M FROM JUNC.	I	4.40 M.	I	4.40 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 08.45

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

TIME INTERVAL	ARM A	ARM B	ARM C	ARM D
07.45 - 08.00	11.5	1.2	4.8	8.9
ENTRY	11.5	1.2	4.8	8.9
EXIT	11.9	1.9	7.0	5.5
08.00 - 08.15	11.5	1.2	4.8	8.9
ENTRY	11.5	1.2	4.8	8.9
EXIT	11.9	1.9	7.0	5.5
08.15 - 08.30	11.5	1.2	5.8	8.9
ENTRY	11.5	1.2	5.8	8.9
EXIT	11.9	1.9	7.0	5.5
08.30 - 08.45	11.5	1.2	4.8	8.9
ENTRY	11.5	1.2	4.8	8.9
EXIT	11.9	1.9	7.0	5.5

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 08.45	ARM A	0.000	0.034	0.550	0.416
	ARM B	0.639	0.000	0.130	0.212
	ARM C	0.853	0.032	0.000	0.115
	ARM D	0.772	0.158	0.071	0.000

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
07.45-08.00								
B-CD	0.33	5.61	0.059		0.0	0.1	0.9	
B-AD	0.84	3.25	0.259		0.0	0.3	4.6	
A-B	0.39							
A-C	6.31							
A-D	4.77	8.32	0.573		0.0	1.3	17.6	
D-AB	7.67	7.90	0.970		0.0	8.7	88.6	
D-BC	1.22	1.48	0.828		0.0	2.5	26.3	
C-D	0.56							
C-A	4.14							
C-B	0.15	7.93	0.019		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-CD	0.33	5.52	0.060		0.1	0.1	0.9	
B-AD	0.84	3.03	0.277		0.3	0.4	5.4	
A-B	0.39							
A-C	6.31							
A-D	4.77	8.32	0.573		1.3	1.3	19.5	
D-AB	7.68	7.72	0.994		8.7	13.2	167.1	
D-BC	1.21	1.27	0.955		2.5	4.3	52.1	
C-D	0.56							
C-A	4.14							
C-B	0.15	7.89	0.019		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.15-08.30								
B-CD	0.34	5.32	0.063		0.1	0.1	1.0	



I	B-AD	0.83	2.77	0.302	0.4	0.4	6.1	I
I	A-B	0.39						I
I	A-C	6.31						I
I	A-D	4.77	8.08	0.590	1.3	1.4	20.5	I
I	D-AB	7.70	7.37	1.045	13.2	20.6	255.5	I
I	D-BC	1.19	1.23	0.970	4.3	5.5	74.0	I
I	C-D	0.67						I
I	C-A	4.99						I
I	C-B	0.19	7.89	0.023	0.0	0.0	0.4	I
I								I

I	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)	I
I	08.30-08.45									I
I	B-CD	0.34	5.42	0.062		0.1	0.1	1.0		I
I	B-AD	0.83	2.77	0.301		0.4	0.4	6.3		I
I	A-B	0.39								I
I	A-C	6.31								I
I	A-D	4.77	8.32	0.573		1.4	1.4	20.7		I
I	D-AB	7.70	7.60	1.013		20.6	24.3	336.9		I
I	D-BC	1.19	1.27	0.937		5.5	6.2	88.0		I
I	C-D	0.56								I
I	C-A	4.14								I
I	C-B	0.15	7.89	0.019		0.0	0.0	0.3		I
I										I

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	0.4
08.45	0.4

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.3 *
08.15	1.3 *
08.30	1.4 *
08.45	1.4 *

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	8.7 *****
08.15	13.2 *****
08.30	20.6 *****
08.45	24.3 *****

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	2.5 ***
08.15	4.3 ****
08.30	5.5 *****
08.45	6.2 *****

QUEUE FOR STREAM C-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-CD	I	20.0	I	3.8	I	3.8	I
I	B-AD	I	50.2	I	22.4	I	22.4	I
I	A-B	I	23.2	I		I		I
I	A-C	I	378.4	I		I		I
I	A-D	I	286.0	I	78.3	I	78.4	I

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I	D-AB	I	461.1	I	461.1	I	848.1	I	1.84	I	886.8	I	1.92	I
I	D-BC	I	72.3	I	72.3	I	240.4	I	3.33	I	255.3	I	3.53	I
I	C-D	I	35.3	I	35.3	I		I		I		I		I
I	C-A	I	261.1	I	261.1	I		I		I		I		I
I	C-B	I	9.7	I	9.7	I	1.2	I	0.13	I	1.2	I	0.13	I
-----														
I	ALL	I	1597.2	I	1597.2	I	1194.1	I	0.75	I	1247.9	I	0.78	I
-----														

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

END OF JOB

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

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

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RELEASE 4.0 (NOV 2003)

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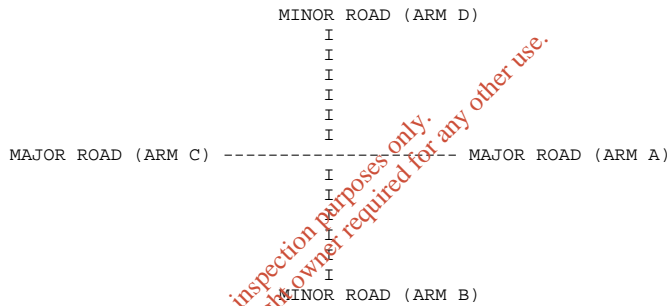
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IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\R150\_R152 post  
development2014.vpi"  
(drive-on-the-left ) at 16:24:31 on Tuesday, 10 January 2006

RUN TITLE  
\*\*\*\*\*  
R150/ R152 Junction Post Development 2014

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

INPUT DATA  
-----



ARM A IS R152 North  
ARM B IS R150 East  
ARM C IS R152 South  
ARM D IS R150 West

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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  
-----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I ( W )	7.00 M.	I ( W )	7.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR )	0.00 M.	I (WCR )	0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	3.00 M.	I (WA-D)	3.00 M.	I
I	- VISIBILITY	I (VC-B)	250.0 M.	I (VA-D)	0.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	250.0 M.	I (VD-A)	150.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	150.0 M.	I (VD-C)	250.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I (WD-A)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I (WD-C)	-	I
I	- WIDTH AT 0 M FROM JUNC.	I	4.40 M.	I	4.40 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	2.20 M.	I	2.20 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I	1 VEHS	I

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 08.45

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN):

TIME INTERVAL	ARM A	ARM B	ARM C	ARM D
07.45 - 08.00	11.8	1.2	5.0	9.2
	12.3	2.0	7.2	5.7
08.00 - 08.15	11.8	1.2	5.0	9.2
	12.3	2.0	7.2	5.7
08.15 - 08.30	11.8	1.2	5.0	9.2
	12.3	2.0	7.2	5.7
08.30 - 08.45	11.8	1.2	5.0	9.2
	12.3	2.0	7.2	5.7

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 08.45	ARM A	0.000	0.035	0.548	0.447
		( 0.0)	( 10.0)	( 10.0)	( 10.0)
	ARM B	0.652	0.000	0.134	0.205
		( 10.0)	( 0.0)	( 10.0)	( 10.0)
	ARM C	0.857	0.033	0.000	0.111
		( 10.0)	( 10.0)	( 0.0)	( 10.0)
	ARM D	0.778	0.150	0.067	0.000
		( 10.0)	( 10.0)	( 10.0)	( 0.0)

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
07.45-08.00								
B-CD	0.33	5.40	0.061		0.0	0.1	0.9	
B-AD	0.87	3.05	0.286		0.0	0.4	5.2	
A-B	0.41							
A-C	6.47							
A-D	4.93	8.28	0.595		0.0	1.4	19.0	
D-AB	7.94	7.82	1.016		0.0	11.4	108.9	
D-BC	1.22	1.20	1.016		0.0	3.9	37.0	
C-D	0.55							
C-A	4.28							
C-B	0.16	7.81	0.021		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-CD	0.33	5.26	0.063		0.1	0.1	1.0	
B-AD	0.87	2.76	0.314		0.4	0.4	6.4	
A-B	0.41							
A-C	6.47							
A-D	4.93	8.28	0.595		1.4	1.4	21.3	
D-AB	7.97	7.60	1.048		11.4	19.5	234.1	
D-BC	1.19	1.23	0.971		3.9	5.3	70.0	
C-D	0.55							
C-A	4.28							
C-B	0.16	7.77	0.021		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.15-08.30								
B-CD	0.34	5.18	0.065		0.1	0.1	1.0	

I	B-AD	0.86	2.59	0.334		0.4	0.5	7.0		I
I	A-B	0.41								I
I	A-C	6.47								I
I	A-D	4.93	8.28	0.595		1.4	1.4	21.6		I
I	D-AB	7.98	7.56	1.055		19.5	27.3	351.8		I
I	D-BC	1.18	1.22	0.974		5.3	6.4	88.1		I
I	C-D	0.55								I
I	C-A	4.28								I
I	C-B	0.16	7.77	0.021		0.0	0.0	0.3		I
I										I

I	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)	I
I	08.30-08.45									I
I	B-CD	0.34	5.10	0.066		0.1	0.1	1.0		I
I	B-AD	0.86	2.43	0.354		0.5	0.5	7.7		I
I	A-B	0.41								I
I	A-C	6.47								I
I	A-D	4.93	8.28	0.595		1.4	1.5	21.7		I
I	D-AB	7.98	7.53	1.060		27.3	35.0	467.2		I
I	D-BC	1.18	1.20	0.981		6.4	7.4	103.3		I
I	C-D	0.55								I
I	C-A	4.28								I
I	C-B	0.16	7.77	0.021		0.0	0.0	0.3		I
I										I

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.4
08.30	0.5
08.45	0.5 *

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.4 *
08.15	1.4 *
08.30	1.4 *
08.45	1.5 *

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	11.4
08.15	19.5
08.30	27.3
08.45	35.0

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	3.9
08.15	5.3
08.30	6.4
08.45	7.4

QUEUE FOR STREAM C-B

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-CD	I	20.0	I	4.0	I	4.0	I
I	B-AD	I	52.0	I	26.3	I	26.3	I
I	A-B	I	24.5	I		I		I
I	A-C	I	388.5	I		I		I
I	A-D	I	295.6	I	83.7	I	83.8	I

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I	D-AB	I	478.0	I	478.0	I	1162.0	I	2.43	I	1243.3	I	2.60	I
I	D-BC	I	71.6	I	71.6	I	298.3	I	4.17	I	320.8	I	4.48	I
I	C-D	I	33.2	I	33.2	I		I		I		I		I
I	C-A	I	257.0	I	257.0	I		I		I		I		I
I	C-B	I	9.8	I	9.8	I	1.3	I	0.13	I	1.3	I	0.13	I
-----														
I	ALL	I	1630.2	I	1630.2	I	1575.6	I	0.97	I	1679.5	I	1.03	I
-----														

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

END OF JOB

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

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ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Crowthorne House           Fax: +44 (0) 1344 770864  
Nine Mile Ride               Email: softwarebureau@trl.co.uk  
Wokingham, Berks.         Web: www.trlsoftware.co.uk  
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-----

Run with file:-  
"p:\Projects\2005 Files\05.186 waste Management Facility at Carranstown\calcs\western roundabout predevelop.vai"  
(drive-on-the-left ) at 11:44:26 on Tuesday, 10 January 2006

FILE PROPERTIES  
\*\*\*\*\*

RUN TITLE: R152/M1 Interchange Western Roundabout  
LOCATION: Duileek  
DATE: 10/01/2006  
CLIENT: Indevar  
ENUMERATOR: Traffic [580130J]  
JOB NUMBER: 05.186  
STATUS: TIA  
DESCRIPTION: Analysis of Western Roundabout

INPUT DATA  
\*\*\*\*\*

ARM A - R152 to Duileek  
ARM B - R152 to Drogheda  
ARM C - M1 exit slip

GEOMETRIC DATA  
-----

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.00	I	7.00	I	10.00	I	20.00	I	43.00	I	30.0	I	0.629	I	27.930	I
I	ARM B	I	3.75	I	6.50	I	12.00	I	20.00	I	43.00	I	30.0	I	0.618	I	26.950	I
I	ARM C	I	6.00	I	8.00	I	12.00	I	20.00	I	43.00	I	30.0	I	0.735	I	36.887	I

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

TRAFFIC DEMAND DATA  
-----

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

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DEMAND FLOW PROFILES ARE INPUT DIRECTLY.  
DEMAND SET TITLE: Pre development

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN) -

TIME INTERVAL	ARM A	ARM B	ARM C
08.00 - 08.15	6.5	8.3	0.9
ENTRY	6.5	8.3	0.9
EXIT	8.7	7.0	0.0
08.15 - 08.30	6.5	8.3	0.9
ENTRY	6.5	8.3	0.9
EXIT	8.7	7.0	0.0
08.30 - 08.45	6.5	8.3	0.9
ENTRY	6.5	8.3	0.9
EXIT	8.7	7.0	0.0
08.45 - 09.00	6.5	8.3	0.9
ENTRY	6.5	8.3	0.9
EXIT	8.7	7.0	0.0

DEMAND SET TITLE: Pre development

TIME	TURNING PROPORTIONS (PERCENTAGE OF H.V.S)			
	FROM/TO	ARM A	ARM B	ARM C
08.00 - 09.00	ARM A	0.000 ( 10.0)	1.000 ( 10.0)	0.000 ( 10.0)
	ARM B	1.000 ( 10.0)	0.000 ( 10.0)	0.000 ( 10.0)
	ARM C	0.462 ( 10.0)	0.538 ( 10.0)	0.000 ( 10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	6.47	25.09	0.258		0.0	0.3	5.1		0.05
ARM B	8.30	24.50	0.339		0.0	0.5	7.5		0.06
ARM C	0.90	27.46	0.033		0.0	0.0	0.5		0.04

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									
ARM A	6.47	25.09	0.258		0.3	0.3	5.2		0.05
ARM B	8.30	24.50	0.339		0.5	0.5	7.7		0.06
ARM C	0.90	27.43	0.033		0.0	0.0	0.5		0.04

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									
ARM A	6.47	25.09	0.258		0.3	0.3	5.2		0.05
ARM B	8.30	24.50	0.339		0.5	0.5	7.7		0.06
ARM C	0.90	27.43	0.033		0.0	0.0	0.5		0.04



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									
ARM A	6.47	25.09	0.258		0.3	0.3	5.2		0.05
ARM B	8.30	24.50	0.339		0.5	0.5	7.7		0.06
ARM C	0.90	27.43	0.033		0.0	0.0	0.5		0.04

-----  
 QUEUE AT ARM A  
 -----

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

-----  
 QUEUE AT ARM B  
 -----

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

-----  
 QUEUE AT ARM C  
 -----

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

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-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

ARM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	* QUEUEING * * DELAY * (MIN)	* INCLUSIVE QUEUEING * * DELAY * (MIN)
A	388.2	388.2	20.7	20.7
B	498.0	498.0	30.4	30.4
C	54.0	54.0	2.0	2.0
ALL	940.2	940.2	53.2	53.2

\* 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

===== end of file =====

[Printed at 11:44:38 on 10/01/2006]

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Crowthorne House           Fax: +44 (0) 1344 770864  
Nine Mile Ride               Email: softwarebureau@trl.co.uk  
Wokingham, Berks.         Web: www.trlsoftware.co.uk  
RG40 3GA, UK

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-----

Run with file:-  
"p:\Projects\2005 Files\05.186 waste Management Facility at Carranstown\calcs\western roundabout predevelop.vai"  
(drive-on-the-left ) at 11:45:41 on Tuesday, 10 January 2006

FILE PROPERTIES  
\*\*\*\*\*

RUN TITLE: R152/M1 Interchange Western Roundabout  
LOCATION: Duileek  
DATE: 10/01/2006  
CLIENT: Indevar  
ENUMERATOR: Traffic [580130J]  
JOB NUMBER: 05.186  
STATUS: TIA  
DESCRIPTION: Analysis of Western Roundabout

INPUT DATA  
\*\*\*\*\*

ARM A - R152 to Duileek  
ARM B - R152 to Drogheda  
ARM C - M1 exit slip

GEOMETRIC DATA  
-----

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.00	I	7.00	I	10.00	I	20.00	I	43.00	I	30.0	I	0.629	I	27.930	I
I	ARM B	I	3.75	I	6.50	I	12.00	I	20.00	I	43.00	I	30.0	I	0.618	I	26.950	I
I	ARM C	I	6.00	I	8.00	I	12.00	I	20.00	I	43.00	I	30.0	I	0.735	I	36.887	I

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

TRAFFIC DEMAND DATA  
-----

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

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DEMAND FLOW PROFILES ARE INPUT DIRECTLY.  
DEMAND SET TITLE: post development

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN) -

TIME INTERVAL	ARM A	ARM B	ARM C
08.00 - 08.15	6.6	8.4	0.9
ENTRY	6.6	8.4	0.9
EXIT	8.8	7.2	0.0
08.15 - 08.30	6.6	8.4	0.9
ENTRY	6.6	8.4	0.9
EXIT	8.8	7.2	0.0
08.30 - 08.45	6.6	8.4	0.9
ENTRY	6.6	8.4	0.9
EXIT	8.8	7.2	0.0
08.45 - 09.00	6.6	8.4	0.9
ENTRY	6.6	8.4	0.9
EXIT	8.8	7.2	0.0

DEMAND SET TITLE: post development

TIME	TURNING PROPORTIONS (PERCENTAGE OF H.V.S)			
	FROM/TO	ARM A	ARM B	ARM C
08.00 - 09.00	ARM A	0.000 ( 10.0)	1.000 ( 10.0)	0.000 ( 10.0)
	ARM B	1.000 ( 10.0)	0.000 ( 10.0)	0.000 ( 10.0)
	ARM C	0.462 ( 10.0)	0.538 ( 10.0)	0.000 ( 10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	6.62	25.09	0.264		0.0	0.4	5.2		0.05
ARM B	8.45	24.50	0.345		0.0	0.5	7.7		0.06
ARM C	0.90	27.35	0.033		0.0	0.0	0.5		0.04

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									
ARM A	6.62	25.09	0.264		0.4	0.4	5.4		0.05
ARM B	8.45	24.50	0.345		0.5	0.5	7.9		0.06
ARM C	0.90	27.32	0.033		0.0	0.0	0.5		0.04

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									
ARM A	6.62	25.09	0.264		0.4	0.4	5.4		0.05
ARM B	8.45	24.50	0.345		0.5	0.5	7.9		0.06
ARM C	0.90	27.32	0.033		0.0	0.0	0.5		0.04

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									
ARM A	6.62	25.09	0.264		0.4	0.4	5.4		0.05
ARM B	8.45	24.50	0.345		0.5	0.5	7.9		0.06
ARM C	0.90	27.32	0.033		0.0	0.0	0.5		0.04

-----  
 QUEUE AT ARM A  
 -----

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

-----  
 QUEUE AT ARM B  
 -----

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

-----  
 QUEUE AT ARM C  
 -----

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

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-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

ARM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	* QUEUEING * (MIN)	* DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * (MIN)	* DELAY * (MIN/VEH)
A	397.2	397.2	21.3	0.05	21.3	0.05
B	507.0	507.0	31.3	0.06	31.3	0.06
C	54.0	54.0	2.0	0.04	2.0	0.04
ALL	958.2	958.2	54.6	0.06	54.7	0.06

\* 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

===== end of file =====

[Printed at 11:45:58 on 10/01/2006]

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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-----

Run with file:-  
"p:\Projects\2005 Files\05.186 waste Management Facility at Carranstown\calcs\eastern roundabout predevelop.vai"  
(drive-on-the-left ) at 11:41:35 on Tuesday, 10 January 2006

FILE PROPERTIES  
\*\*\*\*\*

RUN TITLE: M1/R152 Eastern Roundabout  
LOCATION: M1/R152 Interchange  
DATE: 10/01/2006  
CLIENT: Indevar  
ENUMERATOR: Traffic [580130]  
JOB NUMBER: 05.332  
STATUS:  
DESCRIPTION: Analysis of Eastern Roundabout

INPUT DATA  
\*\*\*\*\*

ARM A - R152 to Duleek  
ARM B - Interchange Link  
ARM C - R152 to Drogheda  
ARM D - M1 Entry Slip

GEOMETRIC DATA  
-----

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.50	I	8.60	I	12.00	I	14.00	I	52.00	I	30.0	I	0.738	I	41.286	I
I	ARM B	I	4.75	I	7.00	I	10.00	I	20.00	I	52.00	I	30.0	I	0.625	I	30.594	I
I	ARM C	I	3.75	I	8.00	I	10.00	I	20.00	I	52.00	I	30.0	I	0.596	I	28.032	I

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

TRAFFIC DEMAND DATA  
-----

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

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DEMAND FLOW PROFILES ARE INPUT DIRECTLY.  
 DEMAND SET TITLE: M1/R152 Eastern Roundabout Predevelopment

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN) -

TIME INTERVAL	ARM A	ARM B	ARM C	ARM D
08.00 - 08.15	8.7	4.6	7.5	0.0
ENTRY	8.3	4.1	3.9	4.5
EXIT				
08.15 - 08.30	8.7	4.6	7.5	0.0
ENTRY	8.3	4.1	3.9	4.5
EXIT				
08.30 - 08.45	8.7	4.6	7.5	0.0
ENTRY	8.3	4.1	3.9	4.5
EXIT				
08.45 - 09.00	8.7	4.6	7.5	0.0
ENTRY	8.3	4.1	3.9	4.5
EXIT				

DEMAND SET TITLE: M1/R152 Eastern Roundabout Predevelopment

TIME	TURNING PROPORTIONS (PERCENTAGE OF H.V.S)				
	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.00 - 09.00	ARM A	0.000 ( 10.0)	0.371 ( 10.0)	0.412 ( 10.0)	0.217 ( 10.0)
	ARM B	0.468 ( 10.0)	0.000 ( 10.0)	0.075 ( 10.0)	0.457 ( 10.0)
	ARM C	0.814 ( 10.0)	0.117 ( 10.0)	0.000 ( 10.0)	0.069 ( 10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	8.70	36.89	0.236		0.0	0.3	4.5		0.04
ARM B	4.63	24.40	0.190		0.0	0.2	3.4		0.05
ARM C	7.51	21.82	0.344		0.0	0.5	7.6		0.07

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									
ARM A	8.70	36.88	0.236		0.3	0.3	4.6		0.04
ARM B	4.63	24.39	0.190		0.2	0.2	3.5		0.05
ARM C	7.51	21.81	0.344		0.5	0.5	7.8		0.07

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									
ARM A	8.70	36.88	0.236		0.3	0.3	4.6		0.04
ARM B	4.63	24.39	0.190		0.2	0.2	3.5		0.05
ARM C	7.51	21.81	0.344		0.5	0.5	7.9		0.07

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									
ARM A	8.70	36.88	0.236		0.3	0.3	4.6		0.04
ARM B	4.63	24.39	0.190		0.2	0.2	3.5		0.05
ARM C	7.51	21.81	0.344		0.5	0.5	7.9		0.07

-----  
 QUEUE AT ARM A  
 -----

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

-----  
 QUEUE AT ARM B  
 -----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2

-----  
 QUEUE AT ARM C  
 -----

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

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-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

ARM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	* QUEUEING * DELAY (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	522.0	522.0	18.4	0.04
B	277.8	277.8	14.0	0.05
C	450.6	450.6	31.2	0.07
ALL	1250.4	1250.4	63.5	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

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 3.0 (JUNE 2005)

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Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\eastern roundabout predevelop.vai"  
(drive-on-the-left ) at 11:43:04 on Tuesday, 10 January 2006

FILE PROPERTIES  
\*\*\*\*\*

RUN TITLE: M1/R152 Eastern Roundabout  
LOCATION: M1/R152 Interchange  
DATE: 10/01/2006  
CLIENT: Indevar  
ENUMERATOR: Traffic [580130J]  
JOB NUMBER: 05.332  
STATUS:  
DESCRIPTION: Analysis of Eastern Roundabout

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INPUT DATA  
\*\*\*\*\*

ARM A - R152 to Duleek  
ARM B - Interchange Link  
ARM C - R152 to Drogheda  
ARM D - M1 Entry Slip

GEOMETRIC DATA  
-----

ARM D IS JUNCTION EXIT ONLY

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.50	I	8.60	I	12.00	I	14.00	I	52.00	I	30.0	I	0.738	I	41.286	I
I	ARM B	I	4.75	I	7.00	I	10.00	I	20.00	I	52.00	I	30.0	I	0.625	I	30.594	I
I	ARM C	I	3.75	I	8.00	I	10.00	I	20.00	I	52.00	I	30.0	I	0.596	I	28.032	I

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

TRAFFIC DEMAND DATA  
-----

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 08.00 AND ENDS 09.00



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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.  
 DEMAND SET TITLE: Post Development

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN) -

TIME INTERVAL	ARM A	ARM B	ARM C	ARM D
08.00 - 08.15	8.9	4.7	7.6	0.0
08.15 - 08.30	8.9	4.7	7.6	0.0
08.30 - 08.45	8.9	4.7	7.6	0.0
08.45 - 09.00	8.9	4.7	7.6	0.0

DEMAND SET TITLE: Post Development

TIME	ARM A	ARM B	ARM C	ARM D
08.00 - 09.00	0.000	0.372	0.415	0.214
ARM B	0.474	0.000	0.075	0.451
ARM C	0.816	0.117	0.000	0.067

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	8.85	36.88	0.240		0.0	0.3	4.7		0.04
ARM B	4.70	24.35	0.193		0.0	0.2	3.5		0.05
ARM C	7.60	21.78	0.349		0.0	0.5	7.8		0.07

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									
ARM A	8.85	36.88	0.240		0.3	0.3	4.7		0.04
ARM B	4.70	24.34	0.193		0.2	0.2	3.6		0.05
ARM C	7.60	21.77	0.349		0.5	0.5	8.0		0.07

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									
ARM A	8.85	36.88	0.240		0.3	0.3	4.7		0.04
ARM B	4.70	24.34	0.193		0.2	0.2	3.6		0.05
ARM C	7.60	21.77	0.349		0.5	0.5	8.0		0.07

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									
ARM A	8.85	36.88	0.240		0.3	0.3	4.7		0.04
ARM B	4.70	24.34	0.193		0.2	0.2	3.6		0.05
ARM C	7.60	21.77	0.349		0.5	0.5	8.0		0.07

QUEUE AT ARM A

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

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2

QUEUE AT ARM C

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	* QUEUEING * * DELAY * (MIN)	* INCLUSIVE QUEUEING * * DELAY * (MIN)
A	531.0	531.0	18.8	18.8
B	282.0	282.0	14.3	14.3
C	456.0	456.0	31.8	31.8
ALL	1269.0	1269.0	64.9	64.9

\* 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  
 ===== end of file =====

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

PICADY 4.1 ANALYSIS PROGRAM  
RELEASE 4.0 (NOV 2003)

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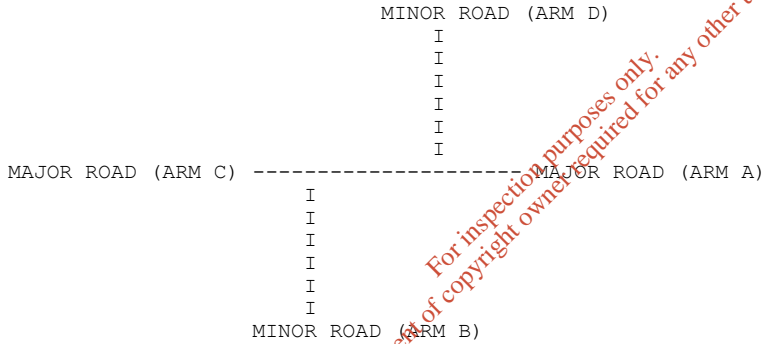
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Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\N2\_R150 Pre development.vpi"  
(drive-on-the-left ) at 14:10:47 on Friday, 20 January 2006

RUN TITLE  
\*\*\*\*\*  
N2/R150 Junction Predevelopment

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

INPUT DATA  
-----



ARM A IS N2 North  
ARM B IS R150 East  
ARM C IS N2 South  
ARM D IS R150 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.

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 11.50 M.	I	( W ) 11.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR ) 0.00 M.	I	(WCR ) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 250.0 M.	I	(VA-D) 200.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 175.0 M.	I	(VD-A) 250.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 250.0 M.	I	(VD-C) 175.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I	(WD-A) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) 0.00 M.	I

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM A	ARM B	ARM C	ARM D
08.00 - 08.15	ARM A	0.000	0.130	0.842	0.028	0.0	55.0	357.0	12.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.210	0.000	0.188	0.602	38.0	0.0	34.0	109.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.884	0.055	0.000	0.062	129.0	8.0	0.0	9.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.072	0.809	0.118	0.000	11.0	123.0	18.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				
08.15 - 08.30	ARM A	0.000	0.130	0.842	0.028	0.0	55.0	357.0	12.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.210	0.000	0.188	0.602	38.0	0.0	34.0	109.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.884	0.055	0.000	0.062	129.0	8.0	0.0	9.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.072	0.809	0.118	0.000	11.0	123.0	18.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				

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

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
08.30 - 08.45	ARM A	0.000	0.130	0.842	0.028
		0.0	55.0	357.0	12.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)
	ARM B	0.210	0.000	0.188	0.602
		38.0	0.0	34.0	109.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)
	ARM C	0.884	0.055	0.000	0.062
		129.0	8.0	0.0	9.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)
	ARM D	0.072	0.809	0.118	0.000
		11.0	123.0	18.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)

08.45 - 09.00	ARM A	0.000	0.130	0.842	0.028
		0.0	55.0	357.0	12.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)
	ARM B	0.210	0.000	0.188	0.602
		38.0	0.0	34.0	109.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)
	ARM C	0.884	0.055	0.000	0.062
		129.0	8.0	0.0	9.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)
	ARM D	0.072	0.809	0.118	0.000
		11.0	123.0	18.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA  
 THE TURNING PROPORTIONS USED VARY BETWEEN TIME SEGMENTS  
 DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-ACD	3.02	8.74	0.346		0.0	0.5	7.4	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.49	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.0	0.4	5.9	
C-D	0.15							
C-A	2.15							
C-B	0.13	8.94	0.015		0.0	0.0	0.2	

08.15-08.30								
B-ACD	3.02	8.74	0.346		0.5	0.5	7.8	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.48	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.4	0.4	6.2	
C-D	0.15							
C-A	2.15							
C-B	0.13	8.93	0.015		0.0	0.0	0.2	

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-ACD	3.02	8.74	0.346		0.5	0.5	7.9	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.48	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.4	0.4	6.2	
C-D	0.15							
C-A	2.15							
C-B	0.13	8.93	0.015		0.0	0.0	0.2	

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)
08.45-09.00								
B-ACD	3.02	8.74	0.346		0.5	0.5	7.9	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.48	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.4	0.4	6.2	
C-D	0.15							
C-A	2.15							
C-B	0.13	8.93	0.015		0.0	0.0	0.2	

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM A-D

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

QUEUE FOR STREAM D-ABC

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

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	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)
B-ACD	181.2	30.9	0.17
A-B	55.0		
A-C	357.2		
A-D	12.0	1.3	0.11
D-ABC	151.8	24.5	0.16
C-D	9.0		
C-A	128.8		
C-B	8.0	0.9	0.11
ALL	903.0	57.7	0.06

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

END OF JOB  
 \*\*\*\*\* PICADY 4 run completed.  
 ===== end of file =====

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

PICADY 4.1 ANALYSIS PROGRAM  
RELEASE 4.0 (NOV 2003)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT  
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Run with file:-

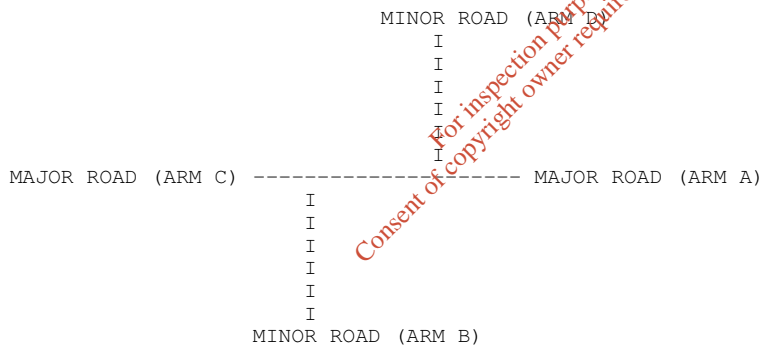
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RUN TITLE  
\*\*\*\*\*

N2/R150 Junction Post Development

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

INPUT DATA  
-----



ARM A IS N2 North  
ARM B IS R150 East  
ARM C IS N2 South  
ARM D IS R150 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  
 -----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 11.50 M.	I	( W ) 11.50 M.	I
I	CENTRAL RESERVE WIDTH	I	( WCR ) 0.00 M.	I	( WCR ) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	( WC-B ) 2.20 M.	I	( WA-D ) 2.20 M.	I
I	- VISIBILITY	I	( VC-B ) 250.0 M.	I	( VA-D ) 200.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	( VB-C ) 175.0 M.	I	( VD-A ) 250.0 M.	I
I	- VISIBILITY TO RIGHT	I	( VB-A ) 250.0 M.	I	( VD-C ) 175.0 M.	I
I	- LANE 1 WIDTH	I	( WB-C ) 3.50 M.	I	( WD-A ) 3.50 M.	I
I	- LANE 2 WIDTH	I	( WB-A ) 0.00 M.	I	( WD-C ) 0.00 M.	I

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

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

I		I	TURNING PROPORTIONS				I	
I		I	TURNING COUNTS				I	
I		I	( PERCENTAGE OF H.V.S )				I	
I	TIME	I	FROM/TO	ARM A	ARM B	ARM C	ARM D	I
I	08.00 - 08.15	I						I
I		I	ARM A	0.000	0.130	0.842	0.028	I
I		I		0.0	55.0	357.0	12.0	I
I		I	( 0.0 )	( 10.0 )	( 10.0 )	( 10.0 )	( 10.0 )	I
I		I						I
I		I	ARM B	0.205	0.000	0.205	0.589	I
I		I		38.0	0.0	38.0	109.0	I
I		I	( 10.0 )	( 0.0 )	( 10.0 )	( 10.0 )	( 10.0 )	I
I		I						I
I		I	ARM C	0.860	0.080	0.000	0.060	I
I		I		129.0	12.0	0.0	9.0	I
I		I	( 10.0 )	( 10.0 )	( 0.0 )	( 10.0 )	( 10.0 )	I
I		I						I
I		I	ARM D	0.072	0.809	0.118	0.000	I
I		I		11.0	123.0	18.0	0.0	I
I		I	( 10.0 )	( 10.0 )	( 10.0 )	( 0.0 )	( 0.0 )	I
I		I						I
I	08.15 - 08.30	I						I
I		I	ARM A	0.000	0.130	0.842	0.028	I
I		I		0.0	55.0	357.0	12.0	I
I		I	( 0.0 )	( 10.0 )	( 10.0 )	( 10.0 )	( 10.0 )	I
I		I						I
I		I	ARM B	0.205	0.000	0.205	0.589	I
I		I		38.0	0.0	38.0	109.0	I
I		I	( 10.0 )	( 0.0 )	( 10.0 )	( 10.0 )	( 10.0 )	I
I		I						I
I		I	ARM C	0.860	0.080	0.000	0.060	I
I		I		129.0	12.0	0.0	9.0	I
I		I	( 10.0 )	( 10.0 )	( 0.0 )	( 10.0 )	( 10.0 )	I
I		I						I
I		I	ARM D	0.072	0.809	0.118	0.000	I
I		I		11.0	123.0	18.0	0.0	I
I		I	( 10.0 )	( 10.0 )	( 10.0 )	( 0.0 )	( 0.0 )	I
I		I						I

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		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
08.30 - 08.45	ARM A	0.000	0.130	0.842	0.028	0.0	55.0	357.0	12.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.205	0.000	0.205	0.589	38.0	0.0	38.0	109.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.860	0.080	0.000	0.060	129.0	12.0	0.0	9.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.072	0.809	0.118	0.000	11.0	123.0	18.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				
08.45 - 09.00	ARM A	0.000	0.130	0.842	0.028	0.0	55.0	357.0	12.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.205	0.000	0.205	0.589	38.0	0.0	38.0	109.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.860	0.080	0.000	0.060	129.0	12.0	0.0	9.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.072	0.809	0.118	0.000	11.0	123.0	18.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				

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TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA  
 THE TURNING PROPORTIONS USED VARY BETWEEN TIME SEGMENTS  
 DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-ACD	3.08	8.75	0.352		0.0	0.5	7.6	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.49	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.0	0.4	5.9	
C-D	0.15							
C-A	2.15							
C-B	0.20	8.94	0.022		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.15-08.30								
B-ACD	3.08	8.75	0.352		0.5	0.5	8.0	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.48	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.4	0.4	6.2	
C-D	0.15							
C-A	2.15							
C-B	0.20	8.93	0.022		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-ACD	3.08	8.75	0.352		0.5	0.5	8.1	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.48	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.4	0.4	6.2	
C-D	0.15							
C-A	2.15							
C-B	0.20	8.93	0.022		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
B-ACD	3.08	8.75	0.352		0.5	0.5	8.1	
A-B	0.92							
A-C	5.95							
A-D	0.20	9.48	0.021		0.0	0.0	0.3	
D-ABC	2.53	8.59	0.295		0.4	0.4	6.2	
C-D	0.15							
C-A	2.15							
C-B	0.20	8.93	0.022		0.0	0.0	0.3	

QUEUE FOR STREAM B-ACD

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

QUEUE FOR STREAM A-D

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

QUEUE FOR STREAM D-ABC

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

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	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)
B-ACD	184.8	31.8	31.8
A-B	55.0		
A-C	357.2		
A-D	12.0	1.3	1.3
D-ABC	151.8	24.5	24.5
C-D	9.0		
C-A	129.0		
C-B	12.0	1.4	1.4
ALL	910.8	59.0	59.0

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

END OF JOB

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

===== end of file =====

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GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	MINOR ROAD D
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	( W ) 10.00 M.	( W ) 10.00 M.
CENTRAL RESERVE WIDTH	( WCR ) 0.00 M.	( WCR ) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	( WC-B ) 3.00 M.	( WA-D ) 3.00 M.
- VISIBILITY	( VC-B ) 250.0 M.	( VA-D ) 200.0 M.
- BLOCKS TRAFFIC	NO	NO
MINOR ROAD - VISIBILITY TO LEFT	( VB-C ) 250.0 M.	( VD-A ) 250.0 M.
- VISIBILITY TO RIGHT	( VB-A ) 200.0 M.	( VD-C ) 250.0 M.
- LANE 1 WIDTH	( WB-C ) 3.00 M.	( WD-A ) 3.50 M.
- LANE 2 WIDTH	( WB-A ) 0.00 M.	( WD-C ) 3.50 M.

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

TIME	TURNING PROPORTIONS			
	FROM/TO	ARM A	ARM B	ARM D
08.00 - 08.15	ARM A	0.000	0.014	0.944
		0.0	6.0	391.0
		( 0.0 )	( 10.0 )	( 10.0 )
	ARM B	0.029	0.000	0.343
		2.0	0.0	24.0
		( 10.0 )	( 0.0 )	( 10.0 )
	ARM C	0.626	0.009	0.000
		134.0	2.0	0.0
		( 10.0 )	( 10.0 )	( 0.0 )
	ARM D	0.045	0.147	0.808
		13.0	43.0	236.0
		( 10.0 )	( 10.0 )	( 10.0 )
08.15 - 08.30	ARM A	0.000	0.014	0.944
		0.0	6.0	391.0
		( 0.0 )	( 10.0 )	( 10.0 )
	ARM B	0.029	0.000	0.343
		2.0	0.0	24.0
		( 10.0 )	( 0.0 )	( 10.0 )
	ARM C	0.626	0.009	0.000
		134.0	2.0	0.0
		( 10.0 )	( 10.0 )	( 0.0 )
	ARM D	0.045	0.147	0.808
		13.0	43.0	236.0
		( 10.0 )	( 10.0 )	( 10.0 )

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		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
08.30 - 08.45									
	ARM A	0.000	0.014	0.944	0.041	0.0	6.0	391.0	17.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.029	0.000	0.343	0.629	2.0	0.0	24.0	44.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.626	0.009	0.000	0.364	134.0	2.0	0.0	78.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.045	0.147	0.808	0.000	13.0	43.0	236.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				
08.45 - 09.00									
	ARM A	0.000	0.014	0.944	0.041	0.0	6.0	391.0	17.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.029	0.000	0.343	0.629	2.0	0.0	24.0	44.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.626	0.009	0.000	0.364	134.0	2.0	0.0	78.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.045	0.147	0.808	0.000	13.0	43.0	236.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE TURNING PROPORTIONS USED VARY BETWEEN TIME SEGMENTS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-ACD	1.17	7.38	0.159		0.0	0.2	2.7	
A-B	0.10							
A-C	6.52							
A-D	0.28	10.33	0.027		0.0	0.0	0.4	
D-A	0.22	10.11	0.021		0.0	0.0	0.3	
D-BC	4.65	8.96	0.519		0.0	1.0	14.5	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.02	0.004		0.0	0.0	0.1	

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
B-ACD	1.17	7.37	0.159		0.2	0.2	2.8	
A-B	0.10							
A-C	6.52							
A-D	0.28	10.33	0.027		0.0	0.0	0.4	
D-A	0.22	10.09	0.021		0.0	0.0	0.3	
D-BC	4.65	8.96	0.519		1.0	1.1	15.9	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.00	0.004		0.0	0.0	0.1	

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)
08.30-08.45								
B-ACD	1.17	7.36	0.159		0.2	0.2	2.8	
A-B	0.10							
A-C	6.52							
A-D	0.28	10.33	0.027		0.0	0.0	0.4	
D-A	0.22	10.09	0.021		0.0	0.0	0.3	
D-BC	4.65	8.96	0.519		1.1	1.1	16.0	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.00	0.004		0.0	0.0	0.1	

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)
08.45-09.00								
B-ACD	1.17	7.36	0.159		0.2	0.2	2.8	
A-B	0.10							
A-C	6.52							
A-D	0.28	10.33	0.027		0.0	0.0	0.4	
D-A	0.22	10.09	0.021		0.0	0.0	0.3	
D-BC	4.65	8.96	0.519		1.1	1.1	16.1	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.00	0.004		0.0	0.0	0.1	

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2

QUEUE FOR STREAM A-D

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

QUEUE FOR STREAM D-A

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



-----

QUEUE FOR STREAM D-BC

-----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	1.0	*
08.30	1.1	*
08.45	1.1	*
09.00	1.1	*

-----

QUEUE FOR STREAM C-B

-----

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

-----

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

-----

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-ACD	I	70.2	I	70.2	I	11.1	I	0.16
I	A-B	I	6.0	I	6.0	I		I	
I	A-C	I	391.0	I	391.0	I		I	
I	A-D	I	17.0	I	17.0	I	1.7	I	0.10
I	D-A	I	13.0	I	13.0	I	1.3	I	0.10
I	D-BC	I	279.2	I	279.2	I	62.4	I	0.22
I	C-D	I	78.1	I	78.1	I		I	
I	C-A	I	134.1	I	134.1	I		I	
I	C-B	I	2.0	I	2.0	I	0.2	I	0.11
I	ALL	I	990.6	I	990.6	I	76.7	I	0.08

\* 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.

Consent: copyright owner required for any other use.

END OF JOB

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

===== end of file =====

[Printed at 12:32:18 on 20/01/2006]



-----  
 GEOMETRIC DATA  
 -----

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 10.00 M.	I	( W ) 10.00 M.	I
I	CENTRAL RESERVE WIDTH	I	( WCR ) 0.00 M.	I	( WCR ) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	( WC-B ) 3.00 M.	I	( WA-D ) 3.00 M.	I
I	- VISIBILITY	I	( VC-B ) 250.0 M.	I	( VA-D ) 200.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	( VB-C ) 250.0 M.	I	( VD-A ) 250.0 M.	I
I	- VISIBILITY TO RIGHT	I	( VB-A ) 200.0 M.	I	( VD-C ) 250.0 M.	I
I	- LANE 1 WIDTH	I	( WB-C ) 3.00 M.	I	( WD-A ) 3.50 M.	I
I	- LANE 2 WIDTH	I	( WB-A ) 0.00 M.	I	( WD-C ) 3.50 M.	I

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

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

I		I	TURNING PROPORTIONS				I
I		I	TURNING COUNTS				I
I		I	( PERCENTAGE OF H.V.S )				I
I	TIME	I	FROM/TO	ARM A	ARM B	ARM C	ARM D
I	08.00 - 08.15	I					
I		I	ARM A	0.000	0.014	0.935	0.050
I		I		0.0	6.0	391.0	21.0
I		I		( 0.0 )	( 10.0 )	( 10.0 )	( 10.0 )
I		I					
I		I	ARM B	0.029	0.000	0.343	0.629
I		I		2.0	0.0	24.0	44.0
I		I		( 10.0 )	( 0.0 )	( 10.0 )	( 10.0 )
I		I					
I		I	ARM C	0.626	0.009	0.000	0.364
I		I		134.0	2.0	0.0	78.0
I		I		( 10.0 )	( 10.0 )	( 0.0 )	( 10.0 )
I		I					
I		I	ARM D	0.057	0.145	0.797	0.000
I		I		17.0	43.0	236.0	0.0
I		I		( 10.0 )	( 10.0 )	( 10.0 )	( 0.0 )
I		I					
I	08.15 - 08.30	I					
I		I	ARM A	0.000	0.014	0.935	0.050
I		I		0.0	6.0	391.0	21.0
I		I		( 0.0 )	( 10.0 )	( 10.0 )	( 10.0 )
I		I					
I		I	ARM B	0.029	0.000	0.343	0.629
I		I		2.0	0.0	24.0	44.0
I		I		( 10.0 )	( 0.0 )	( 10.0 )	( 10.0 )
I		I					
I		I	ARM C	0.626	0.009	0.000	0.364
I		I		134.0	2.0	0.0	78.0
I		I		( 10.0 )	( 10.0 )	( 0.0 )	( 10.0 )
I		I					
I		I	ARM D	0.057	0.145	0.797	0.000
I		I		17.0	43.0	236.0	0.0
I		I		( 10.0 )	( 10.0 )	( 10.0 )	( 0.0 )
I		I					

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		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
08.30 - 08.45									
	ARM A	0.000	0.014	0.935	0.050	0.0	6.0	391.0	21.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.029	0.000	0.343	0.629	2.0	0.0	24.0	44.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.626	0.009	0.000	0.364	134.0	2.0	0.0	78.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.057	0.145	0.797	0.000	17.0	43.0	236.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				
08.45 - 09.00									
	ARM A	0.000	0.014	0.935	0.050	0.0	6.0	391.0	21.0
		( 0.0)	( 10.0)	( 10.0)	( 10.0)				
	ARM B	0.029	0.000	0.343	0.629	2.0	0.0	24.0	44.0
		( 10.0)	( 0.0)	( 10.0)	( 10.0)				
	ARM C	0.626	0.009	0.000	0.364	134.0	2.0	0.0	78.0
		( 10.0)	( 10.0)	( 0.0)	( 10.0)				
	ARM D	0.057	0.145	0.797	0.000	17.0	43.0	236.0	0.0
		( 10.0)	( 10.0)	( 10.0)	( 0.0)				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE TURNING PROPORTIONS USED VARY BETWEEN TIME SEGMENTS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-ACD	1.17	7.38	0.158		0.0	0.2	2.7	
A-B	0.10							
A-C	6.52							
A-D	0.35	10.33	0.034		0.0	0.0	0.5	
D-A	0.28	10.11	0.028		0.0	0.0	0.4	
D-BC	4.65	8.94	0.520		0.0	1.1	14.6	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.02	0.004		0.0	0.0	0.1	

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TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
B-ACD	1.17	7.37	0.159		0.2	0.2	2.8	
A-B	0.10							
A-C	6.52							
A-D	0.35	10.33	0.034		0.0	0.0	0.5	
D-A	0.28	10.09	0.028		0.0	0.0	0.4	
D-BC	4.65	8.93	0.520		1.1	1.1	15.9	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.00	0.004		0.0	0.0	0.1	

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)
08.30-08.45								
B-ACD	1.17	7.37	0.159		0.2	0.2	2.8	
A-B	0.10							
A-C	6.52							
A-D	0.35	10.33	0.034		0.0	0.0	0.5	
D-A	0.28	10.09	0.028		0.0	0.0	0.4	
D-BC	4.65	8.93	0.520		1.1	1.1	16.0	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.00	0.004		0.0	0.0	0.1	

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)
08.45-09.00								
B-ACD	1.17	7.37	0.159		0.2	0.2	2.8	
A-B	0.10							
A-C	6.52							
A-D	0.35	10.33	0.034		0.0	0.0	0.5	
D-A	0.28	10.09	0.028		0.0	0.0	0.4	
D-BC	4.65	8.93	0.520		1.1	1.1	16.1	
C-D	1.30							
C-A	2.24							
C-B	0.03	9.00	0.004		0.0	0.0	0.1	

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QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2

QUEUE FOR STREAM A-D

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

QUEUE FOR STREAM D-A

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

-----  
 QUEUE FOR STREAM D-BC  
 -----

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	1.1	*
08.30	1.1	*
08.45	1.1	*
09.00	1.1	*

-----  
 QUEUE FOR STREAM C-B  
 -----

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

-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-ACD	I	70.2	I	70.2	I	11.1	I	0.16
I	A-B	I	6.0	I	6.0	I		I	
I	A-C	I	391.2	I	391.2	I		I	
I	A-D	I	21.0	I	21.0	I	2.1	I	0.10
I	D-A	I	17.0	I	17.0	I	1.7	I	0.10
I	D-BC	I	278.8	I	278.8	I	62.6	I	0.22
I	C-D	I	78.1	I	78.1	I		I	
I	C-A	I	134.1	I	134.1	I		I	
I	C-B	I	2.0	I	2.0	I	0.2	I	0.11
I	ALL	I	998.4	I	998.4	I	77.8	I	0.08

\* 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.

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END OF JOB

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

===== end of file =====

[Printed at 12:42:03 on 20/01/2006]

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

PICADY 4.1 ANALYSIS PROGRAM  
RELEASE 4.0 (NOV 2003)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT  
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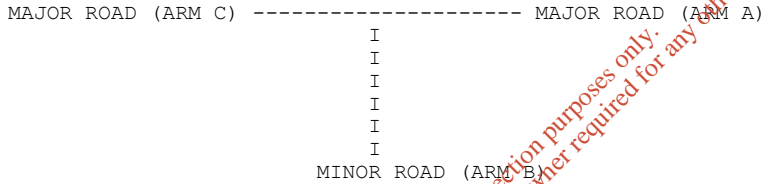
THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\  
N2\_R152 Pre Development 230106.vpi"  
(drive-on-the-left ) at 10:54:02 on Tuesday, 24 January 2006

RUN TITLE  
\*\*\*\*\*  
N2/R152 Junction Pre Development

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

INPUT DATA  
-----



ARM A IS N2 North  
ARM B IS R152  
ARM C IS N2 South

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Consent of copyright owner required for any other use.*

STREAM LABELLING CONVENTION  
-----

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

GEOMETRIC DATA  
-----

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 10.00 M.	I
I	CENTRAL RESERVE WIDTH	I	( WCR ) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	( WC-B ) 3.00 M.	I
I	- VISIBILITY	I	( VC-B ) 250.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	( VB-C ) 200.0 M.	I
I	- VISIBILITY TO RIGHT	I	( VB-A ) 200.0 M.	I
I	- LANE 1 WIDTH	I	( WB-C ) 3.00 M.	I
I	- LANE 2 WIDTH	I	( WB-A ) 3.00 M.	I

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN) :

TIME INTERVAL	ARM A	ARM B	ARM C
08.00 - 08.15	11.5	8.1	7.1
	3.9	3.7	19.0
08.15 - 08.30	11.5	8.1	7.1
	3.9	3.7	19.0
08.30 - 08.45	11.5	8.1	7.1
	3.9	3.7	19.0
08.45 - 09.00	11.5	8.1	7.1
	3.9	3.7	19.0

TIME	FROM/TO	ARM A	ARM B	ARM C
08.00 - 09.00	ARM A	0.000	0.032	0.968
		( 0.0)	( 10.0)	( 10.0)
	ARM B	0.055	0.000	0.945
		( 10.0)	( 0.0)	( 10.0)
	ARM C	0.510	0.490	0.000
		( 10.0)	( 10.0)	( 0.0)

Consent of copyright owner required for any other use.

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)
08.00-08.15								
B-C	7.63	8.47	0.901		0.0	5.9	65.8	
B-A	0.45	5.27	0.085		0.0	0.1	1.3	
C-A	3.62							
C-B	3.48	8.96	0.388		0.0	0.6	8.8	
A-B	0.37							
A-C	11.13							

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)
08.15-08.30								
B-C	7.63	8.47	0.901		5.9	6.9	97.2	
B-A	0.45	5.26	0.085		0.1	0.1	1.4	
C-A	3.62							
C-B	3.48	8.96	0.388		0.6	0.6	9.4	
A-B	0.37							
A-C	11.13							



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)
08.30-08.45								
B-C	7.63	8.47	0.901		6.9	7.5	108.3	
B-A	0.45	5.26	0.085		0.1	0.1	1.4	
C-A	3.62							
C-B	3.48	8.96	0.388		0.6	0.6	9.4	
A-B	0.37							
A-C	11.13							

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)
08.45-09.00								
B-C	7.63	8.47	0.901		7.5	7.8	114.4	
B-A	0.45	5.26	0.085		0.1	0.1	1.4	
C-A	3.62							
C-B	3.48	8.96	0.388		0.6	0.6	9.5	
A-B	0.37							
A-C	11.13							

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	5.9	*****
08.30	6.9	*****
08.45	7.5	*****
09.00	7.8	*****

QUEUE FOR STREAM B-A

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

QUEUE FOR STREAM C-B

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-C	458.0	385.7	0.84
B-A	26.8	5.5	0.20
C-A	217.4		
C-B	208.6	37.1	0.18
A-B	22.0		
A-C	668.0		
ALL	1600.8	428.2	0.27

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

END OF JOB  
 \*\*\*\*\* PICADY 4 run completed.  
 ===== end of file =====

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

PICADY 4.1 ANALYSIS PROGRAM  
RELEASE 4.0 (NOV 2003)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT  
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-----

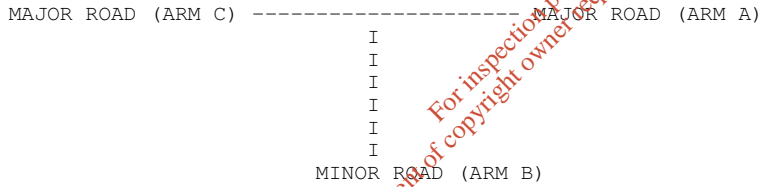
THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-  
"p:\Projects\2005 Files\05.186 Waste Management Facility at Carranstown\calcs\  
N2\_R152 Post Development 230106.vpi"  
(drive-on-the-left ) at 11:01:56 on Tuesday, 24 January 2006

RUN TITLE  
\*\*\*\*\*  
N2/R152 Junction Post Development

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

INPUT DATA  
-----



ARM A IS N2 North  
ARM B IS R152  
ARM C IS N2 South

STREAM LABELLING CONVENTION  
-----

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

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-----  
 GEOMETRIC DATA  
 -----

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 10.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.00 M.	I
I	- VISIBILITY	I	(VC-B) 250.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 200.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 200.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 3.00 M.	I

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

TIME PERIOD BEGINS 08.00 AND ENDS 09.00

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

DEMAND FLOW PROFILES ARE INPUT DIRECTLY.

FLOW DATA USED IN THE ESTIMATION OF TURNING PROPORTIONS (VEH/MIN)

I	TIME INTERVAL	I	ARM A	I	ARM B	I	ARM C	I
I	08.00 - 08.15	I		I		I		I
I	ENTRY	I	11.5	I	8.1	I	7.2	I
I	EXIT	I	3.9	I	3.8	I	19.1	I
I	08.15 - 08.30	I		I		I		I
I	ENTRY	I	11.5	I	8.1	I	7.2	I
I	EXIT	I	3.9	I	3.8	I	19.1	I
I	08.30 - 08.45	I		I		I		I
I	ENTRY	I	11.5	I	8.1	I	7.2	I
I	EXIT	I	3.9	I	3.8	I	19.1	I
I	08.45 - 09.00	I		I		I		I
I	ENTRY	I	11.5	I	8.1	I	7.2	I
I	EXIT	I	3.9	I	3.8	I	19.1	I

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I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	08.00 - 09.00	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.032	I	0.968	I
I		I		I	( 0.0)	I	( 10.0)	I	( 10.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.055	I	0.000	I	0.945	I
I		I		I	( 10.0)	I	( 0.0)	I	( 10.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.507	I	0.493	I	0.000	I
I		I		I	( 10.0)	I	( 10.0)	I	( 0.0)	I
I		I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM ENTRY AND EXIT FLOWS

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

I	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)	I
I	08.00-08.15									I
I	B-C	7.68	8.47	0.907		0.0	6.1	67.7		I
I	B-A	0.45	5.25	0.085		0.0	0.1	1.3		I
I	C-A	3.62								I
I	C-B	3.53	8.96	0.393		0.0	0.6	9.0		I
I	A-B	0.37								I
I	A-C	11.13								I

I	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)	I
I	08.15-08.30									I
I	B-C	7.68	8.47	0.907		6.1	7.2	101.2		I
I	B-A	0.45	5.24	0.085		0.1	0.1	1.4		I
I	C-A	3.62								I
I	C-B	3.53	8.96	0.393		0.6	0.6	9.6		I
I	A-B	0.37								I
I	A-C	11.13								I

I	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)	I
I	08.30-08.45									I
I	B-C	7.68	8.47	0.907		7.2	7.8	113.4		I
I	B-A	0.45	5.24	0.085		0.1	0.1	1.4		I
I	C-A	3.62								I
I	C-B	3.53	8.96	0.393		0.6	0.6	9.6		I
I	A-B	0.37								I
I	A-C	11.13								I

I	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)	I
I	08.45-09.00									I
I	B-C	7.68	8.47	0.907		7.8	8.2	120.4		I
I	B-A	0.45	5.24	0.085		0.1	0.1	1.4		I
I	C-A	3.62								I
I	C-B	3.53	8.96	0.393		0.6	0.6	9.7		I
I	A-B	0.37								I
I	A-C	11.13								I

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QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	6.1	*****
08.30	7.2	*****
08.45	7.8	*****
09.00	8.2	*****

QUEUE FOR STREAM B-A

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

-----  
 QUEUE FOR STREAM C-B  
 -----

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

-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-C	I	461.1	461.1	I	402.8	0.87	I	406.7	0.88	I
I	B-A	I	26.7	26.7	I	5.5	0.20	I	5.5	0.20	I
I	C-A	I	217.5	217.5	I			I			I
I	C-B	I	211.5	211.5	I	37.9	0.18	I	37.9	0.18	I
I	A-B	I	22.3	22.3	I			I			I
I	A-C	I	667.7	667.7	I			I			I
I	ALL	I	1606.8	1606.8	I	446.1	0.28	I	450.1	0.28	I

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

END OF JOB  
 \*\*\*\*\* PICADY 4 run completed.  
 ===== end of file =====

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**Appendix 13.5**  
**R152 Photographs**

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**Photograph No 1**  
N2/R152 Junction at  
Kilmoon Cross  
Looking North on N2



**Photograph No 2**  
R152 at Kilmoon Cross  
Looking East  
(km 0)



**Photograph No 3**  
Bunnan  
Looking North  
(km 1.3)





**Photograph No 4**  
Hawkinstown Junction  
Looking South  
(km 2.2)



**Photograph No 5**  
Hawkinstown Junction  
Looking North  
(km 2.2)



**Photograph No 6**  
Gilliamstown  
Looking South  
(km 3.8)



**Photograph No 7**  
Gilliamstown Junction  
Looking North



**Photograph No 8**  
Riverstown  
Looking South  
(km 4.6)



**Photograph No 9**  
Riverstown  
Looking North



**Photograph No 10**  
Scatternagh  
Looking South  
(km 5.4)



**Photograph No 11**  
Scatternagh  
Looking North  
(7.7m wide road)



**Photograph No 12**  
Scatternagh  
Looking North



**Photograph No 13**  
Boolies Little Junction  
Looking South  
(km 6.7)



**Photograph No 14**  
Boolies Little Junction  
Looking North



**Photograph No 15**  
Boolies Little Junction  
Looking South  
(km 7.0)



**Photograph No 16**  
Boolies Little  
Looking South



**Photograph No 17**  
Keenogue  
Looking South  
(km 8.6)



**Photograph No 18**  
Keenogue  
Looking North



**Photograph No 19**  
Duleek/Prioryland  
Looking South  
(km 10.0)



**Photograph No 20**  
Duleek/Prioryland  
Looking North



**Photograph No 21**  
R150 Junction at Duleek  
Looking South  
(km 10.9)



**Photograph No 22**  
R150 Junction at Duleek  
Looking North



**Photograph No 23**  
Carranstown Esso Garage  
Looking South  
(9.5m wide road excluding  
hard shoulder)  
(km 11.7)



**Photograph No 24**  
Carranstown Esso Garage  
Looking North



**Photograph No 25**  
Carranstown  
Football Grounds  
Looking South  
(km 12.0)



**Photograph No 26**  
Carranstown Inn  
Looking North  
(km 12.0)



**Photograph No 27**  
Carranstown  
Looking South  
(km 12.3)





**Photograph No 28**  
Carranstown  
Looking North  
(km 12.3)



**Photograph No 29**  
Carranstown just North of  
proposed site entrance  
Looking South  
(9.5m wide road)  
(km 12.6)



**Photograph No 30**  
Carranstown  
Looking North  
(km 12.6)



**Photograph No 31**  
Carranstown  
Kavanagh Centre  
Looking South  
(km 13.0)



**Photograph No 32**  
Carranstown  
Kavanagh Centre  
Looking North  
(9.0m wide road)  
(km 13.0)



**Photograph No 33**  
Platin  
Looking South  
(km 13.4)



**Photograph No 34**  
Platin  
Looking North  
(8.6m wide road)  
(km 13.4)



**Photograph No 35**  
Irish Cement Platin  
Looking South  
(km 13.9)



**Photograph No 36**  
Irish Cement Platin  
Looking North  
(km 13.9)



**Photograph No 37**  
Just West of M1  
Looking South  
(km 14.7)



**Photograph No 38**  
Approach to M1  
Looking North  
(km 14.7)



**Photograph No 39**  
Realigned R152 at  
M1 Junction approach  
(km 15.0)

**Appendix 13.6**  
**R150 Photographs**

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**Photograph No 50**  
R150 Duleek Main Street  
looking east



**Photograph No 51**  
R150 Duleek Main Street  
looking west



**Photograph No 52**  
R150 looking east at the  
bend at western end of  
Duleek Main Street



**Photograph No 53**  
R150 looking west at the  
bend at western end of  
Duleek Main Street



**Photograph No 54**  
R150 at western end of  
Duleek looking east



**Photograph No 55**  
R150 at western end of  
Duleek looking west



**Photograph No 56**  
R150 looking east at  
Garballagh, 1.5km west of  
Duleek



**Photograph No 57**  
R150 looking west at  
Garballagh, 1.5km west of  
Duleek



**Photograph No 58**  
High quality section of  
R150 at Gaskinstown  
looking east, 2.5km west of  
Duleek





**Photograph No 59**  
High quality section of  
R150 at Gaskinstown  
looking west, 2.5km west of  
Duleek



**Photograph No 60**  
R150 at Mullaghfin looking  
west, 4km west of Duleek



**Photograph No 61**  
N2 / R150 Junction at  
Flemingstown looking north