

Traffic & Transport Assessment

Proposed Large Scale Residential Development, Broomfield West, Midleton, Co. Cork

Castle Rock Homes (Midleton) Ltd

November 2023 **HDC1296/01**

Hegsons Design Consultancy Limited

Dublin I Cork I London I Bedford I Wendover I Buxton I Saint-Denis-Le-Gast

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1 Introduction

1.1 Introduction

Hegsons Design Consultancy Limited were commissioned by Castle Rock Homes (Midleton) Limited to undertake a Traffic & Transport Assessment in support of a planning application for the proposed large scale residential development and creche facility at Broomfield West, Midleton Co Cork.

The proposed development will consists of a large scale residential development consisting of the development of 272 No. residential units, creche and all associated ancillary developments works.

1.2 Consultation Documents

This document has been prepared and takes into consideration the following:

- Cork County Development Plan 2022-2028;
- Sustainable Recreational Development in urban areas (2009);
- Smarter Travel: A Sustainable Transport Future, 2009 – 2020;
- The Transport Infrastructure Ireland (TII) National Roads Authority (NRA) Traffic and Transport Assessment Guidelines May 2014;
- Cork County Council's Design Guide, 'Making Places: A Design Guide for Residential Development';
- The TII NRA Design Manual for Roads and Bridges (DMRB) TA 79/99 Traffic Capacity of Urban Roads;
- TII Publications PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections May 2019
- The Department of Transport, Tourism and Sport (DTTAS) and the Department of Environment, Community and Local Government (DoECLG) Design Manual for Urban Roads and Streets (DMURS) March 2013;
- TII Road Safety Audit GE-STY-01024 December 2017; and
- TII Road Safety Audit Guidelines GE-STY-01027 December 2017.

1.3 Transport & Mobility Assessment

Delivering measures to facilitate and encourage future residents to base their travel patterns on the existing and planned sustainable infrastructure is a key element of the planning and design of the subject site.

To implement the vision of government agencies, planning authorities, transport providers and other stakeholders it is proposed to locate new housing, commercial and employment development within the masterplan area in order to provide the greatest encouragement for future residents, employees and visitors to base their travel patterns on sustainable modes rather than the private car.

The following key principles should underpin the transport and mobility strategy of the site include:

- Exploit the potential for users of the area to achieve high levels of modal shift away from the private car in favour of more sustainable modes of transport. High standards of access and mobility will add to the quality of life for users of the area;

- Support the achievement of high levels of modal shift by collaborating to support use of sustainable modes of travel by cycling, walking and public transport;

- Provide direct and convenient access to the town centre, schools, etc by sustainable modes of transport;

- Ensure that the maximum number of new houses have safe and convenient access to facilities within 15-20 minute cycle / walk of the development area and key transport links; and

- Ensure the primary role of the public realm as a network of streets and open spaces that enable a successful and vibrant public life.

The site layout will be prepared following detailed consultation of the Sustainable Recreational Development in Urban Areas (2009), the Urban Design Manual and the Design Manual for Urban Roads and Streets (DMURS) and the relevant sections of the TII Road Safety Audit GE-STY-01024 December 2017 and TII Road Safety Audit Guidelines GE-STY-01027 December 2017.

Furthermore, the layout has taken note of the policies an objective set out in the Cork County Development Plan 2022-2028 and the proposal has regard to Cork County Council's Design Guide, 'Making Places: A Design Guide for Residential Development'.

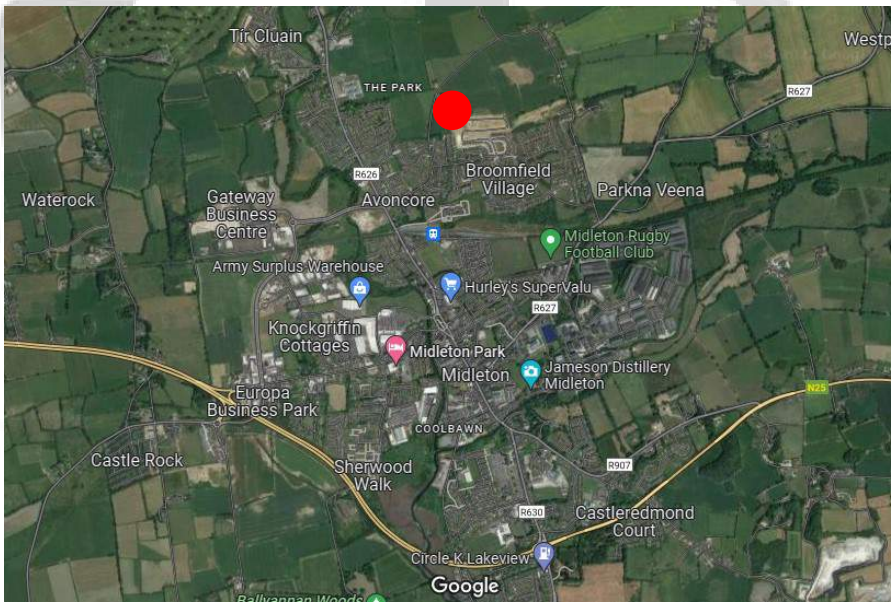
2 Existing Environment

2.1 Site Location

The subject site is located approximately 1.3km from the town of Midleton on the northern site of the town, and it abuts the substantially complete Blossom Hill Housing development being carried out by Castle Rock Homes (Midleton) Ltd.

Midleton is a busy Cork County Town with a rapidly growing population and sits at the end of the Cork-Midleton rail line and along the N25 East Parkway. In the context of the town the site would be considered elevated and is accessed via established routes through the established residential area of Broomfield, Midleton.

The subject site is c. 8.273ha and located at Broomfield Midleton, Co. Cork. The site is located to the north of Midelton town and to the east of the R626. The site is bound by Broomfield Village to the south and agricultural lands to the east. The subject site is bound on the north and eastern side by the L-7630 Broomfield Road and the Midleton Water Treatment Plant.



Source: Hegsons Design Consultancy Ltd / Google Maps

Site Location

Figure 2.1: Site Location

2.2 Local Road Network

N25 National Road

National road which links the development site with Cork City Centre via the N8 in the west with Rosslare Harbour in the east via Waterford. The road generally runs in an east to west direction and is a dual carriageway between the interchange with the N8 and Lake View Roundabout in the south. The two main junctions from the N25 that serve Midleton are Junction 5 at Knockgriffin (in the west) and the Lake View Roundabout (in the south). To the east of Lake View Roundabout, the N25 is a single carriageway road. There are currently delays on the N25 during peak

periods near Midleton, particularly on the westbound approach to Lake View Roundabout.

R626 Regional Road

The R626 runs in a north to south direction and provides a link between Midleton Gyratory in the south and the M8 motorway in the north via the R639. The road is single carriageway and is located to the west of the subject site. The road is generally heavily trafficked during the AM and PM commuter peak periods.

R627 Regional Road

The R627 is located to the east of the development and generally runs in a north-east to south-west direction. The R627 runs between Midleton Town Centre in the south-west to Tallow in the north-east. In the southwest, near the junction with the R907, the road is narrow and constrained by buildings at both sides of the road and by parked cars on the north-west side of the road. Beyond the build-up areas, the R627 is provided to a distributor road standard.

R907 Regional Road

The R907 runs from the Midleton Gyratory in the town centre to the N25 in the east. The R907 is provided to a good a standard with no obvious constraints. The junction with the N25 is currently priority controlled with a right-turn ghost island on the N25. A diverge lane is provided for left-turners.

Northern Relief Road (Phase 1)

The Northern Relief Road is located to the south / east of the development and provides a link between the R626 in the east and the N25 in the south via the Knockgriffin junction. The road provides access to the Nordic Enterprise Park which is located at the southern boundary of the development. Signal-controlled crossroads are provided at the junction with the R626 and Avoncore Place complete with pedestrian facilities.

L-7630 Avoncore Place

Avoncore Place forms an arm of the signal-controlled junction at the R626 / Northern Relief Road. The road runs in a north-east to southwest direction and provides access to the Broomfield residential area. The road is subject to a 50kph speed limit.

To the north, the road becomes L-7630 Broomfield Road which has recently been upgraded form a rural in nature road which provided local access to residential properties, to a 5.5m – 7.0m wide road with a 2.0m wide footpath along the western side. The road, which has recently been upgraded as part of the new Park Hill View residential development (Council Ref:18/7236), is traffic calmed and is subject to an 80kph speed limit at present.

L-9425-1 Broomfield Crescent

Broomfield Crescent provides a link between Avoncore Place and the R627 (via Meadowlands Lane). The road acts as a spine road through the Broomfield Village residential development. Direct frontage access from the road takes place in the west near the junction with Avoncore Place. The road is subject to a 50kph speed limit.




Photographs 1 & 2: L-7630 Broomfield Road adjacent to the Subject Site

2.3 Existing Access

Access to the subject site can currently only be achieved via L-7630 Broomfield Road which runs along the western boundary of the site and connects to the R626 via Avoncore Place.

The site is currently used as agricultural land and generates limited if any vehicle trips on a daily basis. No observation was made of other vehicles entering or exiting the site during the site visits. The analysis will therefore not include any existing traffic associated with the subject sites current land use.

2.4 Baseline Traffic Conditions

Site observations and traffic counts will be undertaken within the study area in order to determine the level of traffic using the road network in close proximity to the subject site. 12-hour peak traffic flows have been derived from manual traffic counts undertaken along with ATC data collection in 2023.

The traffic surveys were undertaken on Wednesday 15th March 2023 at the following locations:

Manual Traffic Counts (12 hours: 7am – 7pm):

- Location No. 1 – R626 / Northern Relief Road / L-7630 Avoncore Place
- Location No. 2 – L-7630 Avoncore Place / L-9425-1 Broomfield Crescent
- Location No. 3 – L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane
- Location No. 4 – R627 / L-7630-0 Meadowlands
- Location No. 5 – L-9425-1 Broomfield Crescent / Meadowlands Estate

ATC:

- Location ATC No. 6 – L-7630 Broomfield Road (North of Midleton Water Treatment Plant)



Figure 2.2: Proposed Traffic Count Locations within the Study Area

Observations were also made in relation to the traffic flow along the road for the same time periods. Details of the traffic counts are contained in **Appendix B**.

A summary of the average weekday peak hourly traffic entry flows into the roundabouts are presented in Tables 2.1 – 2.6.

Table 2.1 – Summary of AM & PM Peak Hour Traffic Counts at the R626 / Northern Relief Road / L-7630 Avoncore Place Junction

R626/Northern Relief Road/L-7630 Avoncore Place Junction					
Peak Hour Entry Flows (vehicles / hour)					
Time Period	R626 (North)	L-7630 Avonmore Place (East)	R 626 (South)	Northern Relief Road (West)	Total Junction Volume
AM Peak Hour (0800-0900)	712	497	337	302	1,848
PM Peak Hour (1715-1815)	385	213	401	449	1,448

Source: IDOSA / Hegsons Design Consultancy Ltd – March 2023

Table 2.2 – Summary of AM & PM Peak Hour Traffic Counts at the L-7630 Avoncore Place / L-9425-1 Broomfield Crescent Junction

L-7630 Avoncore Place / L-9425-1 Broomfield Crescent Junction					
Peak Hour Entry Flows (vehicles / hour)					
Time Period	L-7630 Broomfield Rd (North)	L-9425-1 Broomfield Crescent (East)	L-7630 Broomfield Road (South)	Brookdale (West)	Total Junction Volume
AM Peak Hour (0845-0900)	11	413	196	41	661
PM Peak Hour (1730-1830)	8	175	306	22	511

Source: IDOSA / Hegsons Design Consultancy Ltd – March 2023

Table 2.3 – Summary of AM & PM Peak Hour Traffic Counts at the L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane Junction

L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane Junction				
Peak Hour Entry Flows (vehicles / hour)				
Time Period	L-7630-0 Meadowlands Lane (North)	L-9425-1 Broomfield Crescent / (East)	L-7630-0 Meadowlands Lane (South)	Total Junction Volume
AM Peak Hour (0800-0900)	33	207	210	450
PM Peak Hour (1615-1715)	22	167	141	330

Source: IDOSA / Hegsons Design Consultancy Ltd – March 2023

Table 2.4 – Summary of AM & PM Peak Hour Traffic Counts at the R627 / L-7630-0 Meadowlands Lane Junction

R627 / L-7630-0 Meadowlands Junction				
Peak Hour Entry Flows (vehicles / hour)				
Time Period	L-7630-0 Meadowlands Lane (North)	R627 (East)	R627 (West)	Total Junction Volume
AM Peak Hour (0800-0900)	223	360	177	760
PM Peak Hour (1615-1715)	146	122	285	553

Source: IDOSA / Hegsons Design Consultancy Ltd – March 2023

Table 2.5 – Summary of AM & PM Peak Hour Traffic Counts at the L-9425-1 Broomfield Crescent / Meadowlands Junction

L-9425-1 Broomfield Crescent / Meadowlands Junction				
Peak Hour Entry Flows (vehicles / hour)				
Time Period	L-9425-1 Broomfield Crescent (North)	Meadowlands Estate (East)	L-9425-1 Broomfield Crescent (South)	Total Junction Volume
AM Peak Hour (0800-0900)	173	53	285	511
PM Peak Hour (1730-1830)	194	33	138	365

Source: IDOSA / Hegsons Design Consultancy Ltd – March 2023

Table 2.6 – Summary of ATC Daily Traffic Counts along the L-7630 Broomfield Road

ATC Peak Hour Traffic Counts along the L-7630 Broomfield Road			
Peak Hour Entry Flows (vehicles / hour)			
Time Period	L-7630 Broomfield Road (North)	L-7630 Broomfield Road (South)	Total Volume / Average Speed
Daily Traffic Volumes	321	260	581
Average Speed	32.6 kph	33.6 kph	33.1 kph
85% Speed	44.0 kph	44.2 kph	44.1 kph

Source: IDOSA / Hegsons Design Consultancy Ltd – March 2023

2.5 Existing Sustainable Transport Provisions

2.5.1 Existing Public Transport Network

Bus Services:
Midleton is well connected by both bus and rail to Cork City. There are five bus services which serve Midleton:

- 40 Cork – Cork-Waterford
  - Service operates hourly in each direction between 0900 and 2200; however, it only picks up passengers in the eastbound direction, towards Waterford (other services take passengers towards Cork).

- 240 Cork – Ballycotton:
  - Service operates three buses from Midleton to Cork between 07:00 – 09:00 and operates at irregular intervals throughout the day.

- 241 Cork –Trabolgan:
  - Services operates two buses from Midleton to Cork between 07:00 – 08:00 and at irregular intervals throughout the day.

- 260 Cork – Ardmore:
  - Service provides three buses to Cork between 08:00 – 09:00; one of which provides a non-stop service to Cork from Midleton. The timetabled journey time on this direct bus to Cork is approximately 25 minutes.

- 261 Cork – Ballinacurra:
  - Service provides seven buses to Cork between the hours of 07:00 – 09:00.

Each of the services above run along Cork Road and route south towards Midleton Town Centre and link with Carrigtwohill to the west. At present, there is no bus service to the north of the Midleton Gyratory. The nearest bus stops are located on the R907 by the gyratory and the Cork Road; both of which are a 1.5km and 1.8km walking distance from the subject site, respectively.

Rail Services:

A total of 25 trains operates daily each way between Cork and Midleton.

Services run at 30-minute intervals during peak periods and every hour off-peak from Monday to Friday.

A total of 280-300 car parking spaces are provided at the station as well as capacity to accommodate around 20 – 30 bicycles. The existing Midleton rail station is located between 750m and 1,250m from the subject site and is easily commutable by foot, cycle or car.

2.6 Existing Pedestrian and Cycle Facilities

The Government's sustainable development strategy, Sustainable Development – A Strategy for Ireland, identifies the increased provision of safer facilities for pedestrians and cyclists, including the provision of dedicated cycle lanes as a key priority. In addition, Smarter Travel: A Sustainable Transport Future 2009 – 2020, sets out as some of its key goals that future population and employment growth will predominantly take place in sustainable compact forms, that the future extent of the total share of car commuting will drop from 65% to 45% and that alternatives such as walking, cycling and public transport will be supported and provided to the extent that these will rise to 55% of total commuter journeys to work.

Pedestrian Network

Most of the main roads within Midleton have footways on at least one side of the road. Pedestrian crossing facilities are integrated into the existing road network at the R626 junction by way of the signal controlled crossings. There are adequate footpaths within Broomfield Village and the adjoining road network to accommodate the current pedestrian demand. Footpath are provided along Avoncore Place up to the southern edge of the subject site. No footpaths are provided at present on the L-7630 Broomfield Road along the frontage of the site.

Cycling Network

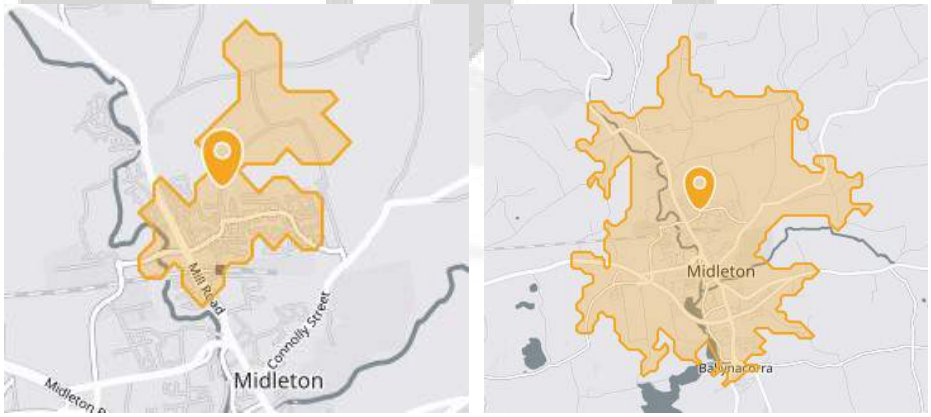
The spine road which runs through the new residential area of Broomfield Village (Broomfield Crescent) to the south of the subject site provides dedicated cycleways of a good standard adjacent to the footways on both sides of the road. Cycleways are provided on both sides of the Northern Relief Road which runs from the N25 junction at Knockgriffin to the R626. A cycleway is also provided on the east / north side of the access road to the Nordic Enterprise Park which will provide access to the development site.

The provision of cycleways on the roads help to encourage trips by bicycle, particularly in the future and are currently underutilised. A fully sheltered bicycle parking facility is currently provided at Midleton Railway Station which has the capacity to accommodate approximately 20 – 30 bicycles.

It is recognised that walking and cycling are the most important mode at the local level and offers the greatest potential to replace short car trips, particularly those around 10-15 minutes cycle time (2-3km) and 30-minute walking time (4-5km) respectively.

Pedestrian & Cycle Isochrones

A pedestrian and cycling isochrone plans have been produced to identify the proximity of the subject site to the surrounding area. Figure 2.3 illustrates the isochrone plan for the area with walking and cycling (15 minutes) distance to the subject site. It can be seen that access can be gained to the local facilities, rail station, schools and nurseries.



Source: Created with TravelTime API: http://www.traveltimeplatform.com/

Figure 2.3: Pedestrian (Left) and Cycle (Right) 15-minute isochrone plan for the subject site

2.7 Existing Modal Split for Midelton

To establish the existing mode-share for the study area, a review of the mode share data from the 2016 census was undertaken for Midleton. At the time of writing, only the 2016 data was available.

Table 2.1 outlines the share of each mode for all trips to work and education from Midleton. To provide some context, these mode-share figures have been compared to those of Cork County and the Cork City + County average.

Table 2.1 – Census 2016 - Mode of Travel

Mode of Travel	Cork City & County Modal Split (%)	Cork County Modal Split (%)	Midleton Modal Split (%)
On Foot	14.2%	9.4%	12.2%
Bicycle	1.4%	0.7%	1.2%
Bus, Minibus or coach	8.7%	7.9%	4.9%
Train, DART or LUAS	0.7%	0.8%	3.7%
Motorcycle or scooter	0.3%	0.2%	0.3%
Car Driver	51.9%	56.0%	52.1%
Car Passenger	22.9%	24.9%	25.6%

Source: CSO Census 2016

The analysis indicates that, in terms of walking, the study area is broadly in line with the City + County average while it slightly outperforms the County average. In terms of public transport, the study area has a similar total mode share to both averages but with a greater rail split which is to be expected given its proximity to the station. The car driver and car passenger mode shares (77.7%) are broadly in line with County averages. These high car mode shares are reflective of the dispersed nature of residential developments and their distance from commercial, educational and employment centres.

3 Characteristics of the Proposed Development

3.1 Proposed Development

The subject site is c. 8.273 ha and located at Broomfield West, Midleton, Co. Cork. The site is located to the north of Midelton town and to the east of the R626. The site is bound by Broomfield Village to the south and agricultural lands to the east. The subject site is bound on the north and eastern side by the L-7630 Broomfield Road and the Midleton Water Treatment Plant.

The proposed development will consists of a large scale residential development consisting of the development of 272 No. residential units, creche, community use and all associated ancillary developments works at Broomfield West, Midleton, Co. Cork.

The proposal for the 272 No dwellings units is for a mix of 4-bedroom semi-detached dwellings, 3-bedroom semi-detached dwellings, 2, 3 & 4 bedroom terraced dwellings, 2, 3 & 4 bedroom terraced mews style dwellings, 2 bed duplexes and 1 bed apartments.

The proposed development layout has been prepared following detailed consultation of the Sustainable Recreational Development in urban areas (2009), the Urban Design Manual and the Design Manual for Urban Roads and Streets (DMURS).

Drawings illustrating the development and site layout has been prepared by Brian O'Kennedy Architects and are contained in **Appendix A**.

3.2 Car and Cycle Parking Provisions and Layout

3.2.1 Car Parking Provision

Surface level car parking spaces are to be provided within the proposed development. It is proposed to provide a total of 386 car parking spaces on site.

Based on the Cork County Development Plan 2022-2028, car parking standards for new development (maximum standards) as extracted from Table 12.6 are as follows:

- Dwelling Houses: 2 car parking spaces per unit
- Apartments: 1.25 spaces per unit
- Crèches: 1 space per 3 staff + 1 space per 10 children

The Cork County Development Plan 2022-2028 also indicates the following:

> *'A reduced car parking provision may be acceptable where the planning authority are satisfied that good public transport links are already available or planned and/or a Transport Mobility Plan for the development demonstrates that a high percentage of modal shift in favour of the sustainable modes will be achieved through the development.'*

It should also be noted that 'The Sustainable Urban Housing: Design Standards for New Apartments' suggests reduced car parking requirements for development adjacent to existing and future rail stations and minimum requirements in peripheral / or less accessible urban locations, as follows:

> *"The quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria.*
>
> *4) Central and/or Accessible Urban Locations In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such rail and bus stations located in close proximity. These locations are most likely to be in cities, especially in or adjacent to (i.e. within 15 minutes walking distance of) city centres or centrally located employment locations. This includes 10 minutes walking distance of DART, commuter rail or Luas stops or within 5 minutes walking distance of high frequency (min 10 minute peak hour frequency) bus services.*
>
> *5) Intermediate Urban Locations In suburban/urban locations served by public transport or close to town centres or employment areas and particularly for housing schemes with more than 45 dwellings per hectare net (18 per acre), planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard.*
>
> *6) Peripheral and/or Less Accessible Urban Locations As a benchmark guideline for apartments in relatively peripheral or less accessible urban locations, one car parking space per unit, together with an element of visitor parking, such as one space for every 3-4 apartments, should generally be required. For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure, where possible, the provision of an appropriate number of drop off, service, visitor parking spaces and parking for the mobility impaired. Provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles and cycle parking and secure storage. It is also a requirement to demonstrate specific measures that enable car parking provision to be reduced or avoided."*

It is considered that this proposed development does not fall within these categories and as such consideration would be given to a reduced overall car parking standard and the application of an appropriate maximum car parking standard.

National policy seeks to reduce car use and a reduction in car parking provision will aid this policy. There is excellent bicycle and pedestrian provision within and to / from the site and this will further encourage the use of more sustainable modes of transport.

A summary of the car parking provision is outlined below and is shown on the Brian O'Kennedy Architects Drawings:

Private Car Parking Spaces:

4-bedroom Dwellings (22 No.)	44 spaces
3-bedroom Dwellings (94 No.)	188 spaces
2-bedroom Dwellings (96 No.)	96 spaces
2-bedroom Duplex Apartments (26 No.)	26 spaces
1-bedroom Duplex Apartments (26 No.)	0 spaces
1-bedroom Apartments (Roadside) (8 No.)	0 spaces

Roadside Car Parking Spaces:

Public Spaces	10 spaces
Roadside 'Resident Only Spaces'	15 spaces
Creche / Community Spaces	7 spaces

A total of 238 No. of the dwellings in this proposal has a designated private parking space provided directly in front / close to their dwelling. On street parking is provided across the site for 26 No. remaining units, where some of the apartments (in particular the 1-bed apartments) are proposed to be car-free. Each dwelling will include an EV charge point directly outside their dwelling.

The size of all the parking spaces shall be provided in accordance with the Cork County Development Plan 2022-2028 and the design, layout and location guidance set out in the DoEHLG Urban Design Manual Best Practice Guide. The parking areas will be durable, and surfaced using permeable materials that allow water to percolate through to the ground beneath (sustainable urban drainage). The purpose of this is to reduce the speed of rainwater runoff and thereby reduce flooding risk further downstream – this is particularly important on a hillside.

The proposals include a mixture of on and off-street parking including shared parking areas to enable residents to landscape at least part of their front gardens. the provision of greenspace or street tree planting to soften the appearance of hard space and contribute to the sustainable urban drainage.

Footways will be level and accessible for wheelchair users and they will not undulate for driveways. Instead, ramps will be provided from the carriageway to footway level leaving at least 2m of flat footway surface in accordance with accessibility best practice.

It is considered that both the overall car parking provision and that allocated to the apartment buildings is appropriate for this development in this location. On-street parking will allow for communal use to maximize efficiency and accommodate visitors at various peak and off-peak times.

3.2.2 Cycle Parking Provision

Secure cycle parking spaces will be accommodated in a convenient place at the front of each dwellinghouse, and it will be either integral to the main building or in a secure purpose shared or individual built cycle store that also accommodates panniers and wet weather gear. Either way, it is essential that cycling is as easy and convenient as possible: putting cycles in storage units that are complex or

difficult to access, or at the rear of the property would undermine prospects for cycling taking a significant modal share. It is anticipated that this will increase the attractiveness of cycling as a mode of transport for visitors and residents of the proposed development.

Based on the Cork County Development Plan 2022-2028, cycle parking standards for new development (maximum standards) as extracted from Table 12.6 are as follows:

- Dwelling Houses: 1 long stay parking space per unit
  1 short stay (visitor) parking space per 5 units
- Apartments: 1 long stay parking space per bedroom
  1 short stay (visitor) parking space per 2 units
- Childcare Service: 1 long stay parking space per 5 staff
  1 short stay (visitor) parking space per 10 children

The development as proposed provides a minimum of 388 secure bicycle parking spaces within the various dwellings / apartment and childcare facilities and a further 20 public / visitor spaces. This provision is significantly in excess of the required bicycle parking standards (c. 350 cycle parking spaces required) and will promote sustainable transport for future residents of the development.

A summary of the car parking provision is outlined below and is shown on the Brian O'Kennedy Architects Drawings:

Private Bicycle Parking Spaces:

4-bedroom Dwellings (22 No.)	Min. 44 spaces
3-bedroom Dwellings (94 No.)	Min. 188 spaces
2-bedroom Dwellings (96 No.)	Min. 96 spaces
2-bedroom Duplex Apartments (26 No.)	26 spaces
1-bedroom Duplex Apartments (26 No.)	26 spaces
1-bedroom Apartments (Roadside) (8 No.)	8 spaces

Public Bicycle Parking Spaces:

Total Public Spaces (within site boundary)	44 spaces

The provision of additional cycle parking spaces over and above the County Development Plan standards will enhance the sustainable transport credentials of the proposed development and will encourage cycle as a key mode of travel especially with the existing cycling infrastructure the R626 and the Northern Relief Road and Broomfield Crescent and within the wider town area.

The site also makes the provision for shared e-cargo-bike storage. E-cargo-bikes are becoming increasingly important as a way of enabling families to cycle together with young children, or as a means of carrying bulky items including shopping.

3.2.3 Electric Vehicle Charging Spaces

There is a national target for 10% of all road vehicles to be powered by electricity. To meet this objective, developments that provide ten or more parking spaces are required to provide at least one parking space equipped with a functioning EV charging point and at least 10% of spaces shall be located conveniently to allow for future fit out of a charging point.

The EV infrastructure shall be in accordance with Council's Detailed Standards for EV Charging Infrastructure. Where houses are provided with private, off-street parking, the houses will include ducting to allow homeowners to install EV charging points as required. This will ensure that the proposed development is compliant with the Cork County Development Plan 2022-2028 in relation to the provision of EV charging points.

3.3 Internal Site Layout & Access Arrangement

All new roads layouts were designed in accordance with the Design Manual for Urban Roads and Streets 2019 (DMURS). DMURS aims to aid the design of safer, more attractive and vibrant streets which will generate and sustain communities and neighbourhoods. As well as cars and other vehicles this encompasses pedestrians, cyclists and those using public transport. Research has shown that narrow carriageways are one of the most effective measures of traffic calming. This has been factored into the design of the development.

The hierarchy of the streets on the site are all local in nature which reflects the end destination typology of the site. The design speed for the site is 30 kph, and appropriate speed restriction signs will be set out at the site entrance.

The access roads within the site are at least 5.5 metres wide with adequate radii provided to accommodate general traffic movements and refuse vehicle / fire vehicle movements. Details of the Autotrack analysis for the site is contained in Appendix C.

The proposed development provides a number of speed tables and crossing points within the site and along the link road at regular intervals which will ensure vehicle speeds within the scheme are low and will ensure a safe environment for pedestrians and cyclists.

A number of pedestrian and cycle route access points are proposed throughout the site linking significant catchment areas of the site. The permeability of the site is enhanced through the provision of these access points.

3.3.1 Vehicular Access Arrangements

Access to the existing site is via 4 proposed access points off the L-7630 Broomfield Road. The accesses will take the form of priority junction and provide access to various numbers of residential dwellings. The proposed accesses will accommodate all vehicular, pedestrian and cycle movements to and from the proposed development.

Southern Lands:

- Proposed Access No. 1: South Access – 52 dwellings, Creche & community use
- Proposed Access No. 2: North Access – 74 dwellings

Northern Lands:

- Proposed Accesses No. 3 & No. 4: – 146 dwellings

The proposed accessed area currently situated within an 80km/h speed limit.

In light of the sightlines provided for other developments along the road (Proposed Park View Hill Development - Council Ref:18/7236) based on Cork County Council requirements 90m sightlines would be proposed. However, as the road has been realigned and widened, the proposed extension of the urban environment through the development of the lands for residential use suggests that the speed limit for the road should change. Therefore, the application of the DMURS standards, for a road with design speed of 50km/h is more appropriate – thus requiring a sightline requirement of 45m in both directions. As the newly aligned L-7630 Broomfield Road has a solid white line and is also traffic calmed, there is a constraint on overtaking in the area so the visibility splay from the southern access can be taken to the centre lines of the road as outlined in DMURS. Details of the visibility sightlines, which only impact lands within the ownership of the applicant are containing in Appendix C.

SSD STANDARDS

Design Speed (km/h)	SSD Standard (metres)
10	7
20	14
30	23
40	33
50	45
60	59

Forward Visibility

Design Speed (km/h)	SSD Standard (metres)
10	8
20	15
30	24
40	36
50	49
60	65

Forward Visibility on Bus Routes

Table 4.2: Reduced SSD standards for application within cities towns and villages. Reduced forward visibility increases driver caution and reduces vehicle speeds.

Source: The Department of Transport, Tourism and Sport (DTTAS) and the Department of Environment, Community and Local Government (DoECLG) Publication: Design Manual for Urban Roads and Streets (DMURS) 2019 – Table 4.2

The proposed access junctions will have adequate junction radii provided either side to accommodate general traffic movements and deliveries and they will be able to enter and egress the development in a forward gear so that no reversing onto the public road will be experienced. All the internal design features are in accordance with best practice, and as detailed in the Cork County Council design guidelines and the Departments Design Manual for Urban Streets and Roads (DMURS).

3.4 L-7630 Broomfield Road

As part of the proposed works, it is proposed to widen the L-7630 Broomfield Road along the extent of the site. The development will include lands outside the applicant's ownership which will be required to allow the development to provide a 2.0m footpath on the eastern side of the road.

It should be noted that the permitted development Park Hill View development (Council Ref: 18/7236) on the west side of the L-7630 Broomfield Road includes road widening to 6 metres and a footpath on the west side of the improved road. The improvement of the L-7630 Broomfield Road would be along the proposed site boundary. This road and footpath has been constructed and is open to traffic.

It is also proposed to extend the 50kph speed limit along the road for the full extent of the site boundary. Due to the proposed development and Park Hill View development, which is currently under construction, the urban area will extend along the road and the reduction in speed limit from 80kph to 50kph is recommended.

3.4.1 Pedestrian and Cycle Connectivity

It is also proposed to provide a raised crossing point of the L-7630 Broomfield Road just south of the proposed vehicular access to the proposed Creche and residential dwellings. The location of the new proposed pedestrian crossing is indicated in Figure 3.1.

The crossing would be proposed in order to enhance and ensure connectivity via the existing 2.0m wide footpath on the western side of the L-7630 Broomfield Road from the proposed development to Midleton Rail Station and onwards to the town centre.

It should be noted that a new pedestrian crossing was provided on the northern arm of the L-7630 Broomfield Road / Broomfield Crescent junction. As part of the improvement to the junction, the provision of a grass verge on the northern side of Broomfield Crescent has directed pedestrian to use the new pedestrian crossing and walk along the footpath on the western side of the road toward the Railway Station and Town Centre. In line with this approach, the new proposed crossing at the southern western boundary of the subject site, will encourage road user to cross the road at that point rather than undertaking unsafe pedestrian movements along the narrow footpath in front of existing dwelling to the south of the subject site and across Broomfield Crescent, where no dedicated crossing point is provided.

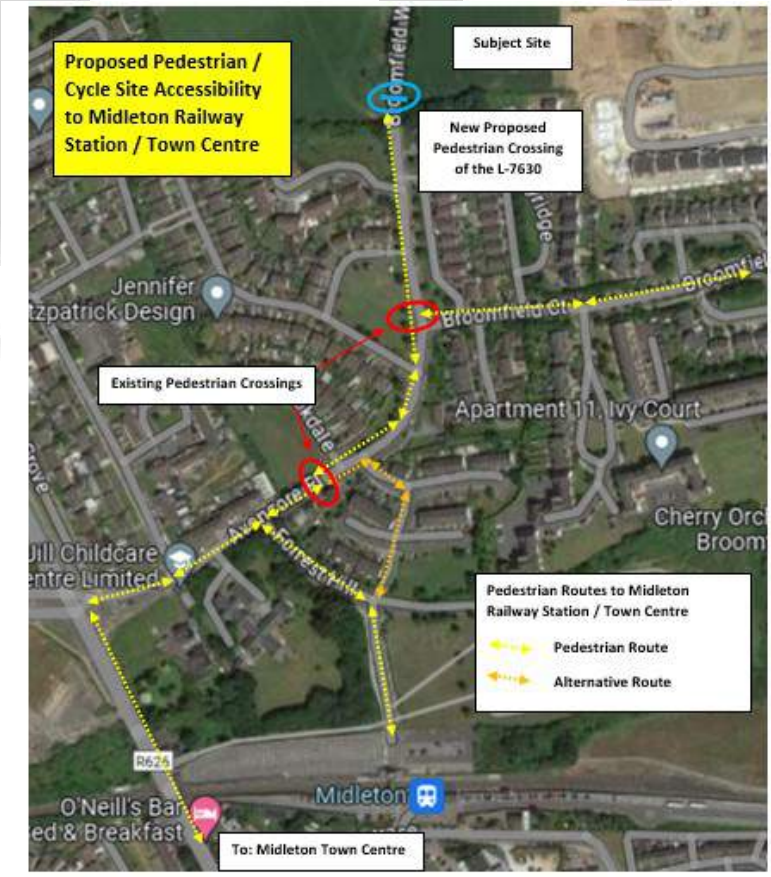


Figure 3.1: Pedestrian & Cycle Accessibility Route to Midleton Railway Station and Town Centre along the L-7630 from the subject site

3.5 Stage 1 / 2 Road Safety Audit

A Stage 1 / 2 Road Safety Audit has been prepared to support the planning submission as it is proposed to provide new access junctions and the widening of the existing public road which and will have safety implication on the adjoining road network.

The safety implication and the audit will incorporate the internal site layout along with the proposed access arrangement onto the public road. Any proposed recommendations in relation to the existing and proposed road features on or along the carriageway identified by the Audit have been included within the final site design.

The Road Safety Audit was carried out in the context of the procedures provided in the relevant sections of the TII Road Safety Audit GE-STY-01024 December 2017 and TII Road Safety Audit Guidelines GE-STY-01027 December 2017; and in accordance with the DoTTS Design Manual for Urban Roads and Streets (DMURS).

3.6 DMURS Compliance Statement

As part of the planning submission a DMURS Compliance Statement has been prepared for the proposed residential development. The DMURS Compliance Statement was prepared in order to outline the design compliance with best practice in terms of operation and safety.

3.7 Road Network Improvement Works (Water Rock Urban Expansion Areas (UEA))

The Water Rock Strategic Transport Assessment undertaken by Systra outlines the infrastructure proposals required to support the development of the Water Rock UEA.

A number of infrastructure improvements are outline in the Local Area Plan to support the proposed development in the Water Rock UEA. A description of the improvement works that are proposed to be implemented during the UEA Phase 1A development is outlined below.

Services Corridor Link Road

The proposed Service Corridor Link connects the Midleton Northern Relief Road to the Water Rock Road. The proposed road will facilitate the construction of 2,500 No. houses withing the Water Rock UEA as well as improving connectivity for local residents.

The new road will cater for all road users with 2.25m cycle tracks and 2m footpaths provided along both sides of the road. This will improve both comfort and safety for cyclists and pedestrians. Provisions have been made along the Services Corridor Link Road to allow for access to the development lands to the north of the road.

Upgrade of Cork Road and Northern Relief Road Junction

It is proposed to upgrade the signalised junction between the Cork Road and Northern Relief Road (Knockgriffen Junction) in order to enhance the capacity of the junction.

Traffic Management Measures for Water Rock Road

It is proposed to close Water Rock Road to vehicular traffic at the level crossing to prevent additional traffic from the UEA using the Water Rock Road priority junction. This will result in all traffic that currently uses the Water Rock Road to the north of the level crossing to now travel along the Services Corridor Link Road and the Midleton Northern Relief Road to access the N25.

4 Traffic Generation for Proposed Development

4.1 Introduction

This section describes the growth rates applied to the base traffic flows, to obtain future traffic flows for the area. This section goes on to detail the traffic attracted and its distribution over the local road network, resulting from the proposed development.

4.2 Traffic Generation for Proposed Development

Based on a review of the TRICS database, the number of similar sized sites was low for the different land uses (e.g. private dwellings & apartments).

Following a review of the MHL Consulting "Traffic and Trasport Assessment" prepared for the Water Rock Midleton Development (331 residential dwellings) a synopsis of the peak hour trip generation rates for the overall development are outlined in Table 4.1.

Table 4.1 – Typical Peak Hour Trip Rate – (TRICS / Water Rock Development Midleton)

Time Period	Outbound (No. of trips/trip rate)	Inbound (No. of trips/trip rate)	Total Two-Directional Volume (No. of trips/trip rate)
AM Peak Hour	0.551 vehs/dwelling	0.120 vehs/dwelling	0.671 vehs/dwelling
PM Peak Hour	0.177 vehs/dwelling	0.396 vehs/dwelling	0.573 vehs/dwelling

As outlined in Table 4.1, the travel patterns are very tidal for residential dwellings – that more people depart during the AM peak than arrive and the opposite in the PM peak period.

The proposed trip rate for the proposed development will be validated against the traffic counts undertaken for the Meadowlands Estate off Broomfield Crescent which is equidistance to the public transport provision in Midleton (e.g. rail station etc)

Table 4.2 outlines the trip rates obtained from the traffic data used in relation to the Park Hill View development in September 2018 - Planning Application Ref: 18/7236 for the development of 41 No. residential units and associated infrastructure which is currently being constructed on site.

Based on the Transport Assessment prepared on behalf of the development, Table 4.2 outlines the trip generation associated with this development.

Table 4.2 – Peak Hour Trip Rates for Park Hill View Development (41 No. Residential Dwellings)

Time Period	Outbound (No. of trips/trip rate)	Inbound (No. of trips/trip rate)	Total Two-Directional (No. of trips/trip rate)
AM Peak Hour			
AM Peak Hour	24 vehs / hr (0.590 vehs/dwelling)	7 vehs / hr (0.180 vehs/dwelling)	31 vehs / hr (0.770 vehs/dwelling)
PM Peak Hour			
PM Peak Hour	10 vehs / hr (0.250 vehs/dwelling)	19 vehs / hr (0.460 vehs/dwelling)	29 vehs / hr (0.710 vehs/dwelling)

Source: MHL Consulting Engineer Ltd – September 2018

It should be noted that the trip rate obtained from the traffic data for Meadowlands and Park Hill View was for a small number of dwellings and has therefore resulted in a slightly higher trip generation rate than used for the assessment of the Water Rock Development.

In order to demonstrate the most realistic case scenario, the following trips rates have been assumed and the associated trips generated outlined in Table 4.3 which is in line with the recently granted planning permission of a similar sized LRD at Waterrock Midleton.

Table 4.3 – Summary of the Assumed Peak Hour Trip Rates and Generation for the Proposed Development – 272 Residential Dwellings

Time Period	Outbound (No. of trips/trip rate)	Inbound (No. of trips/trip rate)	Total Two-Directional (No. of trips/trip rate)
AM Peak Hour			
AM Peak Hour	150 vehs / hr (0.551 vehs/dwelling)	33 vehs / hr (0.120 vehs/dwelling)	183 vehs / hr (0.671 vehs/dwelling)
PM Peak Hour			
PM Peak Hour	48 vehs / hr (0.177 vehs/dwelling)	108 vehs / hr (0.396 vehs/dwelling)	156 vehs / hr (0.573 vehs/dwelling)

Source: Hegsons Design Consultancy Ltd

4.2.1 Trip Distribution

For the purpose of the assessment, in order to forecast a distribution for the residential trips, analysis will be taken of the current trips accessing the area via Avoncore Place and Broomfield Crescent in the peak periods based on the traffic counts undertaken at the Meadowlands Estates. This indicated that 65% of trips headed towards the R626 / Northern Relief Road (Westbound) and 35% of trips headed towards the R627 (Eastbound along Broomfield Road) in the peak hour periods.

4.2.2 Traffic Assignment

It is widely accepted that, the total number of trips generated by a new development are not comprised wholly of new trips to the local road network. In order to represent a robust assessment, no allowance for the removal of any previous trips generated by the site has been taken into consideration for the purpose of this assessment.

Many of the trips may in fact already exist on the network, albeit at another location. The following vehicular trip types have been identified in association with the new residential development:

- Pass-by Trips: Trips which are already present on the road network directly adjacent to the point of access to the site, which may in the future be generated by the site.

- Diverted Trips**:** Trips which are already present on the local road network but not on the road from which the site access is taken and will divert from their existing use to access the site.

Given the nature of the local road network within the study area and in order to provide a robust assessment, a reduction in the quantum of trips associated with the proposed development has not been included within the assessment. Accordingly, it is considered that this assessment represents a robust analysis of the traffic volumes attracted and generated by the proposed residential development.

4.3 Traffic Growth

Based on the proposed construction plan for the proposed development, and for the purpose of this assessment, it has been assumed that the proposed development would have an opening year of 2025. However, the overall scheme will take a number of years to complete, and it is expected that 80% (Phase 2-3) of the proposed development would be expected to be open later than 2025.

The TII Traffic and Transport Assessment Guidelines for a Traffic Impact Assessment recommend that the opening year (base year) of the development and a plan year, 10 and 15 years after the opening year, should be considered for assessing the proposed development.

However, as the proposed road improvement works as outlined in Section 3.7 which are part of the Water Rock UEA, an analysis has not been undertaken for the Opening Year +10 or +15 scenario as it is difficult to predict the level of development in the UEA and road network upgrades that will be completed by this point.

The traffic impacts have therefore been assessed for the following years:

- Opening year of 2025 (Phase 1 – 54 Units (20%)); and

- Design year (+5 Opening) 2030.

The NRA in their Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections October 2021 envisage that car and light vehicle volumes on national roads would increase as detailed in Table 4.4.

Table 4.4 – Summary of the Link Based Growth Rates for the Midelton Area (Table 6.1 Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections October 2021)

Low Sensitivity Growth Rates	Lights Vehicles	Heavy Vehicles
2016 - 2030	1.0173	1.0361
2030 - 2040	1.0067	1.0141
Central Growth Rates	**Lights Vehicles**	**Heavy Vehicles**
2016 - 2030	1.0189	1.0377
2030 - 2040	1.0087	1.0160
High Sensitivity Growth Rates	**Lights Vehicles**	**Heavy Vehicles**
2016 - 2030	1.0223	1.0411
2030 - 2040	1.0124	1.0197

Source: Hegsons Design Consultancy Ltd

4.4 Committed Developments

Although the Central Level of traffic growth has been included for the road network and the initial assessment undertaken for this growth, a number of notable commitment development are also considered within the detailed assessment as outlined below.

4.4.1 Parkhill View Development

Planning Application Ref: 18/7236 for the development of 41 No. residential units and associated infrastructure is currently being constructed on site and is therefore included in the junction assessments.

> *Demolition of existing sheds and construction of 41 no. residential units. The proposed development includes the demolition of existing sheds (2 no. agricultural sheds) and the construction of 2 and 3 storey detached and semi-detached houses and the provision of landscaping, car parking all associated infrastructural and site development works. All associated infrastructure and services to include the widening of the existing L-7630 Broomfield Road including the provision of a pedestrian footpath. The proposed development includes provision for internal roads and footpaths and 2 no. new vehicular entrance off the L-7630 Broomfield Road to serve the development.*

Based on the Transport Assessment prepared on behalf of Park Hill View Estates Ltd, in September 2018, Table 4.5 outlines the trip generation associated with this development.

Table 4.5 – Summary of Peak Hour Trip Rates and Generation for the Park Hill View Development – 41 No. Residential Dwellings

Time Period	Outbound (No. of trips/trip rate)	Inbound (No. of trips/trip rate)	Total Two-Directional (No. of trips/trip rate)
AM Peak Hour			
AM Peak Hour	24 vehs / hr (0.590 vehs/dwelling)	7 vehs / hr (0.180 vehs/dwelling)	31 vehs / hr (0.770 vehs/dwelling)
PM Peak Hour			
PM Peak Hour	10 vehs / hr (0.250 vehs/dwelling)	19 vehs / hr (0.460 vehs/dwelling)	29 vehs / hr (0.710 vehs/dwelling)

Source: MHL Consulting Engineer Ltd – September 2018

4.4.2 Water Rock Development

An LRD planning application has been submitted for lands within Water Rock which forms part of the Water Rock Urban Expansion Area (UEA).

It is proposed that the Water Rock UEA will ultimately provide 2,500 No. housing units, 10,000 sqm of offices, 2,000 sqm of retail facilities, 500 sqm of leisure facilities, 2 No. primary schools and 1 No. secondary school constructed over four phases. The recently granted planning permission for the LRD at Waterrock Midleton consisted of:

> *Proposed development is to consist of 199 No. houses and 131 No. apartment units. The houses consist of 3 and 4-bedroom units while each of the apartments are 2-bedroom units.*

Based on the Transport Assessment prepared on behalf of Haven Falls Ltd, in October 2022, Table 4.6 outlines the trip generation associated with this development which for the purpose of the transport assessment is envisaged to be operational by 2024/2025.

Table 4.6 – Summary of Peak Hour Trip Rates and Generation for the Proposed Water Rock Development on Behalf of Haven Falls Ltd – 331 No Residential Dwellings.

Time Period	Outbound (No. of trips/trip rate)	Inbound (No. of trips/trip rate)	Total Two-Directional (No. of trips/trip rate)
AM Peak Hour			
AM Peak Hour	182 vehs / hr (0.551 vehs/dwelling)	40 vehs / hr (0.120 vehs/dwelling)	221 vehs / hr (0.671 vehs/dwelling)
PM Peak Hour			
PM Peak Hour	58 vehs / hr (0.177 vehs/dwelling)	131 vehs / hr (0.396 vehs/dwelling)	189 vehs / hr (0.573 vehs/dwelling)

Source: MHL Consulting Engineers Ltd – October 2022

In addition, Table 4.7 below outlines the trip rates and generation associated with the entire Phase 1 of the Water Rock UEA (e.g. housing units, offices, educational, retail and leisure facilities. The table is based on the Transport Assessment prepared on behalf of Haven Falls Ltd, in October 2022, which for the purpose of the transport assessment is envisaged to be operational by 2029/2030.

Table 4.7 – Summary of Peak Hour Trip Rates and Generation for the Proposed Phase 1 Water Rock Development (as outlined in the Haven Falls Ltd Transport Assessment)

		AM PEAK		PM PEAK	
		Arrivals	Departures	Arrivals	Departures
Housing and Apartments					
	Peak Trics Trip Rates Per unit	0.120	0.551	0.396	0.177
1054	Peak Trips for 1054 No. Units	126	581	417	187
Primary School					
	Peak Trics Trip Rates Per student	0.147	0.072	0.003	0.008
592	Peak Trips for 592 No. Students	87	43	2	5
Offices					
	Peak Trics Trip Rates Per 100m^2 GFA	1.120	0.093	0.138	0.983
10,000	Peak Trips for 10,000 m^2 GFA	112	9	14	98
Retail					
	Peak Trics Trip Rates Per 100m^2 GFA	0.437	0.193	1.284	1.526
2,000	Peak Trips for 2,000 m^2 GFA	9	4	26	31
Leisure					
	Peak Trics Trip Rates Per 100m^2 GFA	0.867	0.542	1.791	1.694
500	Peak Trips for 500 m^2 GFA	4	3	9	8
Total Trips Generated		227	630	454	230
		857		684	

Source: MHL Consulting Engineers Ltd – October 2022

As outlined in the Water Rock Transport Assessment, based on the proposed infrastructure improvements in the area (outlined in Section 3.7) a 30% modal shift is also assumed on the proposed traffic generated from the Water Rock UEA.

5 Traffic Impacts of the Proposed Development

5.1 Introduction

In assessing each junction, guidelines outlined in the Institution of Highways and Transportation (IHT) "Guidelines for Traffic Impact Assessments" states that a traffic impact assessment is required if traffic to and from a development is likely to increase the two-way traffic flow at a junction in excess of 5%. In addition, an assessment is also required *"where traffic congestion exists or will exist within the assessment period or in other sensitive locations".*

The following development years have been assessed the peak periods:

- 2023: Base Year
- 2025: Opening Year Assessment (Phase 1 - 54 Units (20%)); and
- 2030: Further Design Year (+5 years) – includes a reduction in traffic due to Mobility Management Plan measure / new Infrastructure in the area.

(Note: An analysis has not been undertaken for the Opening Year +10 years or +15 years scenario as it is difficult to predict the level of development in the UEA and road network upgrades that will be completed by that point. This approach is consistent with the approach takes for similar large development application in the area – Water Rock Development (Haven Falls Ltd)

The operational assessment of the key junction has been undertaken during the peak hour periods for the opening year (2025) and + 5 years (2030) of the proposed development. Due to the phase of the construction, it is envisaged, for the purpose of this assessment, that 20% of the total proposed development will be operational in 2025.

In addition, by 2030, the initiatives set out by the Mobility Management Plan, along with the reduce car parking provision, will further reduce the trip generation rate associated with the proposed development. As part of the wider Water Rock UEA and the recent LRD Planning Approval, a 30% modal shift is envisaged across the new traffic generated the area and this is reflected in the following junction appraisals and analysis.

5.2 Junction Appraisals

An assessment has been undertaken to accommodate all proposed vehicular movement at the critical road junction in close proximity to the subject site in order to undertaken a robust assessment.

The results of the capacity assessment have been summarised by Ratio of Flow to Capacity (RFC) and Maximum Queue Length for the AM and PM peak hours. The junction modelled will be modelled with 'OD Tab'. The programs construct peak synthesised demand profiles for each arm by estimating the flow parameters, given peak hour flows in the form of an origin-destination table. This effectively synthesises a peak within the peak hour, therefore producing a worst-case scenario and hence making the traffic analysis robust.

Within the 'Do Something' assessment, the absolute number of Heavy Goods Vehicle (HGV) movements was kept the same as the corresponding 'Do Minimum'

scenario. This was because it is unlikely that a significant increase in HGV trips would be attracted by the proposed development.

It should be noted, that the 'Do Something' junction analysis will be undertaken in order to determine the relative impact of the proposed development on the operating capacity of each junction. This identified the impact of the proposed development on the current junction arrangement (including normal future traffic growth).

Four key junctions will be assessed within the study area if traffic to and from a development is likely to increase the two-way traffic flow at a junction in excess of 5%. The junctions would include:

- R626 / Northern Relief Road / L-7630 Avoncore Place
- L-7630 Avoncore Place / L-9425-1 Broomfield Crescent
- L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane
- R627 / L-7630-0 Meadowlands

The operational assessment of the key junction has been undertaken during the peak hour periods for the opening year (2025) of the proposed development. Where appropriate, the junctions have been modelled using the industry approved PICADY (priority-controlled) and Linsig (signalised controlled junctions) software. The traffic models have been used to forecast capacities at the identified junctions, using RFC's (Ratio of Flow to Capacity) and maximum queue lengths. In addition, all junction operational arrangements have been discussed in the following sections of this report.

The following tables indicate the percentage increase of traffic at the various junctions as a result of the proposed development based on the application of the typical traffic growth factors for the area.

Table 5.1 – Summary of the percentage increase of traffic at the main junctions for the Predicated Peak Hour Traffic Volumes – Do Nothing & Do Something Scenarios - R626 / Northern Relief Road / L-7630 Avoncore Place

Time Period	Do Nothing - Junction Traffic Volumes	Do Something - Junction Traffic Volumes	% Increase in Traffic Volumes
Base Year: 2023 Traffic Survey (vehs/hr)			
AM Peak Hour	1,848	1,848	----
PM Peak Hour	1,448	1,448	----
2025 Traffic Volumes (Proposed Opening Year) (vehs/hr)*			
AM Peak Hour	2,001	2,024	+ 1.17%
PM Peak Hour	1,586	1,606	+ 1.26%
2030 Traffic Volumes (Design Year: 5 years) (vehs/hr)*			
AM Peak Hour	2,284	2,367	+ 3.49%
PM Peak Hour	1,806	1,877	+ 3.77%

Source: Hegsons Design Consultancy Ltd – September 2023
* 2025 & 2030: Do Nothing with Committed Developments (incl. Water Rock UEA Phase 1 in 2030)

Based on the percentage increase in traffic at the junction, the proposed development generates between a maximum of 1.17% and 1.26% increase in traffic in the peak periods assuming that the proposed development is 20% operational in the Opening year 2025.

The proposed development will generate between a maximum of 3.49% and 3.77% increase in traffic in the peak periods once the site is 100% operational in the future year 2030. However, it should be noted that improvements to the road and transport network in and around the area to alleviate traffic demand should be in place by 2030 – these have not been assumed for the purpose of the assessment.

Table 5.2 – Summary of the percentage increase of traffic at the main junctions for the Predicated Peak Hour Traffic Volumes – Do Nothing & Do Something Scenarios - L-7630 Avoncore Place / L-9425-1 Broomfield Crescent

Time Period	Do Nothing - Junction Traffic Volumes	Do Something - Junction Traffic Volumes	% Increase in Traffic Volumes
Base Year: 2023 Traffic Survey (vehs/hr)			
AM Peak Hour	661	661	----
PM Peak Hour	511	511	----
2025 Traffic Volumes (Proposed Opening Year) (vehs/hr)*			
AM Peak Hour	738	774	+ 4.73%
PM Peak Hour	583	615	+ 5.08%
2030 Traffic Volumes (Design Year: 5 years) (vehs/hr)*			
AM Peak Hour	836	964	+ 13.29%
PM Peak Hour	663	772	+ 14.14%

Source: Hegsons Design Consultancy Ltd – September 2023
* 2025 & 2030: Do Nothing with Committed Developments (incl. Water Rock UEA Phase 1 in 2030)

Based on the percentage increase in traffic at the junction, the proposed development generates between a maximum of 4.73% and 5.08% increase in traffic in the peak periods assuming that the proposed development is 20% operational in the Opening year 2025.

The proposed development will generate between 13.29% and 14.14% increase in traffic in the peak periods once the site is 100% operational in the future year 2030.

Table 5.3 – Summary of the percentage increase of traffic for the Predicated Peak Hour Traffic Volumes – Do Nothing & Do Something Scenarios - L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane

Time Period	Do Nothing - Junction Traffic Volumes	Do Something - Junction Traffic Volumes	% Increase in Traffic Volumes
Base Year: 2023 Traffic Survey (vehs/hr)			
AM Peak Hour	450	450	----
PM Peak Hour	330	330	----
2025 Traffic Volumes (Proposed Opening Year) (vehs/hr)*			
AM Peak Hour	491	504	+ 2.58%
PM Peak Hour	367	378	+ 2.91%
2030 Traffic Volumes (Design Year: 5 years) (vehs/hr)*			
AM Peak Hour	576	622	+ 7.32%
PM Peak Hour	436	474	+ 8.12%

Source: Hegsons Design Consultancy Ltd – September 2023
* 2025 & 2030: Do Nothing with Committed Developments (incl. Water Rock UEA Phase 1 in 2030)

Based on the percentage increase in traffic at the junction, the proposed development generates between a maximum of 2.58% and 2.91% increase in traffic in the peak periods assuming that the proposed development is 20% operational in the Opening year 2025.

The proposed development will generate between 7.32% and 8.12% increase in traffic in the peak periods once the site is 100% operational in the future year 2030.

Table 5.4 – Summary of the percentage increase of traffic for the Predicated Peak Hour Traffic Volumes – Do Nothing & Do Something Scenarios – R627 / L-7630-0 Meadowlands Lane

Time Period	Do Nothing - Junction Traffic Volumes	Do Something - Junction Traffic Volumes	% Increase in Traffic Volumes
Base Year: 2023 Traffic Survey (vehs/hr)			
AM Peak Hour	760	760	----
PM Peak Hour	553	553	----
2025 Traffic Volumes (Proposed Opening Year) (vehs/hr)*			
AM Peak Hour	814	827	+ 1.57%
PM Peak Hour	599	610	+ 1.80%
2030 Traffic Volumes (Design Year: 5 years) (vehs/hr)*			
AM Peak Hour	931	976	+ 4.66%
PM Peak Hour	691	729	+ 5.28%

Source: Hegsons Design Consultancy Ltd – September 2023
* 2025 & 2030: Do Nothing with Committed Developments (incl. Water Rock UEA Phase 1 in 2030)

Based on the percentage increase in traffic at the junction, the proposed development generates between a maximum of 1.57% and 1.80% increase in traffic in the peak periods assuming that the proposed development is 20% operational in the Opening year 2025.

The proposed development will generate between 4.66% and 5.28% increase in traffic in the peak periods once the site is 100% operational in the future year 2030.

5.3 Junction Assessments

Based on the percentage increase in traffic at the various junctions, the proposed impact of the proposed development will be assessed once the proposed development is fully operational for a base year (2025) and future years design year scenarios.

Within the 'Do Something' assessment, the absolute number of Heavy Goods Vehicle (HGV) movements was kept the same as the corresponding 'Do Minimum' scenario. This was because it is unlikely that a significant increase in HGV trips would be attracted by the proposed development. A 10% HGV proportion has been assumed for each scenario. Details of the junction analysis is contained in **Appendix D**.

It should be noted that the 'Do Nothing' junction analysis includes the traffic impact of any existing developments that were operational at the time of the traffic survey.

It should be noted, that the 'Do Something' junction analysis have initially been undertaken in order to determine the relative impact of the proposed development on the operating capacity of each junction. This identified the impact of the proposed development on the current junction arrangement (including normal future traffic growth).

5.3.1 R626 / Northern Relief Road / L-7630 Avoncore Place

An assessment of the existing R626 / Northern Relief Road / L-7630 Avoncore Place junction was undertaken to ensure that sufficient operating capacity is available for the junction to operate with minimal delay to traffic.

Based on the percentage increase in traffic at the R626 / Northern Relief Road / L-7630 Avoncore Place junction (see Table 5.1), the proposed development generates a maximum of 1.26% increase in traffic at the junction once Phase 1 of the proposed development is opening in 2025. Once fully operational in 2030, generates a maximum of 3.77% increase in traffic at the junction would be experienced.

The junction currently (2023 volumes) caters for approximately 1,848 vehicles (AM) and 1,448 vehicles (PM) in the peak hours. The 2025 traffic increase at the junction are between 24 and 20 vehicles in the peak AM and PM hours respectively. This relates to an additional approximately 1 vehicle every 2 minutes in both the peak periods either entering or exiting the junction.

The 2030 traffic increase at the junction, when the 30% modal shift is applied, are between 83 and 71 vehicles in the peak AM and PM hours respectively. This relates to an additional approximately 1 – 2 vehicles every minute in both the peak periods either entering or exiting the junction.

However, it should be noted that this increase is assumed prior to any proposed road improvement works as outlined in Section 3.7 which are part of the Water Rock UEA. Although it is difficult to predict the level of development in the UEA and road network upgrades that will be completed by this point, the proposed improvements will significantly assist the operating capacity of the junction.

LINSIG Analysis

Although no significant alteration to the operating capacity of the junction should be experienced as a result of the proposed development, Linsig analysis software was used to assess the capacity of the signalised junction. LINSIG is a computer software program dealing with capacities, mean max queue lengths (pcu) and delays at uncontrolled and signalised junctions. In general, a DOS of 90% is deemed acceptable for signalised junctions. A DOS of this value would indicate that at peak times the junction is at 90% of its operational capacity and therefore has a practical reserve capacity of 10%. Where an arm contains multiple lanes, the highest DoS on any of these lanes is shown.

The Mean Maximum Queue (MMQ) is the maximum position of the last stationary vehicle from the stopline within a cycle, average over all cycles in the modelled period. The MMQ would represent the approximate queue position mid-way through the modelled period. The Practical Reserve Capacity (PRC) is based on the highest DOS and compared this to 90%. So, if the highest DOS was 90%, PRC would be 0%. If highest DoS was below 90% a positive PRC would be predicted, and above 90% a negative PRC.

Tables 5.5 & 5.6 illustrates the various traffic models for the junction.

Table 5.5: Junction Capacity Results – AM peak periods at the R626 / Northern Relief Road / L-7630 Avoncore Place junction.

AM Peak Hour		Do Nothing		Do Something	
		DOS %	MMQ (pcus)	DOS %	MMQ (pcus)
2023	R626 (N)	83.0%	8.3	---	---
	Avoncore Place (E)	63.1%	3.5	---	---
	R626 (S)	81.2%	14.0	---	---
	Northern Relief Road (W)	82.8%	12.6	---	---
		PRC = 8.4%	Average/Delay (s/pcu) = 55.4	---	---
2025	R626 (N)	89.2%	9.9	89.2%	9.9
	Avoncore Place (E)	67.8%	4.2	70.2%	4.6
	R626 (S)	90.0%	16.9	87.5%	16.1
	Northern Relief Road (W)	88.4%	16.5	90.2%	17.3
		PRC = 0.0%	Average/Delay (s/pcu) = 62.5	PRC = -0.2%	Average/Delay (s/pcu) = 62.2
2030	R626 (N)	100.5%	16.3	100.5%	16.3
	Avoncore Place (E)	74.1%	5.3	81.9%	7.0
	R626 (S)	102.1%	29.8	102.6%	30.9
	Northern Relief Road (W)	104.1%	45.3	104.5%	47.0
		PRC = -15.7%	Average/Delay (s/pcu) = 119.7	PRC = - 16.1%	Average/Delay (s/pcu) = 121.3

Table 5.5 shows that for the 2025 AM Do Nothing and Do Something scenarios the junction will be operating at or below the 90% acceptable DOS threshold for signalised junctions. The least critical arm of the junction is the eastern arm which will cater for the highest level of development related trips and the operating capacity will increase by 2.4%. At this arm of the junction an average queue of 4-5 No. PCUs will be experienced in the 2025 AM.

For the 2030 AM scenario, the Do Nothing and Do Something scenarios will result in the junction operating above the 90% acceptable DOS threshold for signalised junctions on three of the junction arms. It should be noted that the 2030 Do Nothing and Do Something scenarios include the Phase 1 Water rock development. The proposed development will result in an 0.4% change in the Practical Reserve Capacity (PRC) for the junction with the Mean Maximum Queue (MMQ) only extending by 2 vehicles.

Table 5.6: Junction Capacity Results – PM peak periods at the R626 / Northern Relief Road / L-7630 Avoncore Place junction.

PM Peak Hour		Do Nothing		Do Something	
		DOS %	MMQ (pcus)	DOS %	MMQ (pcus)
2023	R626 (N)	57.6%	8.3	---	---
	Avoncore Place (E)	42.7%	3.5	---	---
	R626 (S)	47.4%	14.0	---	---
	Northern Relief Road (W)	59.5%	12.6	---	---
		PRC = 51.3%	Average/Delay (s/pcu) = 48.0	---	---
2025	R626 (N)	63.7%	8.7	63.7%	8.7
	Avoncore Place (E)	47.0%	6.6	47.7%	6.7
	R626 (S)	51.4%	5.8	51.8%	5.8
	Northern Relief Road (W)	63.4%	6.8	63.8%	6.9
		PRC = 41.3%	Average/Delay (s/pcu) = 49.0	PRC = 41.2%	Average/Delay (s/pcu) = 49.0
2030	R626 (N)	72.0%	10.6	74.0%	10.6
	Avoncore Place (E)	54.2%	8.0	55.4%	8.4
	R626 (S)	58.3%	6.8	61.9%	6.9
	Northern Relief Road (W)	73.8%	8.5	73.1%	8.3
		PRC = 22.0%	Average/Delay (s/pcu) = 52.1	PRC = 21.7%	Average/Delay (s/pcu) = 52.2

Table 5.6 shows that for the 2025 PM Do Nothing and Do Something scenarios the junction will be operating well below the 90% acceptable DOS threshold for signalised junctions. The DOS, Practical Reserve Capacity (PRC) and Mean

Maximum Queue (MMQ) show little change in the Do Nothing and Do Something scenarios.
For the 2030 PM scenario, the Do Nothing and Do Something scenarios will result in the junction operating well below the 90% acceptable DOS threshold for signalised junctions on all arms of the junction. It should be noted that the 2030 Do Nothing and Do Something scenarios includes the Phase 1 Water rock development. The proposed development will result in an 3.6% increase in the operating capacity of the R626 (South Arm) of the junction but the overall Practical Reserve Capacity (PRC) and the Maximum Queue (MMQ) for the junction will only alter slightly.

5.3.2 L-7630 Avoncore Place / L-9425-1 Broomfield Crescent

An assessment of the existing L-7630 Avoncore Place / L-9425-1 Broomfield Crescent Place junction was undertaken to ensure that sufficient operating capacity is available for the junction to operate with minimal delay to traffic.

Base Year Assessment: 2023

Based on the 2023 traffic volumes, Table 5.7 outlines the junction capacity assessment and results for the existing junction.

Table 5.7: Junction Capacity Results 2023 – AM & PM peak periods at the L-7630 Avoncore Place / L-9425-1 Broomfield Crescent Junction

2023	AM Peak Hour		PM Peak Hour	
	Base Year Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent	0.279	0	0.413	1
Broomfield South	0.656	2	0.271	0

Opening Year: 2025 – Proposed Residential Development (Phase 1: 20% Proposed Development)

Based on the 2025 future year scenario, Table 5.8 outlines the junction capacity assessment and results for the 'Do Nothing' and Do Something' scenarios.

Table 5.8: Junction Capacity Results 2025 – AM and PM peak periods at the L-7630 Avoncore Place / L-9425-1 Broomfield Crescent Junction

2025	AM Peak Hour		PM Peak Hour	
	Do Nothing Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent	0.303	0	0.452	1
Broomfield South	0.709	2	0.299	0
2025	Do Something Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent	0.315	0	0.492	1
Broomfield South	0.745	3	0.309	0

The results of the junction capacity assessment indicates that the priority junction would operate within the theoretical capacity of a junction (RFC value = 0.90) in all time periods. A maximum RFC increase of 3.6% and 4.0% is envisaged at the junction in the AM and PM peak period respectively. In all cases, no significant increase in queues will be experienced as a result of the proposed development.

Future Design Year: 2030 – Proposed Residential Development (Phase 1-3: 100% Fully Operational including MMP Initiatives)

Based on the 2030 future design year scenario, Table 5.9 outlines the junction capacity assessment and results for the 'Do Nothing' and 'Do Something' scenarios.

Table 5.9: Junction Capacity Results 2030 – AM and PM peak periods at the L-7630 Avoncore Place / L-9425-1 Broomfield Crescent Junction

2030	AM Peak Hour		PM Peak Hour	
	Do Nothing Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent	0.362	0	0.522	1
Broomfield South	0.806	4	0.355	1
2030	Do Something Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent	0.415	1	0.660	2
Broomfield South	0.929	9	0.392	1

The results of the junction capacity assessment indicates that the priority junction would operate within the theoretical capacity of a junction (RFC value = 0.90) in all time periods. A maximum RFC increase of 12.9% and 13.8% is envisaged at the junction in the AM and PM peak period respectively. In the AM peak period, some increase in vehicle queuing will be experienced as a result of the proposed development as background traffic is delayed turning right into Broomfield Crescent off Avoncore Place.

5.3.3 L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane

An assessment of the existing L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane junction was undertaken to ensure that sufficient operating capacity is available for the junction to operate with minimal delay to traffic.

Base Year Assessment: 2023

Based on the 2023 traffic volumes, Table 5.10 outlines the junction capacity assessment and results for the existing junction.

Table 5.10: Junction Capacity Results 2023 – AM & PM peak periods at the L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane

2023	AM Peak Hour		PM Peak Hour	
	Base Year Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent West	0.420	1	0.319	0
Meadowlands Lane North	0.007	0	0.012	0

Opening Year: 2025 – Proposed Residential Development (Phase 1: 20% Proposed Development)

Based on the 2025 future year scenario, Table 5.11 outlines the junction capacity assessment and results for the 'Do Nothing' and Do Something' scenarios.

Table 5.11: Junction Capacity Results 2025 – AM and PM peak periods at the L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane Junction

2025	AM Peak Hour		PM Peak Hour	
	Do Nothing Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent West	0.470	1	0.355	1
Meadowlands Lane North	0.007	0	0.012	0
2025	Do Something Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent West	0.493	1	0.362	1
Meadowlands Lane North	0.007	0	0.012	0

The results of the junction capacity assessment indicates that the priority junction would operate within the theoretical capacity of a junction (RFC value = 0.90) in all time periods. A maximum RFC increase of 2.3% and 0.7% is envisaged at the junction in the AM and PM peak period respectively. In all cases, no significant increase in queues will be experienced as a result of the proposed development.

Future Design Year: 2030 – Proposed Residential Development (Phase 1-3: 100% Fully Operational including MMP Initiatives)

Based on the 2030 future design year scenario, Table 5.12 outlines the junction capacity assessment and results for the 'Do Nothing' and 'Do Something' scenarios.

Table 5.12: Junction Capacity Results 2030 – AM and PM peak periods at the L-9425-1 Broomfield Crescent / L-7630-0 Meadowlands Lane Junction

2030	AM Peak Hour		PM Peak Hour	
	Do Nothing Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent West	0.555	1	0.438	1
Meadowlands Lane North	0.009	0	0.018	0
2030	Do Something Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Broomfield Crescent West	0.632	2	0.457	1
Meadowlands Lane North	0.009	0	0.018	0

The results of the junction capacity assessment indicates that the priority junction would operate within the theoretical capacity of a junction (RFC value = 0.90) in all time periods. A maximum RFC increase of 7.7% and 1.9% is envisaged at the junction in the AM and PM peak period respectively. In all cases, no significant increase in queues will be experienced as a result of the proposed development.

5.3.4 R627 / L-7630-0 Meadowlands Lane

An assessment of the existing R627 / L-7630-0 Meadowlands Lane junction was undertaken to ensure that sufficient operating capacity is available for the junction to operate with minimal delay to traffic.

Base Year Assessment: 2023

Based on the 2023 traffic volumes, Table 5.13 outlines the junction capacity assessment and results for the existing junction.

Table 5.13: Junction Capacity Results 2023 – AM & PM peak periods at the R627 / L-7630-0 Meadowlands Lane

2023	AM Peak Hour		PM Peak Hour	
	Base Year Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Meadowlands Lane North	0.448	1	0.373	1
R627 East	0.088	0	0.156	0

Opening Year: 2025 – Proposed Residential Development (Phase 1: 20% Proposed Development)

Based on the 2025 future year scenario, Table 5.14 outlines the junction capacity assessment and results for the 'Do Nothing' and Do Something' scenarios.

Table 5.14: Junction Capacity Results 2025 – AM and PM peak periods at the R627 / L-7630-0 Meadowlands Lane Junction

2025	AM Peak Hour		PM Peak Hour	
	Do Nothing Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Meadowlands Lane North	0.513	1	0.413	1
R627 East	0.093	0	0.163	0
2025	Do Something Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Meadowlands Lane North	0.538	1	0.424	1
R627 East	0.100	0	0.182	0

The results of the junction capacity assessment indicates that the priority junction would operate within the theoretical capacity of a junction (RFC value = 0.90) in all time periods. A maximum RFC increase of 2.5% and 1.1% is envisaged at the junction in the AM and PM peak period respectively. In all cases, no significant increase in queues will be experienced as a result of the proposed development.

Future Design Year: 2030 – Proposed Residential Development (Phase 1-3: 100% Fully Operational including MMP Initiatives)

Based on the 2030 future design year scenario, Table 5.15 outlines the junction capacity assessment and results for the 'Do Nothing' and 'Do Something' scenarios.

Table 5.15: Junction Capacity Results 2030 – AM and PM peak periods at the R627/ L-7630-0 Meadowlands Lane Junction

2030	AM Peak Hour		PM Peak Hour	
	Do Nothing Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Meadowlands Lane North	0.617	2	0.502	1
R627 East	0.136	0	0.197	0
2030	Do Something Scenario			
	Max RFC	Max Q (vehs)	Max RFC	Max Q (vehs)
Meadowlands Lane North	0.709	2	0.535	1
R627 East	0.141	0	0.234	0

The results of the junction capacity assessment indicates that the priority junction would operate within the theoretical capacity of a junction (RFC value = 0.90) in all time periods. A maximum RFC increase of 9.2% and 3.7% is envisaged at the junction in the AM and PM peak period respectively. In all cases, no significant increase in queues will be experienced as a result of the proposed development.

6 Conclusions

This Transport Assessment identifies the amount of traffic attracted by the proposed development and the impact of this traffic on the existing and future road network. For the purpose of this assessment, it has been assumed that the proposed development would be operational in 2025. However, the overall scheme will take between 4-5 years to complete, and it is expected that some portions of the scheme would be expected to be open later than 2025.

Site observations and traffic counts were undertaken in March 2023 in order to determine the level of traffic using the road network in close proximity to the subject site. AM and PM peak hour traffic flows have been derived through the manual traffic counts undertaken on Wednesday 15th March 2023.

The proposed development will consists of a large scale residential development consisting of the development of 272 No. residential units, creche, community use and all associated ancillary developments works at Broomfield West, Midleton, Co. Cork.

The proposal for the 272 No dwellings units is for a mix of 4-bedroom semi-detached dwellings, 3-bedroom semi-detached dwellings, 2, 3 & 4 bedroom terraced dwellings, 2, 3 & 4 bedroom terraced mews style dwellings, 2 bed duplexes and 1 bed apartments.

Access to the existing site is via 4 proposed access points off the L-7630 Broomfield Road. The accesses will take the form of priority junction and provide access to various numbers of residential dwellings. The proposed accesses will accommodate all vehicular, pedestrian and cycle movements to and from the proposed development.

As part of the proposed works, it is proposed to widen the L-7630 Broomfield Road along the extent of the site. The development will include lands outside the applicant's ownership which will be required to allow the development to provide a 2.0m footpath on the eastern side of the road. It is also proposed to provide a raised crossing point of the L-7630 Broomfield Road just south of the proposed vehicular access to the proposed Creche and residential dwellings. The crossing would be proposed in order to enhance and ensure connectivity via the existing 2.0m wide footpath on the western side of the L-7630 Broomfield Road from the proposed development to Midleton Rail Station and onwards to the town centre.

It should be noted that the permitted development Park Hill View (Council Ref: 18/7236) on the west side of the L-Broomfield Road includes road widening to 6 metres and a footpath on the west side of the improved road. The improvement of the L-7630 Broomfield Road would be along the proposed site boundary.

It is also proposed to extend the 50kph speed limit along the road for the full extent of the site boundary. Due to the proposed development and Park Hill View development, which is currently under construction, the urban area will extend along the road and the reduction in speed limit from 80kph to 50kph is recommended.

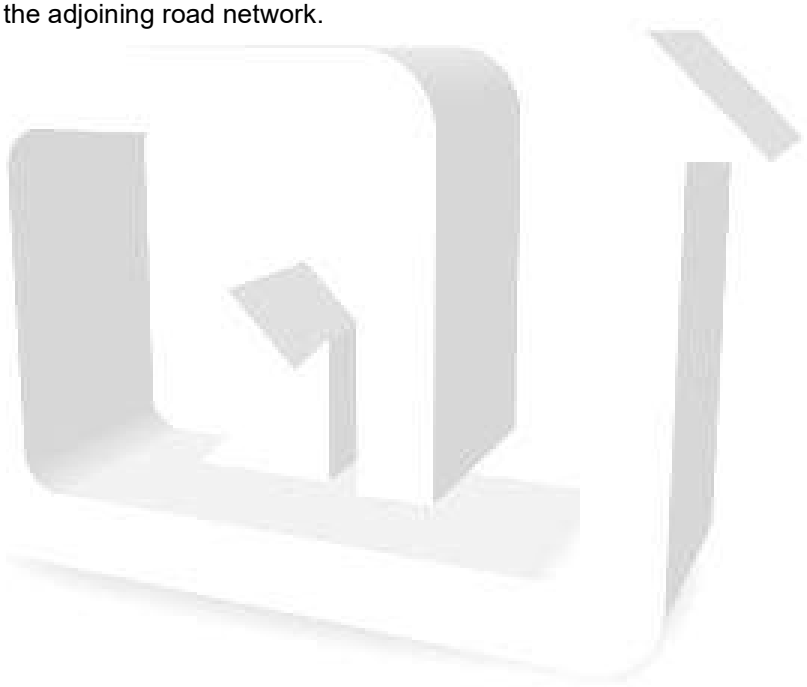
The proposed development layout has been prepared following detailed consultation of the Sustainable Recreational Development in urban areas (2009),

the Urban Design Manual and the Design Manual for Urban Roads and Streets (DMURS).

The trip generation for the subject site was based on a review of the TRICS Database and adjoining site data. Based on the envisaged traffic generation for the proposed 272 residential dwellings (when fully operational) a total of 150 outbound vehicle trips and 33 inbound vehicle trips are envisaged in the AM peak hour. In addition, a total of 48 outbound vehicle trips and 108 inbound vehicle trips are envisaged in the PM peak hour.

The junction assessment indicates that traffic impact of the proposed development would be minimal on the overall operating capacity of the junctions in close proximity to the subject site even when the site is fully operational during the peak periods.

Based on this transport assessment, it is envisaged that any transport implications of the proposed development would be minimal and have insignificant implication on the adjoining road network.



Appendix A Site Layout Plans

DWELLING UNITS COLOUR LEGEND AND DESCRIPTIONS

UNIT TYPE A1+A2
3-BED SEMI-DETACHED HOUSES

UNIT TYPE B
4-BED SEMI-DETACHED HOUSES

UNIT TYPES D+E (TYPE 1 ELEVATIONS)
UNIT TYPES G+H (TYPE 2 ELEVATIONS)
4 UNIT BLOCK OF 2 + 3 BED TERRACED HOUSES

UNIT TYPES D+E (TYPE 1 ELEVATIONS)
6 UNIT BLOCK OF 2 + 3 BED TERRACED HOUSES

UNIT TYPES C+D+E (TYPE 1 ELEVATIONS)
UNIT TYPES F+G+H (TYPE 2 ELEVATIONS)
4 UNIT BLOCK OF 2 + 3 + 4 BED TERRACED HOUSES

UNIT TYPES C+D+E (TYPE 1 ELEVATIONS)
UNIT TYPES F+G+H (TYPE 2 ELEVATIONS)
6 UNIT BLOCK OF 2 + 3 + 4 BED TERRACED HOUSES

UNIT TYPES D+E (TYPE 1 ELEVATIONS)
3 UNIT BLOCK OF 2 + 3 BED TERRACED HOUSES

UNIT TYPES J+K+L
6 UNIT BLOCK OF 2+3+4 BED TERRACED MEWS HOUSES

UNIT TYPES M+N1+N2
4 UNIT BLOCK OF 1+2 BED DUPLEX APARTMENTS

UNIT TYPES O+P+Q+R
4 UNIT BLOCK OF 1 BED TOWNHOUSE STYLE APARTMENTS

ACCOMODATION AND SITE AREAS SCHEDULE

UNIT TYPE	DESCRIPTION	UNIT AREA	NO. of UNITS
A1 & A2	3-Bed Semi-Detached	115 sq.m. / 1230 sq.ft.	42
B	4-Bed Semi-Detached	147.5 sq.m. / 1578 sq.ft.	4
C + F	4-Bed End of Terraced	148 sq.m. / 1584 sq.ft.	12
D + G	2-Bed Mid Terraced	85 sq.m. / 909 sq.ft.	72
E + H	3-Bed End of Terraced	114 sq.m. / 1227 sq.ft.	46
J	3-Bed End of Terraced	119 sq.m. / 1273 sq.ft.	6
K	2-Bed Mid Terraced	84 sq.m. / 899 sq.ft.	24
L	4-Bed End of Terraced	145.5 sq.m. / 1557 sq.ft.	6
M	1-Bed Apartment	55 sq.m. / 592 sq.ft.	26
N1 & N2	2-Bed Duplex Apartment	87 sq.m. / 936.5 sq.ft.	26
O, P, Q & R	1-Bed Apartment	54 sq.m. - 59 sq.m / 577.8 sq.ft. - 631.3 sq.ft	8

Total Houses	212
Total Apartments	60
TOTAL UNITS	**272**
Creche Floor Area	(278 sq.m. / 2975 sq.ft.)
Community Use Floor Area	(132 sq.m. / 1412 sq.ft.)
APPLICATION BOUNDARY AREA - (RED LINE)	20.44 ACRES | 8.273 HA
NETT APPLICATION AREA (EXCL PUBLIC ROAD PATHS AND WIDENED ROADS)	19.64 ACRES | 7.95 HA
TOTAL USABLE GREEN AREA	1.47 HA
DENSITY	34.21 Units/Ha
OPEN SPACES	18.0%

NOTE:
FURTHER LANDSCAPING DETAILS ARE OUTLINED ON DRAWINGS PREPARED BY FOREST BIRD DESIGN AND BOK ENGINEERING

Permitted Residential Development
Permission Granted to "Park Hill View Estates Ltd."
Permission Ref: 18/07236

REF 22/6732-P-1102

REF 22/6732-P-1101

Possible future access here to adjoining lands

MIDLETON WATER TREATMENT PLANT

BLOSSOM HILL

HOLLYRIDGE

LAND IN OWNERSHIP OF APPLICANT

PATH CONNECTS TO CONSTRUCTED 'ORCHARD WAY' TO BLOSSOM HILL

PATH ROUTE TO ACCESS BLOSSOM HILL

EXISTING TREES AND HEDGEROW

SITE NOTICE

PROPOSED SITE LAYOUT PLAN
Scale 1 : 1000

Notes:
1. This drawing is for the purpose of the stage indicated only. - If in doubt ask.
2. Do not scale, figured dimensions only to be taken.
3. Engineer/Architect to be informed of any discrepancies before work proceeds.
4. Contractor to check all dimensions and conditions on site before commencing works.
5. Drawing to be read in conjunction with current Building Regulations.
6. All components and materials to be installed fully in accordance with manufacturers instructions.

LEGEND
SITE FOR PLANNING OUTLINED IN RED = 8.273ha
NETT AREA OF DEVELOPABLE AREA OUTLINED IN BROKEN BLUE LINE = 7.95ha

OTHER LANDS OWNED BY APPLICANT OUTLINED IN BLUE

PROPOSEC SITE ENTRANCES SHOWN IN BLUE ARROW

SITE NOTICE LOCATIONS MARKED 'X'

PROPOSED SERVICES WAYLEAVES SHOWN IN YELLOW

PAS = PRIVATE AMENITY SPACE

PROPOSED PUBLIC ROAD WIDENING

Rev	Date	Description	Drawn	Chk'd
A	09-10-2023	ISSUED FOR PLANNING APPLICATION	JB	BOK/GF

CastleRock Homes

BRIAN O KENNEDY & ASSOCIATES LTD
Engineers+Architects
Shannon House, Church Road, Douglas, Co.Cork
Tel: 021-4899854
Fax: 021-4899464
Email: info@bok.ie
Web: www.bok.ie
ENGINEERING | ARCHITECTURE | ASSIGNED CERTIFIERS
FIRE CERTIFICATES | DAC | PSDP | CONSERVATION

GENERAL NOTE:
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Drawing Status: LRD - PLANNING APPLICATION
Client: CASTLE ROCK HOMES (MIDLETON) LTD.
Project: RESIDENTIAL DEVELOPMENT - BROOMFIELD MIDLETON
Drawing: SITE LAYOUT PLAN
Date: 14-09-2023
Scale: 1:1000 @ A1
Drawing number: 22/6732-P-1100
Rev: A | Drawn: JB | Chk'd: GF

VEHICLE PARKING LEGEND

- PRIVATE PARKING SPACE
- ROADSIDE GUEST/VISITOR PARKING SPACE
- ROADSIDE GUEST/VISITOR DISABLED PARKING SPACE
- PARKING RELATED TO CRECHE/COMMUNITY CENTRE INCL 1NO. EV SPACE
- DROP OFF SPACE

BICYCLE BIKE PARKING LEGEND

- PRIVATE COVERED PARKING SPACE 1NO. SPACE
- COMMUNAL COVERED PARKING SPACE 4NO. SPACES
- PARKING BAY FOR PUBLIC USE

NOTE: LEGEND RELATES TO APARTMENTS OR PUBLIC AREAS ONLY.

DWELLINGS HAVE AVAILABLE SPACE IN REAR GARDENS FOR BICYCLE STORAGE

REFUSE STORAGE LOCATIONS

- PRIVATE COVERED DOMESTIC BIN STORAGE
- COMMUNAL COVERED BIN STORAGE
- PRIVATE COVERED CRECHE BIN STORAGE

NOTE: LEGEND RELATES TO APARTMENTS AND DWELLINGS WITH NO SIDE ACCESS ONLY.

PINK SYMBOL IS EXAGGERATED SCALE ON PLAN FOR CLARITY ON DRAWING.

DWELLINGS WITH SIDE ACCESS HAVE AVAILABLE SPACE IN REAR GARDENS FOR REFUSE STORAGE

Parking Quality Assessment

Private Car Parking Spaces

	Quantity of type	Spaces per Dwelling	Total
4 Bedroom Dwellings	22	2	44
3 Bedroom Dwellings	94	2	188
2 Bedroom Dwellings	96	1	96
2 Bedroom Duplex Apartments	26	1	26
1 Bedroom Duplex Apartments	26	0	0
1 Bedroom Roadside Apartments	8	0	0
Total Units	272	Total Private Spaces	354

Roadside Car Parking Spaces

Total Public Spaces	10
Total Roadside 'Residents Only Spaces'	15
Total Creche/Community Spaces	7
Total Roadside Spaces	32

Private Bicycle Parking Spaces

	Quantity of type	Spaces per Dwelling	Total
4 Bedroom Dwellings	22	2 (more possible)	44
3 Bedroom Dwellings	94	2 (more possible)	188
2 Bedroom Dwellings	96	1 (more possible)	96
2 Bedroom Duplex Apartments	26	1 (more possible)	26
1 Bedroom Duplex Apartments	26	1	26
1 Bedroom Roadside Apartments	8	1	8
Total Units	272	Total Private Spaces	388

Public Bicycle Parking Spaces

Total Public Spaces	44

NOTE:
FURTHER LANDSCAPING DETAILS ARE OUTLINED ON DRAWINGS PREPARED BY FOREST BIRD DESIGN AND BOK ENGINEERING



PART SITE PLAN (SOUTHERN SIDE) - PARKING AND REFUSE
Scale 1 : 500

PRIVATE BIN STORE (DWELLINGS AND CRECHE)
Scale 1 : 50

COMMUNAL DOMESTIC BIN STORE
Scale 1 : 50

SINGE BIKE STORE
Scale 1 : 50

COMMUNAL BIKE STORE
Scale 1 : 50

PUBLIC BIKE PARKING

CastleRock Homes

Notes:
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6. All components and materials to be installed fully in accordance with manufacturers instructions.

Rev	Date	Description	Drawn	Chk'd
A	09-10-2023	ISSUED FOR PLANNING APPLICATION	JB	BOK/GF

BRIAN O KENNEDY & ASSOCIATES LTD
Engineers • Architects
Engineers Ireland
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Tel: 021-4899854
Fax: 021-4899464
Email: info@bok.ie
Web: www.bok.ie
ENGINEERING | ARCHITECTURE | ASSIGNED CERTIFIERS
FIRE CERTIFICATES | DAC | PSDP | CONSERVATION

GENERAL NOTE:
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Drawing Status: LRD PLANNING APPLICATION

Client: CASTLE ROCK HOMES MIDLETON LTD.

Project: RESIDENTIAL DEVELOPMENT - BROOMFIELD MIDLETON

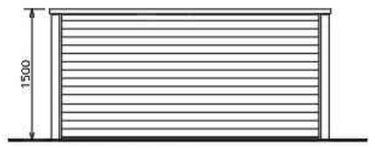
Drawing: PROPOSED PART SITE LAYOUT PLAN SOUTHERN - PARKING AND REFUSE

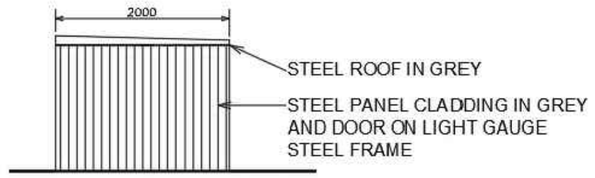
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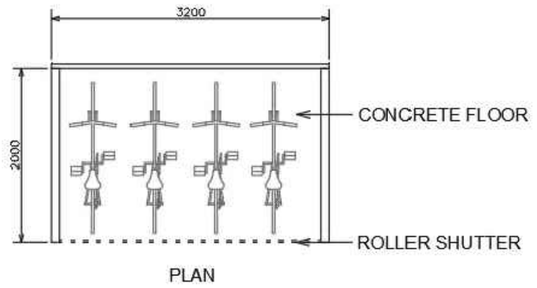
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Drawing number: 22/6732-P-1111

Rev: A | Drawn: JB | Chk'd: GF

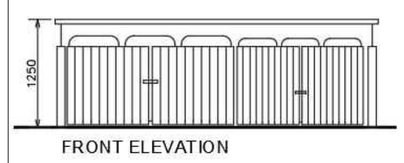


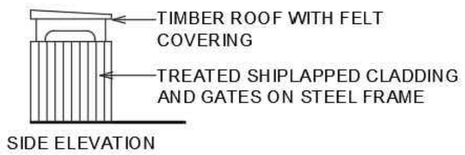


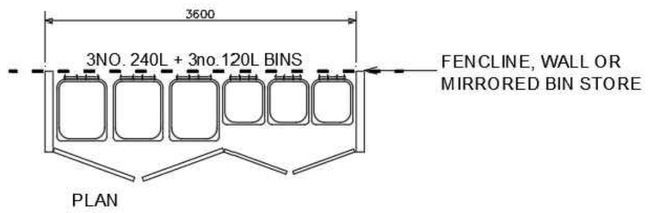


COMMUNAL DOMESTIC BIKE STORE

Scale 1 : 50

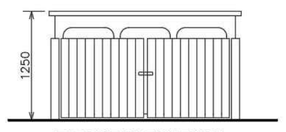


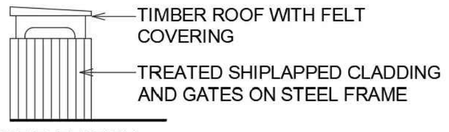


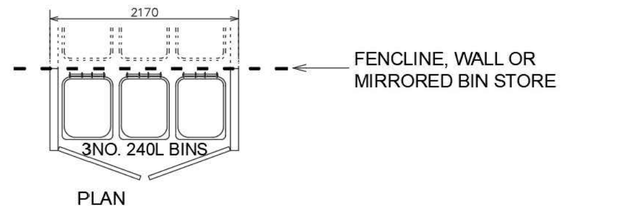


COMMUNAL DOMESTIC BIN STORE

Scale 1 : 50

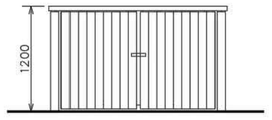




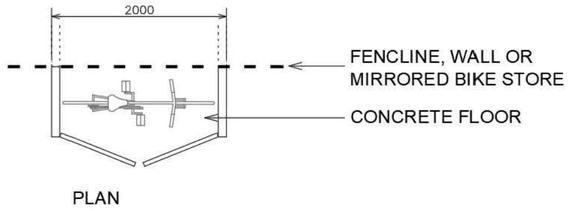


PRIVATE BIN STORE (DWELLINGS AND CRECHE)

Scale 1 : 50







SINGE DOMESTIC BIKE STORE

Scale 1 : 50



PUBLIC BIKE PARKING

NOTE:
FURTHER LANDSCAPING DETAILS ARE OUTLINED ON DRAWINGS PREPARED BY FOREST BIRD DESIGN AND BOK ENGINEERING

Parking Quality Assessment

Private Car Parking Spaces

	Quantity of type	Spaces per Dwelling	Total
4 Bedroom Dwellings	22	2	44
3 Bedroom Dwellings	94	2	188
2 Bedroom Dwellings	96	1	96
2 Bedroom Duplex Apartments	26	1	26
1 Bedroom Duplex Apartments	26	0	0
1 Bedroom Roadside Apartments	8	0	0
Total Units	272	Total Private Spaces	354

Roadside Car Parking Spaces

Total Public Spaces	10
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	Quantity of type	Spaces per Dwelling	Total
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Total Units	272	Total Private Spaces	388

Public Bicycle Parking Spaces

Total Public Spaces	44

PART SITE PLAN (NORTHERN SIDE) - PARKING AND REFUSE

Scale 1 : 500

VEHICLE PARKING LEGEND

- PRIVATE PARKING SPACE
- ROADSIDE GUEST/VISITOR PARKING SPACE
- ROADSIDE GUEST/VISITOR DISABLED PARKING SPACE
- PARKING RELATED TO CRECHE/COMMUNITY CENTRE
- DROP OFF SPACE

BICYCLE BIKE PARKING LEGEND

- PRIVATE COVERED PARKING SPACE 1NO. SPACE
- COMMUNAL COVERED PARKING SPACE 4NO. SPACES
- PARKING BAY FOR PUBLIC USE

NOTE: LEGEND RELATES TO APARTMENTS OR PUBLIC AREAS ONLY.

DWELLINGS HAVE AVAILABLE SPACE IN REAR GARDENS FOR BICYCLE STORAGE

REFUSE STORAGE LOCATIONS

- PRIVATE COVERED BIN STORAGE
- COMMUNAL COVERED BIN STORAGE

NOTE: LEGEND RELATES TO APARTMENTS AND DWELLINGS WITH NO SIDE ACCESS ONLY.

PINK SYMBOL IS EXAGGERATED SCALE ON PLAN FOR CLARITY ON DRAWING.

DWELLINGS WITH SIDE ACCESS HAVE AVAILABLE SPACE IN REAR GARDENS FOR REFUSE STORAGE

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Rev	Date	Description	Drawn	Chk'd
A	09-10-2023	ISSUED FOR PLANNING APPLICATION	JB	BOK/GF

BRIAN O KENNEDY & ASSOCIATES LTD
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CastleRock Homes

Drawing Status: LRD PLANNING APPLICATION

Client: CASTLE ROCK HOMES MIDLETON LTD.

Project: RESIDENTIAL DEVELOPMENT - BROOMFIELD MIDLETON

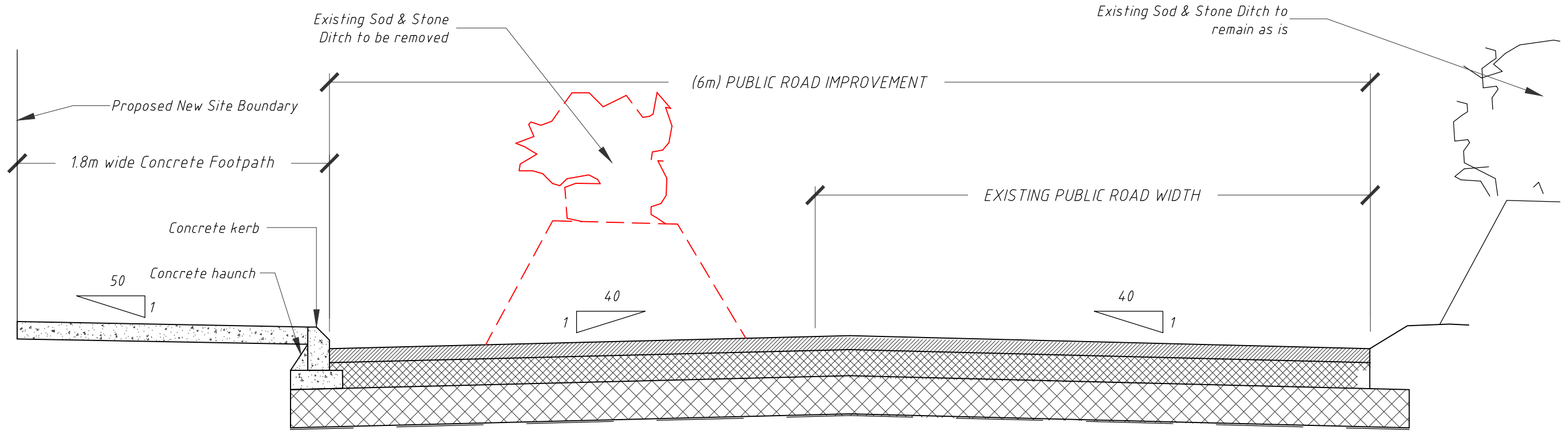
Drawing: PROPOSED PART SITE LAYOUT PLAN NORTHERN - PARKING AND REFUSE

Date: 14-09-23

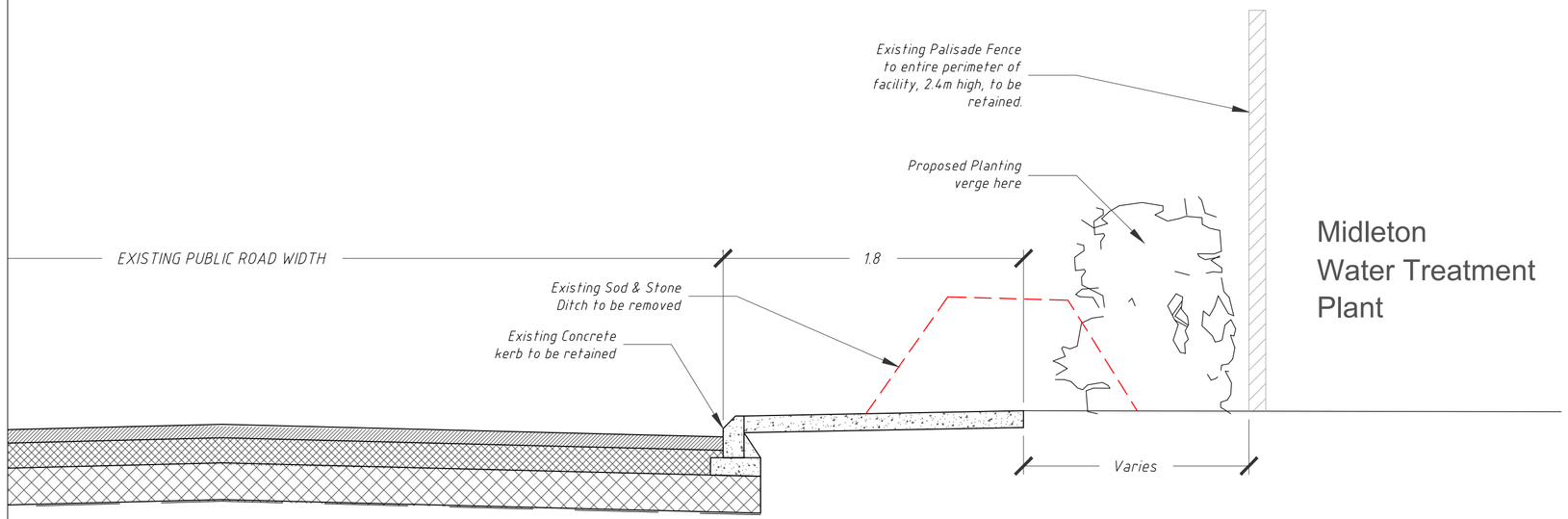
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Drawing number: 22/6732-P-1112

Rev: A | Drawn: JB | Chk'd: GF



Public road improvement section X-X
Scale 1:25

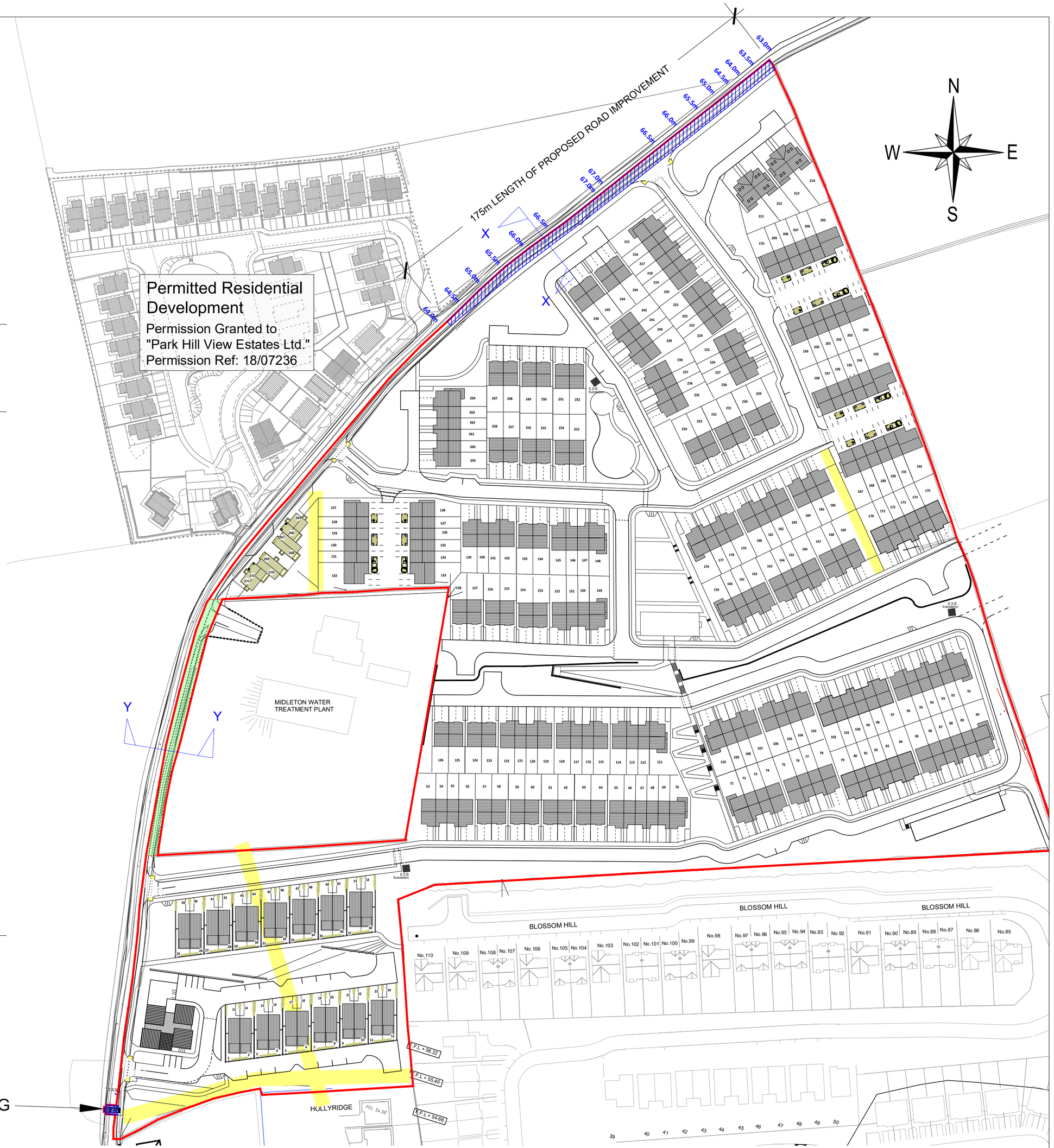


Public road improvement section Y-Y
Scale 1:25

Midleton
Water Treatment
Plant

PROPOSED NEW
PEDESTRIAN CROSSING

NOTE:
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OUTLINED ON DRAWINGS PREPARED BY
FOREST BIRD DESIGN AND BOK ENGINEERING



PROPOSED SITE LAYOUT PLAN
Scale 1 : 1000

Notes:
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PROPOSED PUBLIC ROAD WIDENING

LAND UNDER OWNERSHIP OF IRISH WATER NEW FOOTPATH

Rev	Date	Description	Drawn	Chk'd
A	09-10-2023	ISSUED FOR PLANNING APPLICATION	JB	BOK/GF

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Engineers • Architects
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CastleRock Homes

Drawing Status: LRD PLANNING APPLICATION

Client: CASTLE ROCK HOMES MIDLETON LTD.

Project: RESIDENTIAL DEVELOPMENT - BROOMFIELD MIDLETON

Drawing: PROPOSED SITE LAYOUT PLAN
PUBLIC ROAD IMPROVEMENTS

Date: 28-04-23

Scale: 1:500 @ A1

Drawing number: 22/6732-P-1113

Rev: A | Drawn: JB | Chk'd: GF

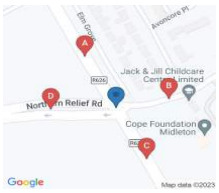
Appendix B Traffic Survey & Trip Generation

Broomfield Midleton - Castle Rock Homes

HEGSONS Design Consultancy limited

Trip Generation (vehs per dwelling)

Total dwellings in development: 272



Link Definition

Arm	Description
A	R626 North
B	Avonmore Ave
C	R626 South
D	NNR

2023 Survey - Traffic Counts

AM Peak Hour

	A	B	C	D	Total	
A	0	88	243	182	513	
B	77	0	55	105	237	
C	333	108	0	39	480	
D	302	301	15	0	618	
Total	712	497	313	326		1848

PM Peak Hour

	A	B	C	D	Total	
A	0	26	250	233	509	
B	27	0	102	189	318	
C	175	63	0	49	287	
D	183	124	27	0	334	
Total	385	89	352	471		1448

Surveyed Flows

2023 Surveyed Matrices

AM Peak Hour

Lights 96%

	A	B	C	D	
A	0	84	233	175	
B	74	0	53	101	
C	320	104	0	37	1774
D	290	289	14	0	

HGV 4%

	A	B	C	D	
A	0	4	10	7	
B	3	0	2	4	
C	13	4	0	2	74
D	12	12	1	0	1848

PM Peak Hour

Lights

	A	B	C	D	
A	0	25	240	224	
B	26	0	98	181	
C	168	60	0	47	1390
D	176	119	26	0	

HGV

	A	B	C	D	
A	0	1	10	9	
B	1	0	4	8	
C	7	3	0	2	58
D	7	5	1	0	1448

2025 Committed Developments Trips (Permitted ParkView Hill & Waterrock)

AM Peak Hour

	A	B	C	D	Total	
A	0	3	0	6	9	
B	3	0	4	19	26	
C	0	2	0	0	2	
D	22	15	2	0	39	
Total	25	20	6	25	76	76

PM Peak Hour

	A	B	C	D	Total	
A	0	2	0	15	17	
B	2	0	2	18	22	
C	0	4	0	5	9	
D	8	21	1	0	30	
Total	10	27	3	38	78	78

2030 Committed Developments Trips (Permitted Park View Hill & Phase 1 Waterrock)

AM Peak Hour

	A	B	C	D	Total	
A	0	3	0	39	42	
B	3	0	4	50	57	
C	0	2	0	5	7	
D	76	45	10	0	131	
Total	79	50	14	94	237	237

PM Peak Hour

	A	B	C	D	Total	
A	0	2	0	51	53	
B	2	0	2	47	51	
C	0	4	0	16	20	
D	30	50	5	0	85	
Total	32	56	7	114	209	209

Proposed Development Trips

AM Peak Hour

	A	B	C	D	Total	
A	0	3	0	0	3	
B	15	0	30	52	97	
C	0	6	0	0	6	
D	0	12	0	0	12	
Total	15	21	30	0		118

PM Peak Hour

	A	B	C	D	Total	
A	0	10	0	0	10	
B	5	0	9	17	31	
C	0	20	0	0	20	
D	0	40	0	0	40	
Total	5	70	9	0		101

2025 Matrices without Development (2023 Surveyed x Growth Factor)+ Committed Development Trips

Growth Factor 2023 to 2025 (LGVs): 1.04
Growth Factor 2023 to 2025 (HGVs): 1.08

AM Peak Hour

	A	B	C	D	
A	0	95	253	196	
B	83	0	61	128	
C	347	114	0	41	
D	337	329	18	0	2001

PM Peak Hour

	A	B	C	D	
A	0	29	260	258	
B	30	0	108	215	
C	182	70	0	56	
D	199	150	29	0	1586

2025 Matrices with Development (2025 Matrices with Phase 1 Development (54 units (20%)) + Committed Development Trips)

Phase 1 20%

AM Peak Hour

	A	B	C	D		
A	0	95	253	196		
B	86	0	67	139		
C	347	116	0	41		
D	337	331	18	0	2024	1.17%

PM Peak Hour

	A	B	C	D		
A	0	31	260	258		
B	31	0	110	218		
C	182	74	0	56		
D	199	158	29	0	1606	1.26%

2030 Matrices without Development (2023 Surveyed x Growth Factor)

MMP 70.0% Reduction SMART Targets

Growth Factor 2023 to 2034 (LGVs): 1.14
Growth Factor 2022 to 2034 (HGVs): 1.3

AM Peak Hour

	A	B	C	D	
A	0	103	279	236	
B	90	0	66	155	
C	382	125	0	48	
D	399	377	24	0	2284

PM Peak Hour

	A	B	C	D	
A	0	31	287	303	
B	32	0	118	250	
C	201	75	0	67	
D	231	177	34	0	1806

2030 Matrices with Development (2030 Matrices Phase 1-3 Development (272 units (100%)) + Committed Development Trips)

MMP 70.0% Reduction SMART Targets

AM Peak Hour

	A	B	C	D		
A	0	105	279	236		
B	101	0	87	192		
C	382	129	0	48		
D	399	385	24	0	2367	3.49%

PM Peak Hour

	A	B	C	D		
A	0	38	287	303		
B	36	0	125	261		
C	201	89	0	67		
D	231	205	34	0	1877	3.77%



IDASO

Survey Name: 070 23123 Broomfield, Midleton Co Cork
Site: Site 1
Location: R626/Avoncore Cottages/Upper Mill Road/Northern Relief Road
Date: Wed 15-Mar-2023

	A => A									A => B									A => C			
TIME	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV
07:00	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	6	0	0	11	5
07:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	36	8
07:30	0	0	0	0	0	0	0	0	0	0	0	7	3	0	0	0	10	10	0	0	44	10
07:45	0	0	0	0	0	0	0	0	0	0	0	12	2	0	0	0	14	14	0	0	41	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	25	7	0	0	0	32	32	0	0	132	26
08:00	0	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	7	7	0	0	55	8
08:15	0	0	0	0	0	0	0	0	0	0	0	13	1	0	0	0	14	14	0	0	73	6
08:30	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	1	17	18	1	0	79	2
08:45	0	0	0	0	0	0	0	0	0	0	0	37	0	0	2	0	39	41.6	0	0	102	2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	71	3	0	2	1	77	80.6	1	0	309	18
09:00	0	0	0	0	0	0	0	0	0	0	0	7	4	0	0	0	11	11	0	0	46	5
09:15	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	32	4
09:30	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3	3.5	0	0	54	4
09:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	37	7
H/TOT	0	0	0	0	0	0	0	0	0	0	0	14	5	1	0	0	20	20.5	0	0	169	20
10:00	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	31	4
10:15	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	4	0	0	32	3
10:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	27	7
10:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	23	6
H/TOT	0	0	0	0	0	0	0	0	0	0	0	8	3	0	0	0	11	11	0	0	113	20
11:00	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	4	5.3	1	0	23	2
11:15	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	4	0	0	30	1
11:30	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	6	0	0	35	2
11:45	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	35	4
H/TOT	0	0	0	0	0	0	0	0	0	0	0	14	5	0	1	0	20	21.3	1	0	123	9
12:00	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3	3.5	0	0	35	3
12:15	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0	0	34	0
12:30	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0	0	35	1
12:45	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	41	4
H/TOT	0	0	0	0	0	0	0	0	0	0	0	12	2	1	0	0	15	15.5	0	0	145	8
13:00	0	0	0	0	0	0	0	0	0	0	0	5	2	1	0	0	8	8.5	0	0	41	2
13:15	0	0	0	0	0	0	0	0	0	0	0	15	1	0	0	0	16	16	0	0	53	4
13:30	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0	35	0
13:45	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	6	6	0	0	28	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	32	4	1	0	0	37	37.5	0	0	157	7
14:00	0	0	0	0	0	0	0	0	0	0	0	8	0	0	1	0	9	10.3	0	0	35	4
14:15	0	0	0	0	0	0	0	0	0	0	0	24	2	0	0	0	26	26	0	0	77	9
14:30	0	0	0	0	0	0	0	0	0	2	0	8	2	0	1	0	13	12.7	1	0	40	3
14:45	0	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	6	7.3	0	0	37	5
H/TOT	0	0	0	0	0	0	0	0	0	2	0	45	4	0	3	0	54	56.3	1	0	189	21
15:00	0	0	0	0	0	0	0	0	0	0	0	2	3	1	1	0	7	8.8	0	0	39	2
15:15	0	0	0	0	0	0	0	0	0	0	0	11	1	2	0	0	14	15	1	0	34	3
15:30	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	39	1
15:45	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	42	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	26	4	3	1	0	34	36.8	1	0	154	9
16:00	0	0	0	0	0	0	0	0	0	0	0	6	0	0	1	0	7	8.3	0	0	37	1
16:15	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	6	0	0	30	2
16:30	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	36	3
16:45	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	4	0	0	32	5
H/TOT	0	0	0	0	0	0	0	0	0	0	0	22	5	0	1	0	28	29.3	0	0	135	11
17:00	0	0	0	0	0	0	0	0	0	0	0	6	1	0	1	0	8	9.3	0	0	43	3
17:15	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	7	7	0	0	38	6
17:30	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	9	9	0	0	44	3
17:45	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	6	6	0	0	32	6
H/TOT	0	0	0	0	0	0	0	0	0	0	0	25	4	0	1	0	30	31.3	0	0	157	18
18:00	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	45	0
18:15	0	0	0	0	0	0	0	0	0	0	0	7	2	0	0	0	9	9	0	0	47	3
18:30	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	18	1
18:45	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0	42	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	22	4	0	0	0	26	26	0	0	152	7
12 TOT	0	0	0	0	0	0	0	0	0	2	0	316	50	6	9	1	384	398.1	4	0	1935	174

					A => D									B => A								
OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	0	16	16	0	0	47	1	0	3	0	51	54.9	0	0	3	0	0	0	0	3	3
1	0	0	45	45.5	0	0	40	4	2	0	0	46	47	0	0	5	0	0	0	0	5	5
0	0	0	54	54	0	0	43	1	1	0	0	45	45.5	0	0	10	3	1	0	0	14	14.5
1	0	1	46	47.5	0	0	79	4	1	0	0	84	84.5	1	0	3	2	0	0	0	6	5.2
2	0	1	161	163	0	0	209	10	4	3	0	226	231.9	1	0	21	5	1	0	0	28	27.7
1	0	1	65	66.5	0	0	60	6	0	2	0	68	70.6	0	0	4	1	0	0	0	5	5
1	0	0	80	80.5	0	0	58	6	1	0	0	65	65.5	0	0	19	1	0	0	0	20	20
0	0	0	82	81.2	0	0	67	6	4	0	2	79	83	0	0	37	0	0	0	0	37	37
1	1	0	106	107.8	0	0	82	7	0	0	1	90	91	0	0	25	0	0	1	0	26	27.3
3	1	1	333	336	0	0	267	25	5	2	3	302	310.1	0	0	85	2	0	1	0	88	89.3
0	0	0	51	51	0	0	26	3	2	0	2	33	36	0	0	6	1	0	0	0	7	7
0	0	0	36	36	0	0	35	7	0	0	1	43	44	0	0	0	0	0	0	0	0	0
1	0	0	59	59.5	0	0	20	5	0	0	1	26	27	0	0	2	1	0	0	0	3	3
0	0	0	44	44	0	0	21	2	0	1	0	24	25.3	0	0	5	1	0	0	0	6	6
1	0	0	190	190.5	0	0	102	17	2	1	4	126	132.3	0	0	13	3	0	0	0	16	16
2	0	0	37	38	0	0	30	1	3	0	0	34	35.5	0	0	2	0	0	0	0	2	2
0	1	0	36	37.3	0	0	27	3	3	0	0	33	34.5	0	0	3	0	0	0	0	3	3
0	0	0	34	34	0	0	26	5	1	0	0	32	32.5	0	0	3	2	0	0	0	5	5
0	0	0	29	29	0	0	13	4	3	1	0	21	23.8	0	0	2	0	0	0	0	2	2
2	1	0	136	138.3	0	0	96	13	10	1	0	120	126.3	0	0	10	2	0	0	0	12	12
1	1	0	28	29	0	0	29	3	1	0	0	33	33.5	0	0	4	2	0	0	0	6	6
1	0	0	32	32.5	0	0	19	4	0	1	0	24	25.3	0	0	2	0	2	0	0	4	5
1	0	0	38	38.5	0	0	29	4	0	0	0	33	33	0	0	2	2	0	1	0	5	6.3
0	0	0	39	39	0	0	25	4	0	0	1	30	31	0	0	4	0	2	0	0	6	7
3	1	0	137	139	0	0	102	15	1	1	1	120	122.8	0	0	12	4	4	1	0	21	24.3
3	0	1	42	44.5	0	0	33	4	0	4	0	41	46.2	0	0	2	1	0	0	0	3	3
0	0	0	34	34	0	0	31	2	2	3	1	39	44.9	0	0	1	0	0	1	0	2	3.3
1	0	0	37	37.5	0	0	29	3	0	1	0	33	34.3	0	0	1	0	0	0	0	1	1
0	0	0	45	45	0	0	31	3	3	0	0	37	38.5	0	0	7	2	0	0	0	9	9
4	0	1	158	161	0	0	124	12	5	8	1	150	163.9	0	0	11	3	0	1	0	15	16.3
0	0	0	43	43	0	0	35	5	2	2	0	44	47.6	0	0	11	0	0	0	1	12	13
0	0	0	57	57	0	0	30	1	0	0	1	32	33	0	0	10	3	0	0	0	13	13
1	0	0	36	36.5	0	0	27	9	3	0	1	40	42.5	0	0	16	1	1	1	0	19	20.8
0	0	0	29	29	0	1	24	6	2	2	0	35	38	0	0	14	0	0	0	0	14	14
1	0	0	165	165.5	0	1	116	21	7	4	2	151	161.1	0	0	51	4	1	1	1	58	60.8
0	0	0	39	39	0	0	46	4	0	2	0	52	54.6	0	0	12	1	0	0	1	14	15
1	0	0	87	87.5	0	0	64	3	1	0	4	72	76.5	0	0	7	0	0	0	0	7	7
1	0	0	45	44.7	0	0	42	5	0	1	1	49	51.3	0	0	6	0	0	0	0	6	6
0	0	0	42	42	0	0	30	2	0	1	1	34	36.3	0	0	4	0	0	0	1	5	6
2	0	0	213	213.2	0	0	182	14	1	4	6	207	218.7	0	0	29	1	0	0	2	32	34
0	0	0	41	41	0	0	30	6	2	1	1	40	43.3	0	0	5	2	2	0	1	10	12
0	0	0	38	37.2	0	0	36	1	1	2	1	41	45.1	0	0	6	0	0	0	0	6	6
0	0	0	40	40	0	0	46	0	2	0	0	48	49	0	0	11	0	0	0	0	11	11
1	1	0	47	48.8	0	0	28	3	0	0	0	31	31	0	0	5	2	0	0	0	7	7
1	1	0	166	167	0	0	140	10	5	3	2	160	168.4	0	0	27	4	2	0	1	34	36
0	1	0	39	40.3	0	0	24	4	1	1	0	30	31.8	0	0	7	0	0	0	0	7	7
1	0	0	33	33.5	0	0	35	5	1	0	0	41	41.5	0	0	7	0	0	0	0	7	7
1	0	0	40	40.5	0	0	36	6	1	0	0	43	43.5	0	0	17	2	0	1	0	20	21.3
0	0	0	37	37	0	0	32	4	0	4	0	40	45.2	0	0	7	2	0	0	0	9	9
2	1	0	149	151.3	0	0	127	19	3	5	0	154	162	0	0	38	4	0	1	0	43	44.3
0	0	0	46	46	0	0	32	4	1	0	0	37	37.5	0	0	11	1	0	0	0	12	12
0	0	0	44	44	0	0	27	5	1	2	0	35	38.1	0	0	6	0	0	1	0	7	8.3
0	0	0	47	47	0	0	49	6	1	0	0	56	56.5	0	0	6	1	0	0	0	7	7
0	0	0	38	38	0	0	45	2	1	1	0	49	50.8	0	0	5	0	0	0	0	5	5
0	0	0	175	175	0	0	153	17	4	3	0	177	182.9	0	0	28	2	0	1	0	31	32.3
1	0	0	46	46.5	0	0	40	2	1	0	0	43	43.5	0	0	6	1	0	0	0	7	7
0	0	0	50	50	0	0	29	2	1	0	0	32	32.5	0	0	8	0	0	0	0	8	8
1	0	0	20	20.5	0	0	24	1	2	0	0	27	28	0	0	8	0	0	0	0	8	8
0	0	0	45	45	0	0	26	0	1	1	0	28	29.8	0	0	5	2	0	0	0	7	7
2	0	0	161	162	0	0	119	5	5	1	0	130	133.8	0	0	27	3	0	0	0	30	30
23	5	3	2144	2162	0	1	1737	178	52	36	19	2023	2114	1	0	352	37	8	6	4	408	423

B => B										B => C										B => D				
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1
0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	40	8	1
0	0	0	0	0	0	0	0	0	0	0	8	3	0	0	0	11	11	0	0	43	5	0
0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	1	13	14	0	0	46	3	0
0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	1	48	5	1
0	0	0	0	0	0	0	0	0	0	0	30	3	0	0	1	34	35	0	1	177	21	2
0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	23	23	1	0	81	4	0
0	0	0	0	0	0	0	0	0	1	0	35	3	0	0	0	39	38.2	0	0	80	3	1
0	0	0	0	0	0	0	0	0	0	0	18	2	0	0	0	20	20	0	0	77	8	0
0	0	0	0	0	0	0	0	0	0	0	25	1	0	0	0	26	26	0	0	36	7	0
0	0	0	0	0	0	0	0	0	1	0	101	6	0	0	0	108	107.2	1	0	274	22	1
0	0	0	0	0	0	0	0	0	0	0	15	0	1	0	0	16	16.5	0	0	35	3	0
0	0	0	0	0	0	0	0	0	0	0	10	2	0	0	0	12	12	0	0	19	0	2
0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	0	17	2	0
0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	19	19	0	0	25	4	0
0	0	0	0	0	0	0	0	0	0	0	53	3	1	0	0	57	57.5	0	0	96	9	2
0	0	0	0	0	0	0	0	0	0	0	12	3	0	0	0	15	15	0	0	12	3	1
0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0	18	5	1
0	0	0	0	0	0	0	0	0	0	0	7	1	0	1	0	9	10.3	0	0	26	0	0
0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0	13	1	1
0	0	0	0	0	0	0	0	0	0	0	33	4	0	1	0	38	39.3	0	0	69	9	3
0	0	0	0	0	0	0	0	0	0	1	6	1	0	0	0	8	7.4	0	0	13	0	0
0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	9	9	0	0	10	2	0
0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	9	9	0	0	16	1	2
0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	14	14	0	0	19	1	1
0	0	0	0	0	0	0	0	0	0	1	36	3	0	0	0	40	39.4	0	0	58	4	3
0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	23	23	0	0	27	1	2
0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	12	0	0	20	3	0
0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	27	0	0
0	0	0	0	0	0	0	0	0	1	0	16	4	0	0	0	21	20.2	0	0	20	1	3
0	0	0	0	0	0	0	0	0	1	0	61	5	0	0	0	67	66.2	0	0	94	5	5
0	0	0	0	0	0	0	0	0	0	0	17	3	0	0	0	20	20	0	0	20	2	2
0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	0	21	3	1
0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	23	2	2
0	0	0	0	0	0	0	0	0	0	0	7	2	0	0	0	9	9	0	0	30	3	2
0	0	0	0	0	0	0	0	0	0	0	43	7	0	0	0	50	50	0	0	94	10	7
0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	8	8	0	0	23	1	1
0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	41	1	1
0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	0	34	3	1
0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	15	15	0	0	27	5	0
0	0	0	0	0	0	0	0	0	0	0	40	2	0	0	0	42	42	0	0	125	10	3
0	0	0	0	0	0	0	0	0	0	0	7	3	0	1	0	11	12.3	0	1	22	0	2
0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	17	17	0	0	26	3	1
0	0	0	0	0	0	0	0	0	0	0	20	1	0	0	0	21	21	0	0	22	2	0
0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	0	28	1	1
0	0	0	0	0	0	0	0	0	0	0	53	5	0	1	0	59	60.3	0	1	98	6	4
0	0	0	0	0	0	0	0	0	0	0	11	2	0	0	0	13	13	0	0	27	4	1
0	0	0	0	0	0	0	0	0	0	0	8	2	0	0	0	10	10	0	0	34	5	1
0	0	0	0	0	0	0	0	0	0	0	14	2	0	0	0	16	16	0	0	20	5	1
0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	16	16	0	0	26	0	0
0	0	0	0	0	0	0	0	0	0	0	49	6	0	0	0	55	55	0	0	107	14	3
0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	0	0	30	3	0
0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	16	16	0	0	25	2	1
0	0	0	0	0	0	0	0	0	0	0	12	1	0	0	0	13	13	0	0	23	5	1
0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	23	23	0	0	26	3	1
0	0	0	0	0	0	0	0	0	0	0	59	1	0	0	0	60	60	0	0	104	13	3
0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0	32	2	0
0	0	0	0	0	0	0	0	0	0	0	15	1	0	0	0	16	16	0	0	26	3	0
0	0	0	0	0	0	0	0	0	0	0	13	2	0	0	0	15	15	0	0	23	1	0
0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	12	0	0	40	0	0
0	0	0	0	0	0	0	0	0	0	0	51	3	0	0	0	54	54	0	0	121	6	0
0	0	0	0	0	0	0	0	0	2	1	609	48	1	2	1	664	665.9	1	2	1417	129	36

				C => A									C => B									
OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C
0	0	49	49.5	0	0	13	2	1	0	0	16	16.5	0	0	4	0	0	0	0	4	4	0
1	0	49	50.3	0	0	32	9	0	0	0	41	41	0	0	3	0	0	0	0	3	3	0
0	0	49	49	0	0	29	4	0	0	0	33	33	0	0	4	1	0	0	0	5	5	0
1	0	56	57.2	0	0	35	4	1	0	0	40	40.5	0	0	12	1	0	0	0	13	13	0
2	0	203	206	0	0	109	19	2	0	0	130	131	0	0	23	2	0	0	0	25	25	0
0	1	87	87.2	0	0	36	7	1	1	0	45	46.8	0	0	9	2	0	0	0	11	11	0
1	0	85	86.8	1	0	63	6	0	1	0	71	71.5	0	0	12	1	0	0	0	13	13	0
0	0	85	85	0	0	61	7	0	0	0	68	68	1	0	7	1	0	0	0	9	8.2	0
1	0	44	45.3	0	0	56	2	1	0	0	59	59.5	0	0	19	3	0	0	0	22	22	0
2	1	301	304.3	1	0	216	22	2	2	0	243	245.8	1	0	47	7	0	0	0	55	54.2	0
1	0	39	40.3	0	0	34	3	1	0	1	39	40.5	0	0	21	2	0	0	0	23	23	0
2	0	23	26.6	0	0	23	1	3	0	0	27	28.5	0	0	11	1	1	0	0	13	13.5	0
2	0	21	23.6	0	0	26	3	1	0	0	30	30.5	0	0	6	2	1	0	0	9	9.5	0
3	0	32	35.9	0	0	28	2	1	0	0	31	31.5	1	0	9	0	0	0	0	10	9.2	0
8	0	115	126.4	0	0	111	9	6	0	1	127	131	1	0	47	5	2	0	0	55	55.2	0
2	1	19	23.1	1	0	28	3	0	0	0	32	31.2	0	0	14	1	0	0	0	15	15	0
0	0	24	24.5	0	0	26	5	0	0	0	31	31	0	0	13	3	0	0	0	16	16	0
0	0	26	26	0	0	21	1	1	0	0	23	23.5	0	0	7	1	0	0	0	8	8	0
3	0	18	22.4	0	0	23	8	0	1	1	33	35.3	0	0	7	5	0	0	0	12	12	0
5	1	87	96	1	0	98	17	1	1	1	119	121	0	0	41	10	0	0	0	51	51	0
1	0	14	15.3	0	0	33	3	0	1	0	37	38.3	0	0	6	1	0	0	0	7	7	0
3	0	15	18.9	1	0	31	1	1	0	0	34	33.7	0	0	15	1	0	0	0	16	16	0
1	0	20	22.3	0	0	40	4	0	0	0	44	44	0	0	14	3	1	0	0	18	18.5	0
0	0	21	21.5	0	0	34	2	0	0	1	37	38	0	0	21	0	1	0	0	22	22.5	0
5	0	70	78	1	0	138	10	1	1	1	152	154	0	0	56	5	2	0	0	63	64	0
2	0	32	35.6	0	0	38	2	1	0	1	42	43.5	0	0	15	1	0	0	0	16	16	0
1	0	24	25.3	0	0	36	5	0	0	0	41	41	0	0	13	0	0	0	0	13	13	0
2	0	29	31.6	0	0	39	4	0	0	0	43	43	0	0	11	0	0	0	0	11	11	0
1	0	25	27.8	0	0	65	2	0	0	0	67	67	0	0	7	1	0	0	0	8	8	0
6	0	110	120.3	0	0	178	13	1	0	1	193	194.5	0	0	46	2	0	0	0	48	48	0
0	0	24	25	1	0	68	6	0	1	0	76	76.5	0	0	14	2	0	0	0	16	16	0
3	0	28	32.4	0	0	68	4	0	0	0	72	72	0	0	19	1	0	0	0	20	20	0
1	0	28	30.3	0	0	66	3	0	0	2	71	73	0	0	19	0	0	0	0	19	19	0
1	1	37	40.3	0	0	50	2	0	0	0	52	52	0	0	26	1	0	0	1	28	29	0
5	1	117	128	1	0	252	15	0	1	2	271	273.5	0	0	78	4	0	0	1	83	84	0
1	1	27	29.8	0	0	52	3	1	0	0	56	56.5	0	0	14	2	0	0	0	16	16	0
1	0	44	45.8	0	0	33	5	0	0	0	38	38	0	0	24	1	0	0	0	25	25	0
1	0	39	40.8	0	0	44	2	1	0	0	47	47.5	0	0	12	2	0	0	0	14	14	0
0	0	32	32	0	0	45	6	0	0	0	51	51	0	0	13	1	0	1	1	16	18.3	0
3	1	142	148.4	0	0	174	16	2	0	0	192	193	0	0	63	6	0	1	1	71	73.3	0
2	0	27	30	0	0	45	4	1	0	0	50	50.5	0	0	18	1	0	0	1	20	21	0
1	0	31	32.8	0	0	52	3	0	0	0	55	55	0	0	17	1	0	0	0	18	18	0
1	0	25	26.3	0	0	46	8	1	0	0	55	55.5	0	0	16	3	0	0	0	19	19	0
3	0	33	37.4	0	0	31	3	0	0	0	34	34	0	0	21	2	0	0	0	23	23	0
7	0	116	126.5	0	0	174	18	2	0	0	194	195	0	0	72	7	0	0	1	80	81	0
3	0	35	39.4	0	0	59	0	6	0	0	65	68	0	0	29	1	0	0	0	30	30	0
0	0	40	40.5	0	0	65	5	0	0	0	70	70	0	0	27	1	0	0	0	28	28	0
1	0	27	28.8	0	0	45	3	0	0	0	48	48	0	0	16	1	0	0	0	17	17	0
0	0	26	26	0	0	53	2	0	0	0	55	55	0	0	13	0	0	0	0	13	13	0
4	0	128	134.7	0	0	222	10	6	0	0	238	241	0	0	85	3	0	0	0	88	88	0
0	0	33	33	0	0	47	11	0	0	0	58	58	0	0	17	1	0	1	0	19	20.3	0
1	0	29	30.8	0	0	62	5	2	0	0	69	70	0	0	20	0	0	0	0	20	20	0
2	0	31	34.1	0	0	62	5	0	0	0	67	67	0	0	29	2	0	0	0	31	31	0
0	0	30	30.5	1	0	50	5	0	0	0	56	55.2	0	0	21	3	1	0	0	25	25.5	0
3	0	123	128.4	1	0	221	26	2	0	0	250	250.2	0	0	87	6	1	1	0	95	96.8	0
0	0	34	34	0	0	54	4	0	0	0	58	58	0	0	26	0	0	0	0	26	26	0
0	0	29	29	0	0	60	2	1	0	0	63	63.5	0	0	25	0	0	0	0	25	25	0
1	0	25	26.3	0	0	44	1	0	0	0	45	45	0	0	15	0	0	0	0	15	15	0
0	0	40	40	0	0	41	1	0	0	0	42	42	0	0	19	1	0	0	0	20	20	0
1	0	128	129.3	0	0	199	8	1	0	0	208	208.5	0	0	85	1	0	0	0	86	86	0
51	4	1640	1726	5	0	2092	183	26	5	6	2317	2339	2	0	730	58	5	2	3	800	806.5	0

C => C								C => D									D => A					
M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2
1	3	1	0	0	0	5	4.4	0	0	0	0	0	0	0	0	0	0	0	9	2	1	0
0	4	1	1	0	0	6	6.5	0	0	0	0	0	0	0	0	0	0	0	10	1	1	0
0	1	1	1	0	0	3	3.5	0	0	0	0	0	0	0	0	0	0	0	13	1	0	1
0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	20	2	0	0
1	18	4	2	0	0	25	25.4	0	0	0	0	0	0	0	0	0	0	0	52	6	2	1
0	7	2	0	0	1	10	11	0	0	0	0	0	0	0	0	0	0	0	22	6	1	1
0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	31	5	1	1
0	6	0	1	0	0	7	7.5	0	0	0	0	0	0	0	0	0	0	0	59	6	0	0
0	9	2	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	43	3	0	0
0	32	5	1	0	1	39	40.5	0	0	0	0	0	0	0	0	0	0	0	155	20	2	2
0	6	2	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	33	4	1	2
0	7	1	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	14	3	1	1
0	7	3	2	0	0	12	13	0	0	0	0	0	0	0	0	0	0	0	20	4	1	1
0	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	13	2	2	1
0	22	7	2	0	0	31	32	0	0	0	0	0	0	0	0	0	0	0	80	13	5	5
0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	10	5	1	2
0	9	2	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	11	2	1	0
0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	13	6	0	0
0	7	4	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	13	3	1	0
0	29	6	0	0	0	35	35	0	0	0	0	0	0	0	0	0	0	0	47	16	3	2
0	7	1	1	0	0	9	9.5	0	0	0	0	0	0	0	0	0	0	0	15	3	1	1
0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	8	0	2	0
0	12	2	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	18	1	1	1
0	7	1	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	19	5	1	0
0	37	4	1	0	0	42	42.5	0	0	0	0	0	0	0	0	0	0	0	60	9	5	2
0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	25	3	1	2
0	15	0	1	0	0	16	16.5	0	0	0	0	0	0	0	0	0	0	0	27	2	2	0
0	11	1	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	24	3	3	1
0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	32	4	3	0
0	49	2	1	0	0	52	52.5	0	0	0	0	0	0	0	0	0	0	0	108	12	9	3
0	19	3	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	38	4	1	1
0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	51	2	2	0
0	16	1	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	29	1	0	1
0	13	4	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	38	6	1	2
0	59	8	0	0	0	67	67	0	0	0	0	0	0	0	0	0	0	0	156	13	4	4
0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	1	0	46	4	1	0
0	19	2	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	31	2	4	0
0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	29	2	1	2
0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	49	4	0	2
0	55	3	0	0	0	58	58	0	0	0	0	0	0	0	0	0	1	0	155	12	6	4
0	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	51	3	2	1
0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	44	8	0	0
0	14	2	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	30	5	1	3
0	18	4	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	30	7	2	2
0	51	6	0	0	0	57	57	0	0	0	0	0	0	0	0	0	0	0	155	23	5	6
0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	34	5	1	1
0	16	2	1	0	0	19	19.5	0	0	0	0	0	0	0	0	0	0	0	40	10	1	2
0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	55	8	0	2
0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	45	6	7	2
0	48	2	1	0	0	51	51.5	0	0	0	0	0	0	0	0	0	0	0	174	29	9	7
0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	51	6	3	2
0	11	2	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	56	6	0	0
0	13	1	1	0	0	15	15.5	0	0	0	0	0	0	0	0	0	0	0	59	5	0	1
0	6	2	1	0	0	9	9.5	0	0	0	0	0	0	0	0	0	0	0	41	4	0	0
0	43	5	2	0	0	50	51	0	0	0	0	0	0	0	0	0	0	0	207	21	3	3
0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	54	6	0	1
0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	40	4	0	0
0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	36	1	0	0
0	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	30	5	1	0
0	38	0	0	0	0	38	38	0	0	0	0	0	0	0	0	0	0	0	160	16	1	1
1	481	52	10	0	1	545	550.4	0	0	0	0	0	0	0	0	0	1	0	1509	190	54	40

			D => B									D => C									
PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C
1	13	14.5	0	0	9	0	0	0	0	9	9	0	0	0	2	0	0	0	2	2	0	0
1	13	14.5	0	0	7	1	0	1	1	10	12.3	0	0	1	0	0	0	0	1	1	0	0
1	16	18.3	0	0	12	1	0	2	1	16	19.6	0	0	2	0	0	0	0	2	2	0	0
0	22	22	0	0	14	1	1	4	0	20	25.7	0	0	0	2	0	0	0	2	2	0	0
3	64	69.3	0	0	42	3	1	7	2	55	66.6	0	0	3	4	0	0	0	7	7	0	0
0	30	31.8	0	0	13	2	0	1	0	16	17.3	0	0	1	0	0	0	0	1	1	0	0
2	40	43.8	0	0	19	2	1	2	0	24	27.1	0	0	4	0	1	0	0	5	5.5	0	0
1	66	67	0	0	27	3	0	1	0	31	32.3	0	0	2	0	0	0	0	2	2	0	0
0	46	46	0	0	33	1	0	0	0	34	34	0	0	5	2	0	0	0	7	7	0	0
3	182	188.6	0	0	92	8	1	4	0	105	110.7	0	0	12	2	1	0	0	15	15.5	0	0
2	42	47.1	0	0	30	2	0	0	0	32	32	0	0	8	0	1	0	0	9	9.5	0	0
0	19	20.8	0	0	10	1	1	2	0	14	17.1	0	0	2	1	0	0	0	3	3	0	0
0	26	27.8	0	0	15	1	1	1	0	18	19.8	0	0	2	1	0	1	0	4	5.3	0	0
0	18	20.3	0	0	16	4	0	2	0	22	24.6	0	0	6	3	0	0	0	9	9	0	0
2	105	116	0	0	71	8	2	5	0	86	93.5	0	0	18	5	1	1	0	25	26.8	0	0
0	18	21.1	0	0	20	3	1	4	0	28	33.7	0	0	4	0	0	0	0	4	4	0	0
0	14	14.5	0	0	10	1	0	2	0	13	15.6	0	0	4	4	2	0	0	10	11	0	0
0	19	19	0	0	14	4	1	0	0	19	19.5	0	0	4	2	0	0	0	6	6	0	0
0	17	17.5	0	0	6	4	2	4	0	16	22.2	0	0	3	2	0	0	0	5	5	0	0
0	68	72.1	0	0	50	12	4	10	0	76	91	0	0	15	8	2	0	0	25	26	0	0
0	20	21.8	0	0	12	1	1	3	0	17	21.4	0	0	5	0	0	0	0	5	5	0	0
0	10	11	0	0	13	3	2	2	0	20	23.6	0	0	7	1	0	0	0	8	8	0	0
1	22	24.8	0	0	14	2	3	1	0	20	22.8	0	0	4	0	0	0	0	4	4	0	0
1	26	27.5	0	0	20	0	0	2	0	22	24.6	0	0	9	1	0	0	0	10	10	0	0
2	78	85.1	0	0	59	6	6	8	0	79	92.4	0	0	25	2	0	0	0	27	27	0	0
0	31	34.1	0	0	14	3	2	1	0	20	22.3	0	0	7	0	0	0	1	8	9	0	0
0	31	32	0	0	12	2	1	3	0	18	22.4	0	0	12	3	1	0	0	16	16.5	0	0
0	31	33.8	0	0	11	1	0	1	0	13	14.3	0	0	6	1	0	0	0	7	7	0	0
0	39	40.5	0	0	17	1	0	2	1	21	24.6	0	0	7	3	0	0	0	10	10	0	0
0	132	140.4	0	0	54	7	3	7	1	72	83.6	0	0	32	7	1	0	1	41	42.5	0	0
0	44	45.8	0	1	16	2	2	1	0	22	23.7	0	0	8	2	0	0	0	10	10	0	0
1	56	58	0	0	42	1	0	0	0	43	43	0	0	10	1	0	0	0	11	11	0	0
0	31	32.3	0	0	22	2	0	3	0	27	30.9	0	0	6	1	0	0	0	7	7	0	0
1	48	52.1	0	0	19	0	1	0	0	20	20.5	0	0	8	1	0	0	0	9	9	0	0
2	179	188.2	0	1	99	5	3	4	0	112	118.1	0	0	32	5	0	0	0	37	37	0	0
1	53	53.7	0	0	15	3	0	0	0	18	18	0	0	11	2	0	0	0	13	13	0	0
1	38	41	0	0	23	3	0	3	0	29	32.9	0	0	2	0	0	0	0	2	2	0	0
0	34	37.1	1	0	18	1	0	3	0	23	26.1	0	0	5	1	0	0	0	6	6	0	0
0	55	57.6	0	0	39	7	1	4	0	51	56.7	0	0	13	0	0	0	0	13	13	0	0
2	180	189.4	1	0	95	14	1	10	0	121	133.7	0	0	31	3	0	0	0	34	34	0	0
0	57	59.3	0	0	22	1	2	3	0	28	32.9	0	0	3	1	0	0	0	4	4	0	0
0	52	52	0	0	30	3	0	1	0	34	35.3	0	0	7	1	0	0	0	8	8	0	0
0	39	43.4	0	0	24	1	1	1	0	27	28.8	0	0	6	0	0	0	0	6	6	0	0
0	41	44.6	0	0	24	2	0	1	0	27	28.3	0	0	9	0	0	0	0	9	9	0	0
0	189	199.3	0	0	100	7	3	6	0	116	125.3	0	0	25	2	0	0	0	27	27	0	0
0	41	42.8	0	0	35	3	1	0	0	39	39.5	0	0	7	2	1	0	0	10	10.5	0	0
0	53	56.1	0	0	34	5	0	2	0	41	43.6	0	1	8	1	0	1	0	11	11.7	0	0
0	65	67.6	0	0	31	2	2	1	0	36	38.3	0	0	7	1	0	0	0	8	8	0	0
0	60	66.1	0	0	44	8	1	2	0	55	58.1	0	0	6	1	0	0	0	7	7	0	0
0	219	232.6	0	0	144	18	4	5	0	171	179.5	0	1	28	5	1	1	0	36	37.2	0	0
0	62	66.1	0	0	38	2	1	0	0	41	41.5	0	0	9	2	0	0	0	11	11	0	0
0	62	62	1	0	46	1	0	1	0	49	49.5	0	0	2	0	0	0	0	2	2	0	0
0	65	66.3	0	0	41	7	0	1	0	49	50.3	0	0	4	2	0	0	0	6	6	0	0
0	45	45	0	1	38	0	1	0	0	40	39.9	0	0	8	0	0	0	0	8	8	0	0
0	234	239.4	1	1	163	10	2	2	0	179	181.2	0	0	23	4	0	0	0	27	27	0	0
0	61	62.3	0	0	49	2	0	0	0	51	51	0	0	11	0	0	0	0	11	11	0	0
0	44	44	0	0	41	5	1	1	1	49	51.8	0	0	6	0	0	0	0	6	6	0	0
0	37	37	0	0	27	1	0	0	0	28	28	0	0	3	0	0	0	0	3	3	0	0
0	36	36.5	0	0	48	2	1	0	0	51	51.5	0	0	15	1	0	0	0	16	16	0	0
0	178	179.8	0	0	165	10	2	1	1	179	182.3	0	0	35	1	0	0	0	36	36	0	0
14	1808	1900	2	2	1134	108	32	69	4	1351	1458	0	1	279	48	6	2	1	337	343	0	0

D => D						
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Broomfield Midleton - Castle Rock Homes

HEGSONS Design Consultancy limited

Trip Generation (vehs per dwelling)

Total dwellings in development: 272



Link Definition

Arm	Description
A	Broomfield Road North
B	Bloomfield Crescent East
C	Broomfield Road South
D	Brookdale West

2023 Survey - Traffic Counts

AM Peak Hour

	A	B	C	D	Total	
A	1	1	4	0	6	
B	1	0	181	4	186	
C	9	410	0	37	456	
D	0	2	11	0	13	
Total	11	413	196	41		661

PM Peak Hour

	A	B	C	D	Total	
A	0	3	5	1	9	
B	0	0	271	1	272	
C	8	169	0	20	197	
D	0	3	30	0	33	
Total	8	172	276	22		511

Surveyed Flows

2023 Surveyed Matrices

AM Peak Hour

Lights 95%

	A	B	C	D		
A	1	1	4	0		
B	1	0	172	4		
C	9	390	0	35	628	
D	0	2	10	0		

HGV 5%

	A	B	C	D		
A	0	0	0	0		
B	0	0	9	0		
C	0	21	0	2	33	
D	0	0	1	0	661	

PM Peak Hour

Lights 95%

	A	B	C	D	
A	0	3	5	1	
B	0	0	257	1	
C	8	161	0	19	485
D	0	3	29	0	

HGV 5%

	A	B	C	D	
A	0	0	0	0	
B	0	0	14	0	
C	0	8	0	1	26
D	0	0	2	0	511

2025 Committed Developments Trips (Permitted ParkView Hill & Waterrock)

AM Peak Hour

	A	B	C	D	Total	
A	0	4	20	0	24	
B	0	0	6	0	6	
C	7	12	0	0	19	
D	0	0	0	0	0	
Total	7	16	26	0	49	49

PM Peak Hour

	A	B	C	D	Total	
A	0	0	10	0	10	
B	1	0	12	0	13	
C	18	10	0	0	28	
D	0	0	0	0	0	
Total	19	10	22	0		51

2030 Committed Developments Trips (Permitted Park View Hill & Phase 1 Waterrock)

AM Peak Hour

	A	B	C	D	Total	
A	0	4	20	0	24	
B	0	0	37	0	37	
C	7	42	0	0	49	
D	0	0	0	0	0	
Total	7	46	57	0	110	110

PM Peak Hour

	A	B	C	D	Total	
A	0	0	10	0	10	
B	1	0	41	0	42	
C	18	39	0	0	57	
D	0	0	0	0	0	
Total	19	39	51	0	109	109

Proposed Development Trips

AM Peak Hour

	A	B	C	D	Total	
A	0	53	0	0	53	
B	12	0	21	0	33	
C	0	97	0	0	97	
D	0	0	0	0	0	
Total	12	150	21	0		183

PM Peak Hour

	A	B	C	D	Total	
A	0	17	0	0	17	
B	38	0	70	0	108	
C	0	31	0	0	31	
D	0	0	0	0	0	
Total	38	48	70	0		156

2025 Matrices without Development (2023 Surveyed x Growth Factor)+ Committed Development Trips

Growth Factor 2023 to 2025 (LGVs): 1.04
Growth Factor 2023 to 2025 (HGVs): 1.08

AM Peak Hour

	A	B	C	D	
A	1	5	24	0	
B	1	0	195	4	
C	16	439	0	39	
D	0	2	11	0	738

PM Peak Hour

	A	B	C	D	
A	0	3	15	1	
B	1	0	294	1	
C	26	186	0	21	
D	0	3	31	0	583

2025 Matrices with Development (2025 Matrices with Phase 1 Development (54 units (20%)) + Committed Development Trips)

Phase 1 20%

AM Peak Hour

	A	B	C	D		
A	1	16	24	0		
B	3	0	199	4		
C	16	459	0	39		
D	0	2	11	0	774	4.73%

PM Peak Hour

	A	B	C	D		
A	0	7	15	1		
B	9	0	308	1		
C	26	192	0	21		
D	0	3	31	0	615	5.08%

2030 Matrices without Development (2023 Surveyed x Growth Factor)

MMP 70.0% Reduction SMART Targets

Growth Factor 2023 to 2034 (LGVs): 1.14
Growth Factor 2022 to 2034 (HGVs): 1.3

AM Peak Hour

	A	B	C	D	
A	1	4	19	0	
B	1	0	234	5	
C	15	500	0	42	
D	0	2	13	0	836

PM Peak Hour

	A	B	C	D	
A	0	3	13	1	
B	1	0	340	1	
C	22	221	0	23	
D	0	3	34	0	663

2030 Matrices with Development (2030 Matrices Phase 1-3 Development (270 units (100%)) + Committed Development Trips)

MMP 70.0% Reduction SMART Targets

AM Peak Hour

	A	B	C	D		
A	1	41	19	0		
B	10	0	248	5		
C	15	568	0	42		
D	0	2	13	0	964	13.29%

PM Peak Hour

	A	B	C	D		
A	0	15	13	1		
B	27	0	389	1		
C	22	243	0	23		
D	0	3	34	0	772	14.14%



IDASO

Survey Name: 070 23123 Broomfield, Midleton Co Cork
Site: Site 2
Location: Broomfield Ct/Avoncore Pl/Brookdale
Date: Wed 15-Mar-2023

	A => A									A => B											
TIME	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
08:00	0	0	0	0	1	0	0	1	1.5	0	0	0	0	1	0	0	1	1.5	0	0	1
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
H/TOT	0	0	0	0	1	0	0	1	1.5	0	0	0	0	1	0	0	1	1.5	1	0	7
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
09:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	5
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	0	0	3
10:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	0	0	6
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	4
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	3
12:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	3	0	0	6
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	0	0	6
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	3
17:00	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
H/TOT	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	6
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	4
12 TOT	0	0	1	0	1	0	0	2	2.5	0	0	8	2	3	0	0	13	14.5	1	0	74

A => C						A => D									B => A						
LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
0	0	0	0	2	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	9	8.2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	1	0	2	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	1	0	6	7.3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
0	0	1	0	4	5.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	1	0	2	3.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	2	0	10	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	2	4.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	2	0	7	9.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	2	4.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	8	10.6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	0	4	5.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
1	0	1	0	7	8.3	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	2	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1	0	1	0	8	9.3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
0	2	0	0	9	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	2	3.3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	1	0	16	18.3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	0	2	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
2	0	1	0	9	10.3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0
8	3	11	0	97	112	0	0	1	0	0	0	0	1	1	0	0	6	3	3	0	0

		B => B									B => C										
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C
0	0	0	0	0	0	0	0	0	0	0	0	0	40	7	1	0	0	48	48.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	50	5	0	1	0	56	57.3	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	54	5	1	1	1	62	64.8	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	56	6	1	0	0	64	63.9	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	200	23	3	2	1	230	234.5	0	0
1	1.5	0	0	0	0	0	0	0	0	0	1	0	93	4	0	0	1	99	99.2	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	112	4	1	1	0	118	119.8	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	110	10	0	1	0	121	122.3	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	63	7	0	1	0	72	72.5	0	0
1	1.5	0	0	0	0	0	0	0	0	0	2	0	378	25	1	3	1	410	413.8	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	36	3	1	1	0	41	42.8	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	24	1	2	1	0	28	30.3	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	19	4	0	2	0	25	27.6	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	34	3	0	3	0	40	43.9	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	113	11	3	7	0	134	144.6	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	18	6	1	1	1	27	29.8	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	22	4	1	0	0	27	27.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	1	0	23	24.3	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	16	1	0	3	0	20	23.9	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	78	11	2	5	1	97	105.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	16	3	1	0	0	21	20.9	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	13	3	1	3	0	20	24.4	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	15	2	2	0	0	19	20	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	28	2	4	0	0	34	36	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	72	10	8	3	0	94	101.3	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	42	2	1	2	0	47	50.1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	24	2	0	1	0	27	28.3	0	0
1	1	0	0	1	0	0	0	0	1	1	0	0	25	2	0	1	0	28	29.3	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	37	4	3	1	1	46	49.8	0	0
1	1	0	0	1	0	0	0	0	1	1	0	0	128	10	4	5	1	148	157.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	31	2	2	0	0	35	36	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	26	7	2	2	0	37	40.6	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	40	3	2	2	0	47	50.6	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	41	6	2	2	3	54	60.6	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	138	18	8	6	3	173	187.8	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	38	0	1	0	0	39	39.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	36	1	1	1	0	39	40.8	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	42	4	1	0	0	47	47.5	0	0
1	1.5	0	0	0	0	0	0	0	0	0	0	0	37	5	0	0	1	43	44	0	0
1	1.5	0	0	0	0	0	0	0	0	0	0	0	153	10	3	1	1	168	171.8	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	30	2	4	3	1	41	47.3	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	36	3	0	1	0	40	41.3	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	35	4	0	0	0	39	39	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	30	3	0	3	0	36	39.9	0	0
1	1	0	0	0	0	0	0	0	0	0	0	1	131	12	4	7	1	156	167.5	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	36	5	1	3	0	45	49.4	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	41	6	1	0	0	48	48.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	41	7	1	2	0	51	54.1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	34	2	0	0	0	36	36	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	152	20	3	5	0	180	188	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	36	4	0	0	0	40	40	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	37	1	1	2	0	41	44.1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	36	5	1	1	0	43	44.8	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	43	4	1	0	0	48	48.5	0	0
1	1	0	0	0	0	0	0	0	0	0	0	0	152	14	3	3	0	172	177.4	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	34	2	0	0	0	36	36	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	39	3	0	0	0	42	42	0	0
2	2.5	0	0	0	0	0	0	0	0	0	0	0	32	3	0	1	0	36	37.3	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	58	3	0	0	0	61	61	0	0
4	4.5	0	0	0	0	0	0	0	0	0	0	0	163	11	0	1	0	175	176.3	0	0
12	13.5	0	0	1	0	0	0	0	1	1	2	3	1858	175	42	48	9	2137	2226	1	0

B => D							C => A									C => B					
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2
0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	11	0	0	0
0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	10	2	0	1
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	15	4	0	2
0	0	0	0	0	0	0	0	0	4	0	1	0	0	5	5.5	0	0	25	4	0	4
0	0	0	0	0	0	0	0	0	11	1	1	0	0	13	13.5	0	0	61	10	0	7
0	1	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	22	5	0	1
0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2.3	0	0	29	5	1	0
0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	35	5	0	2
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	71	2	0	2
1	1	0	0	0	2	2	0	0	3	0	0	1	0	4	5.3	0	0	157	17	1	5
1	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	44	7	0	0
0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	16	2	2	2
1	0	0	0	0	1	1	0	0	3	1	0	1	0	5	6.3	0	0	14	2	2	0
0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2.3	0	0	19	4	0	1
2	0	0	0	0	2	2	0	0	6	1	0	2	0	9	11.6	0	0	93	15	4	3
0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	21	4	1	4
0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	15	5	0	1
0	1	0	0	0	1	1	0	0	1	0	1	0	0	2	2.5	0	0	21	5	0	0
0	0	0	0	0	0	0	0	0	1	1	0	2	0	4	6.6	0	0	8	7	2	2
0	1	0	0	0	1	1	0	0	7	1	1	2	0	11	14.1	0	0	65	21	3	7
0	0	0	0	0	0	0	0	0	2	0	0	2	0	4	6.6	0	0	16	2	1	2
0	1	0	0	0	1	1	0	0	1	1	0	1	0	3	4.3	0	0	21	5	2	1
0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	0	0	24	5	3	1
0	0	0	0	0	0	0	0	0	2	0	0	1	0	3	4.3	0	0	31	0	1	1
0	1	0	0	0	1	1	0	0	6	1	1	4	0	12	17.7	0	0	92	12	7	5
1	0	0	0	0	1	1	0	0	2	0	0	0	0	2	2	0	0	20	4	3	1
1	0	0	0	0	1	1	0	0	1	1	0	0	0	2	2	0	0	21	2	1	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	2	0	1
2	0	0	0	0	2	2	0	0	1	0	0	0	0	1	1	0	0	20	1	0	2
4	0	0	0	0	4	4	0	0	4	1	0	0	0	5	5	0	0	84	9	4	7
0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	1	28	4	3	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	3	0	0
0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	40	1	0	3
1	0	0	0	0	1	1	0	0	2	0	0	0	0	2	2	0	0	38	0	1	0
1	0	0	0	0	1	1	0	0	5	1	0	0	0	6	6	0	1	164	8	4	4
1	0	0	0	0	1	1	0	0	2	0	0	0	0	2	2	0	0	32	4	0	1
1	0	0	0	0	1	1	0	0	3	2	0	1	0	6	7.3	0	0	51	4	0	2
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	32	3	0	3
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	48	7	2	7
4	0	0	0	0	4	4	0	0	5	2	0	1	0	8	9.3	1	0	163	18	2	13
3	1	0	0	0	5	4.2	0	0	3	0	1	0	0	4	4.5	0	0	31	6	3	4
1	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2.3	0	0	41	6	2	0
0	0	0	0	0	0	0	1	0	2	0	0	0	0	3	2.2	0	0	38	4	0	1
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	33	4	0	1
4	1	0	0	0	6	5.2	1	0	6	0	1	1	0	9	10	0	0	143	20	5	6
0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	59	3	1	1
1	0	0	0	0	1	1	0	0	4	0	0	0	0	4	4	0	0	50	10	0	2
3	0	0	0	0	3	3	0	0	2	0	0	0	0	2	2	1	0	45	3	2	1
1	0	0	0	0	1	1	0	0	2	1	0	0	0	3	3	0	0	44	9	1	2
5	0	0	0	0	5	5	0	0	10	1	0	0	0	11	11	1	0	198	25	4	6
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	52	3	1	1
2	1	0	0	0	3	3	0	0	2	0	0	0	0	2	2	1	0	58	2	0	2
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	68	8	0	0
1	0	0	0	0	1	1	0	0	0	2	0	0	0	2	2	0	1	52	4	1	1
3	1	0	0	0	4	4	0	0	4	2	0	0	0	6	6	1	1	230	17	2	4
2	0	0	0	0	2	2	0	0	0	1	0	0	0	1	1	0	0	65	4	1	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	57	6	1	1
0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	35	2	0	0
0	0	0	0	0	0	0	0	0	3	0	1	0	0	4	4.5	1	0	54	5	0	0
2	0	0	0	0	2	2	0	0	8	2	1	0	0	11	11.5	1	0	211	17	2	1
26	5	0	0	0	32	31.2	1	0	75	13	5	11	0	105	121	4	2	1661	189	38	68

			C => C									C => D									
PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C
0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	14	16.3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0
1	22	25.6	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0
0	33	38.2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0
2	80	91.1	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0
0	28	29.3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0
0	35	35.5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0
1	43	46.6	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0
0	75	77.6	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0
1	181	189	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0
0	51	51	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0
0	22	25.6	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0
0	18	19	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0
0	24	25.3	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	0
0	115	120.9	0	0	0	0	0	0	0	0	0	0	0	8	2	1	0	0	11	11.5	0
0	30	35.7	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0
0	21	22.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2.3	0
0	26	26	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0
0	19	22.6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0
0	96	106.6	0	0	0	0	0	0	0	0	0	0	0	10	1	0	1	0	12	13.3	0
0	21	24.1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
0	29	31.3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0
0	33	35.8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
0	33	34.8	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0
0	116	126	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	5	5	0
0	28	30.8	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0
0	27	31.4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0
0	26	27.3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0
1	24	27.6	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0
1	105	117.1	0	0	0	0	0	0	0	0	0	0	0	7	2	0	0	0	9	9	0
0	37	39.2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0
0	61	61	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0
0	44	47.9	0	0	0	0	0	0	0	0	0	1	0	4	1	0	0	0	6	5.2	0
1	40	41.5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.2	0
1	182	189.6	0	0	0	0	0	0	0	0	0	2	0	16	1	0	0	0	19	17.4	0
0	37	38.3	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0
0	57	59.6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0
0	39	42.1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0
1	65	76.1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0
1	198	216.1	0	0	0	0	0	0	0	0	0	0	0	14	1	0	0	0	15	15	0
1	45	52.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	49	50	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	7	7	0
0	43	44.3	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	6	6	0
0	38	39.3	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4	3.2	0
1	175	186.3	0	0	0	0	0	0	0	0	0	1	0	14	2	0	0	0	17	16.2	0
0	64	65.8	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0
0	62	64.6	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0
0	52	53.5	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0
0	56	59.1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0
0	234	243	0	0	0	0	0	0	0	0	0	0	0	14	2	0	0	0	16	16	0
0	57	58.8	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0
0	63	64.8	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0
0	76	76	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	8	8	0
0	59	60.2	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	7	7	0
0	255	259.8	0	0	0	0	0	0	0	0	0	0	0	20	3	0	0	0	23	23	0
0	70	70.5	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	0
1	66	68.8	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0
0	37	37	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0
0	60	59.2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0
1	233	235.5	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	21	21	0
8	1970	2081	0	0	0	0	0	0	0	0	0	3	0	143	17	1	1	0	165	164.4	0

D => A								D => B									D => C				
M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	4	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	22	2	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	16	2	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	5	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	4	0	0
0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	1	0	34	2	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0
0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	1	1.5	0	0	1	0	0	0	0	1	1	0	0	4	2	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	6	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	10	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2.3	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3	4.3	0	0	6	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	2	0	0
0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	1	1	0	0	8	1	0
0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	6	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	4	0	0
0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	17	0	0
0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	1	2	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	4	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	9	2	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	1	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	3	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	1	0	10	2	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	5	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	11	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	14	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	5	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	2	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	12	2	0
0	0	2	1	0	0	3	3.5	0	0	23	7	0	1	0	31	32.3	2	0	157	16	0

				D => D								
OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	9	9	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	24	24	0	0	0	0	0	0	0	0	0
0	0	9	9	0	0	0	0	0	0	0	0	0
0	0	19	18.2	0	0	0	0	0	0	0	0	0
0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	37	36.2	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	7	7	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	9	9	0	0	0	0	0	0	0	0	0
0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	17	17	0	0	0	0	0	0	0	0	0
0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	4	3.2	0	0	0	0	0	0	0	0	0
0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	13	12.2	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	15	15	0	0	0	0	0	0	0	0	0
0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	14	14	0	0	0	0	0	0	0	0	0
0	0	175	173.4	0	0	0	0	0	0	0	0	0

Broomfield Midleton - Castle Rock Homes

HEGSONS Design Consultancy limited

Trip Generation (vehs per dwelling)

Total dwellings in development: 272



Link Definition

Arm	Description
A	Meadowlands Lane North
B	Meadowlands Lane South
C	Bloomfield Crescent

2023 Survey - Traffic Counts

AM Peak Hour

	A	B	C	Total	
A	0	9	4	13	
B	23	0	206	229	
C	10	198	0	208	
Total	33	207	210		450

PM Peak Hour

	A	B	C	Total	
A	0	15	7	22	
B	13	0	134	147	
C	9	152	0	161	
Total	22	167	141		330

Surveyed Flows

2023 Surveyed Matrices

AM Peak Hour

Lights 93%

	A	B	C	
A	0	8	4	
B	21	0	192	
C	9	184	0	419

HGV 7%

	A	B	C	
A	0	1	0	
B	2	0	14	
C	1	14	0	32
				450

PM Peak Hour

	A	B	C	
A	0	14	7	
B	12	0	125	
C	8	141	0	307

	A	B	C	
A	0	1	0	
B	1	0	9	
C	1	11	0	23
				330

2025 Committed Developments Trips (Permitted ParkView Hill & Waterrock)

AM Peak Hour

	A	B	C	Total	
A	0	0	0	0	
B	0	0	6	6	
C	0	16	0	16	
Total	0	16	6		22

PM Peak Hour

	A	B	C	Total	
A	0	0	0	0	
B	0	0	13	13	
C	0	10	0	10	
Total	0	10	13		23

2030 Committed Developments Trips (Permitted Park View Hill & Phase 1 Waterrock)

AM Peak Hour

	A	B	C	Total	
A	0	0	0	0	
B	0	0	37	37	
C	0	46	0	46	
Total	0	46	37	83	83

PM Peak Hour

	A	B	C	Total	
A	0	0	0	0	
B	0	0	41	41	
C	0	39	0	39	
Total	0	39	41	80	80

Proposed Development Trips

AM Peak Hour

	A	B	C	Total	
A	0	0	0	0	
B	0	0	12	12	
C	0	53	0	53	
Total	0	53	12		65

PM Peak Hour

	A	B	C	Total	
A	0	0	0	0	
B	0	0	38	38	
C	0	17	0	17	
Total	0	17	38		55

2025 Matrices without Development (2023 Surveyed x Growth Factor)+ Committed Development Trips

Growth Factor 2023 to 2025 (LGVs): 1.04
Growth Factor 2023 to 2025 (HGVs): 1.08

AM Peak Hour

	A	B	C	Total
A	0	9	4	14
B	24	0	221	245
C	10	222	0	233
				491

PM Peak Hour

	A	B	C	Total
A	0	16	7	23
B	14	0	153	166
C	9	169	0	178
				367

2025 Matrices with Development (2025 Matrices with Phase 1 Development (54 units (20%)) + Committed Development Trips)

Phase 1 20%

AM Peak Hour

	A	B	C	Total	
A	0	9	4	14	
B	24	0	223	247	
C	10	233	0	244	
				504	2.58%

PM Peak Hour

	A	B	C	Total	
A	0	16	7	23	
B	14	0	160	174	
C	9	172	0	181	
				378	2.91%

2030 Matrices without Development (2023 Surveyed x Growth Factor)

MMP 70.0% Reduction SMART Targets

Growth Factor 2023 to 2034 (LGVs): 1.14
Growth Factor 2022 to 2034 (HGVs): 1.3

AM Peak Hour

	A	B	C	Total
A	0	10	5	15
B	26	0	263	290
C	12	260	0	272
				576

PM Peak Hour

	A	B	C	Total
A	0	17	8	25
B	15	0	183	198
C	10	202	0	213
				436

2030 Matrices with Development (2030 Matrices Phase 1-3 Development (270 units (100%)) + Committed Development Trips)

MMP 70.0% Reduction SMART Targets

AM Peak Hour

	A	B	C	Total	
A	0	10	5	15	
B	26	0	271	298	
C	12	297	0	309	
				622	7.32%

PM Peak Hour

	A	B	C	Total	
A	0	17	8	25	
B	15	0	210	225	
C	10	214	0	225	
				474	8.12%



IDASO

Survey Name: 070 23123 Broomfield, Midleton Co Cork
Site: Site 3
Location: Meadowlands Lane/Meadowlands/Broomfield Ct
Date: Wed 15-Mar-2023

	A => A									A => B											
TIME	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR
07:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	2
07:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	0	5
08:00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	6
08:15	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0	2
08:30	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	23	23	0	0	10
09:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	1
09:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	2
10:00	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	2
10:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0	0	4
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	1
11:30	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	5	5	0	0	2
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	5	3	0	0	0	8	8	0	0	6
12:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
12:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	4
13:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2
13:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	1
13:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	1
13:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	7
14:00	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	1
14:15	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	1
14:30	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	12	2	0	0	0	14	14	0	0	2
15:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1
15:15	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	0	4	3.7	0	0	4
15:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	1
15:45	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	1	0	10	0	1	0	0	12	11.7	0	0	6
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	6	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	11	2	0	0	0	13	13	0	0	8
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	3
17:15	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	8
17:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	3
H/TOT	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	8	8	0	0	15
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	1
18:30	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	1
18:45	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0	4
12 TOT	0	0	0	0	0	0	0	0	0	1	0	108	11	1	0	0	121	120.7	0	0	73

A => C						B => A									B => B						
LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV
0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0
2	0	0	0	4	4	0	0	3	1	0	0	0	4	4	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	7	7	0	0	5	2	0	0	0	7	7	0	0	0	0	0	0	0
0	0	0	0	6	6	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0
0	0	0	0	10	10	0	0	8	1	0	0	0	9	9	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
0	1	0	0	1	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
0	1	0	0	3	3.5	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
0	0	0	0	4	4	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0
0	1	0	0	2	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	2	1	0	0	0	3	3	0	0	0	0	0	0	0
0	1	0	0	3	3.5	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	1	0	0	3	3.5	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	3	0	0	9	10.5	0	0	4	1	0	0	0	5	5	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	2	0	0	0	0	2	2	0	0	2	0	0	0	0
0	0	0	0	4	4	0	0	6	0	0	0	0	6	6	0	0	2	0	0	0	0
0	1	0	0	3	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	2	2	0	0	5	1	0	0	0	6	6	0	0	0	0	0	0	0
1	0	0	0	2	2	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	1	0	0	4	4.5	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
2	2	0	0	11	12	0	0	8	1	0	0	0	9	9	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	1	1	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0
1	0	0	0	3	3	0	0	5	2	0	0	0	7	7	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	4	4	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	0	0	0	0	0
0	0	0	0	6	6	0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0
0	0	0	0	3	3	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
0	0	0	0	8	8	0	0	13	0	0	0	0	13	13	0	0	0	0	0	0	0
0	0	0	0	3	3	1	0	5	0	0	0	0	6	5.2	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
0	0	0	0	8	8	0	0	4	1	0	0	0	5	5	0	0	0	0	0	0	0
1	0	0	0	4	4	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
1	0	0	0	16	16	1	0	15	1	0	0	0	17	16.2	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
0	0	0	0	1	1	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
0	0	0	0	2	2	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
0	0	0	0	4	4	0	0	10	0	0	0	0	10	10	0	0	0	0	0	0	0
6	6	0	0	85	88	1	0	95	9	0	0	0	105	104.2	0	0	2	0	0	0	0

B => C									C => A												
TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C
0	0	0	0	6	2	1	0	0	9	9.5	0	0	1	0	0	0	0	1	1	0	0
0	0	0	0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	11	6	1	1	0	19	20.8	0	0	1	0	0	0	0	1	1	0	0
0	0	0	0	20	5	0	0	1	26	27	0	0	0	0	0	0	0	0	0	1	0
0	0	0	0	59	13	2	1	1	76	79.3	0	0	2	0	0	0	0	2	2	1	0
0	0	0	0	30	2	1	0	0	33	33.5	0	0	1	0	0	0	0	1	1	0	0
0	0	0	0	43	9	0	1	0	53	54.3	0	0	1	0	0	0	0	1	1	0	0
0	0	0	0	44	5	0	2	0	51	53.6	0	0	2	0	0	0	0	2	2	1	0
0	0	0	0	59	1	1	0	0	61	61.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	176	17	2	3	0	198	202.9	0	0	4	0	0	0	0	4	4	1	0
0	0	0	0	27	5	0	1	0	33	34.3	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	16	0	1	1	0	18	19.8	0	0	1	0	0	0	0	1	1	0	0
0	0	0	0	10	1	0	3	0	14	17.9	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	18	0	0	2	0	20	22.6	0	0	2	1	0	0	0	3	3	0	0
0	0	0	0	71	6	1	7	0	85	94.6	0	0	5	1	0	0	0	6	6	0	0
0	0	0	0	6	2	0	1	1	10	12.3	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	9	2	1	0	0	12	12.5	0	0	1	0	0	0	0	1	1	0	0
0	0	0	0	13	0	0	1	0	14	15.3	0	0	1	2	0	0	0	3	3	0	0
0	0	0	0	7	0	0	3	0	10	13.9	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	35	4	1	5	1	46	54	0	0	2	2	0	0	0	4	4	0	0
0	0	0	0	9	3	0	0	0	12	12	0	0	3	0	0	0	0	3	3	0	0
0	0	0	0	7	2	1	3	0	13	17.4	0	0	0	0	1	0	0	1	1.5	0	0
0	0	0	0	15	2	1	0	0	18	18.5	0	0	1	1	1	0	0	3	3.5	0	0
0	0	0	0	11	0	3	0	0	14	15.5	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	42	7	5	3	0	57	63.4	0	0	6	1	2	0	0	9	10	0	0
0	0	0	0	28	2	1	2	0	33	36.1	0	0	1	0	1	0	0	2	2.5	0	0
0	0	0	1	11	1	0	1	0	14	14.7	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	21	0	2	1	0	24	26.3	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	17	1	2	1	0	21	23.3	0	0	1	0	0	0	0	1	1	0	0
2	2	0	1	77	4	5	5	0	92	100.4	0	0	4	0	1	0	0	5	5.5	0	0
0	0	0	0	20	2	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	27	3	2	2	0	34	37.6	0	0	1	0	1	0	0	2	2.5	0	0
0	0	0	0	26	0	2	2	0	30	33.6	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	17	3	2	2	2	26	31.6	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	90	8	6	6	2	112	124.8	0	0	5	0	1	0	0	6	6.5	0	1
0	0	0	0	21	0	0	0	0	21	21	0	0	1	0	0	0	0	1	1	0	0
0	0	1	0	31	1	1	1	0	35	36	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	33	2	1	0	0	36	36.5	0	0	1	0	0	0	0	1	1	1	0
0	0	0	0	32	0	0	0	0	32	32	0	0	2	1	0	0	0	3	3	0	0
0	0	1	0	117	3	2	1	0	124	125.5	0	0	6	1	0	0	0	7	7	1	0
0	0	0	0	31	3	4	2	0	40	44.6	0	0	1	0	0	0	0	1	1	0	0
0	0	0	0	19	3	0	1	0	23	24.3	0	0	5	2	1	0	0	8	8.5	0	0
0	0	0	0	23	0	0	2	0	25	27.6	0	0	2	2	0	0	0	4	4	0	0
0	0	0	0	24	2	1	1	0	28	29.8	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	97	8	5	6	0	116	126.3	0	0	10	4	1	0	0	15	15.5	0	0
0	0	0	0	29	3	0	3	0	35	38.9	0	0	3	0	0	0	0	3	3	0	0
0	0	0	0	34	3	1	0	0	38	38.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	29	5	1	2	0	37	40.1	0	0	1	1	0	0	0	2	2	0	0
0	0	0	0	31	3	0	0	0	34	34	0	0	3	0	0	0	0	3	3	0	0
0	0	0	0	123	14	2	5	0	144	151.5	0	0	7	1	0	0	0	8	8	0	0
0	0	0	0	41	2	0	0	0	43	43	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	17	2	1	3	0	23	27.4	0	0	3	0	0	0	0	3	3	0	0
0	0	0	0	21	2	1	0	0	24	24.5	0	0	3	0	0	0	0	3	3	0	0
0	0	0	0	33	2	1	0	0	36	36.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	112	8	3	3	0	126	131.4	0	0	8	0	0	0	0	8	8	0	0
0	0	0	0	25	1	0	0	0	26	26	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	34	1	0	0	0	35	35	0	0	3	0	0	0	0	3	3	0	0
0	0	0	0	16	1	0	1	0	18	19.3	0	0	2	0	0	0	0	2	2	0	0
0	0	0	0	15	1	0	0	0	16	16	0	0	2	1	0	0	0	3	3	0	0
0	0	0	0	90	4	0	1	0	95	96.3	0	0	7	1	0	0	0	8	8	0	0
2	2	1	1	1089	96	34	46	4	1271	1350	0	0	66	11	5	0	0	82	84.5	3	1

C => B							C => C								
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
15	2	0	0	0	17	17	0	0	0	0	0	0	0	0	0
9	2	0	1	1	13	15.3	0	0	0	0	0	0	0	0	0
18	2	0	2	0	22	24.6	0	0	0	0	0	0	0	0	0
23	5	0	4	0	33	37.4	0	0	0	0	0	0	0	0	0
65	11	0	7	1	85	94.3	0	0	0	0	0	0	0	0	0
49	1	0	0	0	50	50	0	0	0	0	0	0	0	0	0
52	2	1	1	0	56	57.8	0	0	0	0	0	0	0	0	0
45	1	0	2	1	50	52.8	0	0	0	0	0	0	0	0	0
49	0	0	1	0	50	51.3	0	0	0	0	0	0	0	0	0
195	4	1	4	1	206	211.9	0	0	0	0	0	0	0	0	0
22	4	0	1	0	27	28.3	0	0	0	0	0	0	0	0	0
3	1	0	2	0	6	8.6	0	0	0	0	0	0	0	0	0
4	2	3	0	0	9	10.5	0	0	0	0	0	0	0	0	0
24	3	0	1	0	28	29.3	0	0	0	0	0	0	0	0	0
53	10	3	4	0	70	76.7	0	0	0	0	0	0	0	0	0
15	2	1	3	0	21	25.4	0	0	0	0	0	0	0	0	0
13	2	0	2	0	17	19.6	0	0	0	1	0	0	0	1	1
15	1	0	0	0	16	16	0	0	0	0	0	0	0	0	0
9	5	2	2	0	18	21.6	0	0	0	0	0	0	0	0	0
52	10	3	7	0	72	82.6	0	0	0	1	0	0	0	1	1
9	3	0	2	0	14	16.6	0	0	0	0	0	0	0	0	0
5	3	2	1	0	11	13.3	0	0	0	0	0	0	0	0	0
19	3	2	2	0	26	29.6	0	0	0	0	0	0	0	0	0
20	0	2	0	0	22	23	0	0	0	0	0	0	0	0	0
53	9	6	5	0	73	82.5	0	0	0	0	0	0	0	0	0
12	3	2	1	0	18	20.3	0	0	0	0	0	0	0	0	0
15	2	1	4	0	22	27.7	0	0	0	0	0	0	0	0	0
16	1	0	1	0	18	19.3	0	0	0	0	0	0	0	0	0
19	1	0	2	0	22	24.6	0	0	0	0	0	0	0	0	0
62	7	3	8	0	80	91.9	0	0	0	0	0	0	0	0	0
25	2	1	1	0	30	31.2	0	0	0	0	0	0	0	0	0
22	3	1	0	0	26	26.5	0	0	0	0	0	0	0	0	0
19	1	0	3	0	23	26.9	0	0	0	0	0	0	0	0	0
31	1	1	0	0	33	33.5	0	0	0	0	0	0	0	0	0
97	7	3	4	0	112	118.1	0	0	0	0	0	0	0	0	0
26	2	0	1	0	29	30.3	0	0	0	0	0	0	0	0	0
26	2	0	2	0	30	32.6	0	0	0	0	0	0	0	0	0
14	2	0	2	0	19	20.8	0	0	0	0	0	0	0	0	0
19	1	1	7	0	28	37.6	0	0	0	0	0	0	0	0	0
85	7	1	12	0	106	121.3	0	0	0	0	0	0	0	0	0
15	5	3	3	0	26	31.4	0	0	1	0	0	0	0	1	1
13	3	2	1	0	19	21.3	0	0	1	0	0	0	0	1	1
15	4	0	1	0	20	21.3	0	0	0	0	0	0	0	0	0
19	1	0	1	0	21	22.3	0	0	0	0	0	0	0	0	0
62	13	5	6	0	86	96.3	0	0	2	0	0	0	0	2	2
28	0	0	1	0	29	30.3	0	0	0	0	0	0	0	0	0
26	2	1	2	0	31	34.1	0	0	0	0	0	0	0	0	0
32	2	0	1	0	35	36.3	0	0	0	0	0	0	0	0	0
29	5	2	1	0	37	39.3	0	0	0	0	0	0	0	0	0
115	9	3	5	0	132	140	0	0	0	0	0	0	0	0	0
23	4	2	2	0	31	34.6	0	0	0	0	0	0	0	0	0
24	0	0	2	0	26	28.6	0	0	0	0	0	0	0	0	0
21	6	0	0	0	27	27	0	0	0	0	0	0	0	0	0
26	2	0	1	0	29	30.3	0	0	0	0	0	0	0	0	0
94	12	2	5	0	113	120.5	0	0	0	0	0	0	0	0	0
25	1	1	0	0	27	27.5	0	0	0	0	0	0	0	0	0
28	5	1	1	1	36	38.8	0	0	0	0	0	0	0	0	0
14	3	0	0	0	17	17	0	0	0	0	0	0	0	0	0
25	0	0	0	0	25	25	0	0	0	0	0	0	0	0	0
92	9	2	1	1	105	108.3	0	0	0	0	0	0	0	0	0
1025	108	32	68	3	1240	1344	0	0	2	1	0	0	0	3	3

Broomfield Midleton - Castle Rock Homes

HEGSONS Design Consultancy limited

Trip Generation (vehs per dwelling)

Total dwellings in development: 272



Link Definition

Arm	Description
A	Meadowlands Lane North
B	R627 East
C	R627 West

2023 Survey - Traffic Counts

AM Peak Hour

	A	B	C	Total	
A	0	110	98	208	
B	40	0	79	119	
C	183	250	0	433	
Total	223	360	177		760

PM Peak Hour

	A	B	C	Total	
A	0	34	132	166	
B	77	0	153	230	
C	69	88	0	157	
Total	146	122	285		553

Surveyed Flows

2023 Surveyed Matrices

AM Peak Hour

Lights 95%

	A	B	C	
A	0	105	93	
B	38	0	75	
C	174	238	0	722

HGV 5%

	A	B	C	
A	0	6	5	
B	2	0	4	
C	9	13	0	38

760

PM Peak Hour

Lights 95%

	A	B	C	
A	0	32	125	
B	73	0	145	
C	66	84	0	525

HGV 5%

	A	B	C	
A	0	2	7	
B	4	0	8	
C	3	4	0	28

553

2025 Committed Developments Trips (Permitted ParkView Hill & Waterrock)

AM Peak Hour

	A	B	C	Total	
A	0	8	8	16	
B	3	0	0	3	
C	3	0	0	3	
Total	6	8	8		22

PM Peak Hour

	A	B	C	Total	
A	0	5	5	10	
B	6	0	0	6	
C	7	0	0	7	
Total	13	5	5		23

2030 Committed Developments Trips (Permitted Park View Hill & Phase 1 Waterrock)

AM Peak Hour

	A	B	C	Total	
A	0	23	23	46	
B	18	0	0	18	
C	19	0	0	19	
Total	37	23	23	83	83

PM Peak Hour

	A	B	C	Total	
A	0	19	20	39	
B	20	0	0	20	
C	21	0	0	21	
Total	41	19	20	80	80

Proposed Development Trips

AM Peak Hour

	A	B	C	Total	
A	0	18	35	53	
B	3	0	0	3	
C	9	0	0	9	
Total	12	18	35		65

PM Peak Hour

	A	B	C	Total	
A	0	7	10	17	
B	14	0	0	14	
C	24	0	0	24	
Total	38	7	10		55

2025 Matrices without Development (2023 Surveyed x Growth Factor)+ Committed Development Trips

Growth Factor 2023 to 2025 (LGVs): 1.04
Growth Factor 2023 to 2025 (HGVs): 1.08

AM Peak Hour

	A	B	C	
A	0	123	110	
B	45	0	82	
C	194	261	0	814

PM Peak Hour

	A	B	C	
A	0	40	143	
B	86	0	159	
C	79	92	0	599

2025 Matrices with Development (2025 Matrices with Phase 1 Development (54 units (20%)) + Committed Development Trips)

Phase 1 20%

AM Peak Hour

	A	B	C	Total	
A	0	126	117	243	
B	45	0	82	128	
C	195	261	0	456	
				827	1.57%

PM Peak Hour

	A	B	C	Total	
A	0	42	145	186	
B	89	0	159	248	
C	84	92	0	175	
				610	1.80%

2030 Matrices without Development (2023 Surveyed x Growth Factor)

MMP 70.0% Reduction SMART Targets

Growth Factor 2023 to 2034 (LGVs): 1.14
Growth Factor 2022 to 2034 (HGVs): 1.3

AM Peak Hour

	A	B	C	
A	0	142	129	
B	59	0	91	
C	223	287	0	931

PM Peak Hour

	A	B	C	
A	0	52	166	
B	102	0	176	
C	94	101	0	691

2030 Matrices with Development (2030 Matrices Phase 1-3 Development (270 units (100%)) + Committed Development Trips)

MMP 70.0% Reduction SMART Targets

AM Peak Hour

	A	B	C	Total	
A	0	155	153	308	
B	61	0	91	151	
C	230	287	0	517	
				976	4.66%

PM Peak Hour

	A	B	C	Total	
A	0	57	173	230	
B	112	0	176	288	
C	111	101	0	212	
				729	5.28%



IDASO

Survey Name: 070 23123 Broomfield, Midleton Co Cork
Site: Site 4
Location: Meadowlands/R627
Date: Wed 15-Mar-2023

	A => A									A => B									
TIME	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C
07:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3	4	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	7	0	0	1	0	8	9.3	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	7	1	0	3	0	11	14.9	1	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	17	1	0	4	1	23	29.2	1	0
08:00	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	8	8	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0	6	6.5	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	11	0	0	2	1	14	17.6	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	12	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	35	1	1	2	1	40	44.1	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	3.3	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	4	4.5	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	6	3	0	1	0	10	11.3	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	17	5	1	2	0	25	28.1	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	9	1	0	2	0	12	14.6	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	5	6.3	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	8	8	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	3	3	2	1	0	9	11.3	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	23	5	2	4	0	34	40.2	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	5	1	0	1	0	7	8.3	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4	4	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	3	2	0	2	0	7	9.6	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	10	10.5	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	19	5	1	3	0	28	32.4	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	5	5.5	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	7	0	1	1	0	9	10.8	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	7	1	0	1	0	9	10.3	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	5	7.6	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	19	3	2	4	0	28	34.2	0	0
13:00	0	0	0	0	0	0	0	0	0	0	1	9	2	0	0	0	12	11.4	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	11	2	0	0	0	13	13	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	5	1	0	2	0	8	10.6	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	36	5	0	2	0	44	46	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	7	7	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	11	2	0	1	0	14	15.3	0	0
14:30	0	0	0	0	0	0	0	0	0	1	0	7	2	0	2	0	12	13.8	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	7	0	1	1	0	9	10.8	0	0
H/TOT	0	0	0	0	0	0	0	0	0	1	0	30	6	1	4	0	42	46.9	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	8	0	2	2	0	12	15.6	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	7	1	1	1	0	10	11.8	1	0
15:30	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	9	9	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	30	2	3	3	0	38	43.4	1	0
16:00	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	15	15	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	16	3	0	0	0	19	19	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	14	2	0	1	0	17	18.3	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	16	4	2	0	0	22	23	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	61	9	2	1	0	73	75.3	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	12	4	2	1	0	19	21.3	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18	18	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	12	4	0	0	0	16	16	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	14	8	0	0	0	22	22	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	56	16	2	1	0	75	77.3	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	13	1	1	0	0	15	15.5	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	14	4	1	0	1	20	21.5	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	8	2	0	0	0	10	10	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	42	7	2	0	1	52	54	0	0
12 TOT	0	0	0	0	0	0	0	0	0	1	1	385	65	17	30	3	502	551.1	2	0

A => C							B => A									B => B				
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1
14	2	0	0	0	16	16	0	0	4	2	1	0	0	7	7.5	0	0	0	0	0
11	2	0	1	0	14	15.3	0	0	18	1	0	0	0	19	19	0	0	0	0	0
14	2	0	1	0	17	18.3	0	0	7	4	0	1	0	12	13.3	0	0	0	0	0
18	4	0	1	0	24	24.5	0	0	16	5	0	0	1	22	23	0	0	0	0	0
57	10	0	3	0	71	74.1	0	0	45	12	1	1	1	60	62.8	0	0	0	0	0
44	0	0	0	0	44	44	0	0	22	2	0	0	0	24	24	0	0	0	0	0
57	2	0	1	0	60	61.3	0	0	33	6	0	0	0	39	39	0	0	0	0	0
39	1	0	0	0	40	40	0	0	16	4	0	0	0	20	20	0	0	0	0	0
38	0	0	1	0	39	40.3	0	0	26	1	0	0	0	27	27	0	0	0	0	0
178	3	0	2	0	183	185.6	0	0	97	13	0	0	0	110	110	0	0	0	0	0
20	4	0	1	0	25	26.3	0	0	11	2	0	0	0	13	13	0	0	0	0	0
3	1	0	1	0	5	6.3	0	0	5	0	0	1	0	6	7.3	0	0	0	0	0
4	1	2	0	0	7	8	0	0	5	1	0	3	0	9	12.9	0	0	0	0	0
17	1	0	0	0	18	18	0	0	8	1	0	0	0	9	9	0	0	0	0	0
44	7	2	2	0	55	58.6	0	0	29	4	0	4	0	37	42.2	0	0	0	0	0
7	2	1	1	0	11	12.8	0	0	3	1	0	0	1	5	6	0	0	0	0	0
11	2	0	1	0	14	15.3	0	0	7	0	0	0	0	7	7	0	0	0	0	0
8	0	0	0	0	8	8	0	0	3	0	0	1	0	4	5.3	0	0	0	0	0
7	1	0	1	0	9	10.3	0	0	4	0	0	1	0	5	6.3	0	0	0	0	0
33	5	1	3	0	42	46.4	0	0	17	1	0	2	1	21	24.6	0	0	0	0	0
3	2	0	1	0	6	7.3	0	0	3	1	0	0	0	4	4	0	0	0	0	0
4	1	2	1	0	8	10.3	0	0	4	1	0	3	0	8	11.9	0	0	0	0	0
16	4	2	0	0	22	23	0	0	6	1	1	0	0	8	8.5	0	0	0	0	0
13	0	1	0	0	14	14.5	0	0	2	0	0	0	0	2	2	0	0	0	0	0
36	7	5	2	0	50	55.1	0	0	15	3	1	3	0	22	26.4	0	0	0	0	0
8	1	1	1	0	11	12.8	0	0	14	2	0	2	0	18	20.6	0	0	0	0	0
11	1	0	2	0	14	16.6	0	0	8	1	0	0	0	9	9	0	0	0	0	0
11	1	0	1	0	13	14.3	0	0	6	0	1	0	0	7	7.5	0	0	0	0	0
20	1	0	0	0	21	21	0	0	6	0	1	1	0	8	9.8	0	0	0	0	0
50	4	1	4	0	59	64.7	0	0	34	3	2	3	0	42	46.9	0	0	0	0	0
19	0	1	1	0	21	22.8	0	0	7	1	0	0	0	8	8	0	0	0	0	0
12	0	1	0	0	13	13.5	0	0	7	1	1	1	0	10	11.8	0	0	0	0	0
16	1	0	1	0	18	19.3	0	0	5	0	3	1	0	9	11.8	0	0	0	0	0
23	1	1	0	0	25	25.5	0	0	6	1	0	0	0	7	7	0	0	0	0	0
70	2	3	2	0	77	81.1	0	0	25	3	4	2	0	34	38.6	0	0	0	0	0
29	0	0	1	0	30	31.3	0	0	4	1	0	0	0	5	5	0	0	0	0	0
19	1	0	0	0	20	20	0	0	6	0	1	1	0	8	9.8	0	0	0	0	0
6	1	0	1	0	8	9.3	0	0	7	1	0	0	0	8	8	0	0	0	0	0
15	1	0	6	0	22	29.8	0	0	12	0	0	0	0	12	12	0	0	0	0	0
69	3	0	8	0	80	90.4	0	0	29	2	1	1	0	33	34.8	0	0	0	0	0
7	5	1	1	0	14	15.8	0	0	17	2	1	0	0	20	20.5	0	0	0	0	0
9	1	2	0	0	13	13.2	0	0	7	1	0	0	0	8	8	0	0	0	0	0
10	2	0	1	0	13	14.3	0	0	7	0	0	2	0	9	11.6	0	0	0	0	0
18	1	0	1	0	20	21.3	0	0	8	0	1	1	0	10	11.8	0	0	0	0	0
44	9	3	3	0	60	64.6	0	0	39	3	2	3	0	47	51.9	0	0	0	0	0
14	1	0	1	0	16	17.3	0	0	7	1	0	1	0	9	10.3	0	0	0	0	0
13	2	1	2	0	18	21.1	0	0	10	0	0	0	0	10	10	0	0	0	0	0
16	0	0	0	0	16	16	0	0	4	3	1	1	0	9	10.8	0	0	0	0	0
20	1	0	1	0	22	23.3	0	0	3	1	0	0	0	4	4	0	0	0	0	0
63	4	1	4	0	72	77.7	0	0	24	5	1	2	0	32	35.1	0	0	0	0	0
12	0	0	1	0	13	14.3	0	0	11	0	0	0	0	11	11	0	0	0	0	0
7	1	0	2	0	10	12.6	0	0	7	1	0	2	0	10	12.6	0	0	0	0	0
8	0	0	0	0	8	8	0	0	7	0	0	0	0	7	7	0	0	0	0	0
14	0	0	1	0	15	16.3	0	0	7	1	1	0	0	9	9.5	0	0	0	0	0
41	1	0	4	0	46	51.2	0	0	32	2	1	2	0	37	40.1	0	0	0	0	0
13	0	0	0	0	13	13	0	0	4	1	0	0	0	5	5	0	0	0	0	0
16	1	0	1	0	18	19.3	0	0	9	0	0	0	0	9	9	0	0	0	0	0
12	1	0	0	0	13	13	0	0	6	0	0	1	0	7	8.3	0	0	0	0	0
24	0	0	0	0	24	24	0	0	2	1	0	0	0	3	3	0	0	0	0	0
65	2	0	1	0	68	69.3	0	0	21	2	0	1	0	24	25.3	0	0	0	0	0
750	57	16	38	0	863	918.8	0	0	407	53	13	24	2	499	538.7	0	0	0	0	0

				B => C									C => A							
OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
0	0	0	0	0	0	34	5	0	0	0	39	39	0	0	4	1	0	0	0	5
0	0	0	0	0	1	35	11	0	1	0	48	48.7	0	0	7	0	0	0	0	7
0	0	0	0	0	0	41	15	2	0	0	58	59	0	0	5	2	1	0	0	8
0	0	0	0	0	0	47	14	0	0	3	64	67	0	0	3	0	0	0	0	3
0	0	0	0	0	1	157	45	2	1	3	209	213.7	0	0	19	3	1	0	0	23
0	0	0	0	0	0	55	7	1	0	0	63	63.5	0	0	9	2	1	0	0	12
0	0	0	0	0	0	78	5	0	0	1	84	85	0	0	12	2	0	1	0	15
0	0	0	0	0	0	50	7	0	0	0	57	57	0	0	29	1	0	2	0	32
0	0	0	0	0	0	41	4	0	0	1	46	47	0	0	38	0	1	0	0	39
0	0	0	0	0	0	224	23	1	0	2	250	252.5	0	0	88	5	2	3	0	98
0	0	0	0	0	0	37	2	0	0	0	39	39	0	0	20	3	0	1	0	24
0	0	0	0	0	0	27	4	0	1	0	32	33.3	0	0	11	0	1	0	0	12
0	0	0	0	0	0	26	5	1	1	0	33	34.8	0	0	4	1	0	0	0	5
0	0	0	0	0	0	25	3	0	0	1	29	30	0	0	11	1	0	3	0	15
0	0	0	0	0	0	115	14	1	2	1	133	137.1	0	0	46	5	1	4	0	56
0	0	0	0	0	0	18	2	0	2	0	22	24.6	0	0	5	0	0	0	0	5
0	0	0	0	0	0	20	3	0	0	0	23	23	0	0	4	2	1	0	0	7
0	0	0	0	0	0	13	1	0	0	0	14	14	0	0	10	0	0	0	0	10
0	0	0	0	0	0	16	2	0	0	0	18	18	0	0	7	0	0	2	0	9
0	0	0	0	0	0	67	8	0	2	0	77	79.6	0	0	26	2	1	2	0	31
0	0	0	0	0	0	14	2	2	0	0	18	19	0	0	5	2	1	0	0	8
0	0	0	0	0	0	25	1	1	0	0	27	27.5	0	0	5	2	0	0	0	7
0	0	0	0	0	0	18	0	1	0	0	19	19.5	0	0	11	1	0	0	0	12
0	0	0	0	0	0	12	5	2	0	0	19	20	0	0	10	0	3	0	0	13
0	0	0	0	0	0	69	8	6	0	0	83	86	0	0	31	5	4	0	0	40
0	0	0	0	0	0	20	1	1	0	0	22	22.5	0	0	15	0	1	0	0	16
0	0	0	0	0	0	21	3	0	0	1	25	26	0	1	7	0	0	1	0	9
0	0	0	0	0	0	26	3	0	0	0	29	29	0	0	16	0	1	1	0	18
0	0	0	0	0	0	16	2	0	0	0	18	18	0	0	13	1	1	0	0	15
0	0	0	0	0	0	83	9	1	0	1	94	95.5	0	1	51	1	3	2	0	58
0	0	0	0	0	0	14	2	1	0	0	17	17.5	0	0	14	2	0	0	0	16
0	0	0	0	0	0	27	2	0	0	0	29	29	0	0	26	2	1	1	0	30
0	0	0	0	0	0	17	1	0	0	0	18	18	0	0	21	0	0	1	0	22
0	0	0	0	0	0	27	4	1	0	0	32	32.5	0	0	13	2	1	2	2	20
0	0	0	0	0	0	85	9	2	0	0	96	97	0	0	74	6	2	4	2	88
0	0	0	0	0	0	21	3	1	0	1	26	27.5	0	0	17	0	0	0	0	17
0	0	0	0	0	0	14	1	0	0	0	15	15	1	0	29	1	0	0	0	31
0	0	0	0	0	0	16	2	0	1	0	19	20.3	0	0	26	1	1	0	0	28
0	0	0	0	0	0	29	1	1	0	0	31	31.5	0	0	22	0	0	0	0	22
0	0	0	0	0	0	80	7	2	1	1	91	94.3	1	0	94	2	1	0	0	98
0	0	0	0	0	0	17	5	0	1	0	23	24.3	0	0	14	1	3	2	0	20
0	0	0	0	0	0	22	0	2	0	0	24	25	0	0	16	2	0	1	0	19
0	0	0	0	0	0	23	3	0	0	0	26	26	0	0	19	0	0	0	0	19
0	0	0	0	0	0	27	5	0	0	0	32	32	0	0	20	2	0	0	0	22
0	0	0	0	0	0	89	13	2	1	0	105	107.3	0	0	69	5	3	3	0	80
0	0	0	0	0	0	17	2	0	1	0	20	21.3	0	0	26	2	0	2	0	30
0	0	0	0	0	0	16	1	0	0	0	17	17	0	0	26	3	1	0	0	30
0	0	0	0	0	0	18	2	0	0	0	20	20	0	0	26	5	0	1	0	32
0	0	0	0	0	0	19	1	1	0	0	21	21.5	0	0	30	2	0	0	0	32
0	0	0	0	0	0	70	6	1	1	0	78	79.8	0	0	108	12	1	3	0	124
0	0	0	0	0	0	28	1	0	1	0	30	31.3	0	0	35	3	0	0	0	38
0	0	0	0	0	0	12	0	0	0	0	12	12	0	0	14	1	1	1	0	17
0	0	0	0	0	0	14	0	0	0	0	14	14	0	0	18	3	1	0	0	22
0	0	0	0	0	0	20	1	0	0	0	21	21	0	0	28	1	0	0	0	29
0	0	0	0	0	0	74	2	0	1	0	77	78.3	0	0	95	8	2	1	0	106
0	0	0	0	0	0	14	2	0	0	0	16	16	0	0	24	0	0	0	0	24
0	0	0	0	0	0	25	1	0	0	0	26	26	0	0	28	1	0	0	0	29
0	0	0	0	0	0	15	1	0	1	0	17	18.3	0	0	14	1	0	0	0	15
0	0	0	0	0	0	26	0	0	0	0	26	26	0	0	14	1	0	0	0	15
0	0	0	0	0	0	80	4	0	1	0	85	86.3	0	0	80	3	0	0	0	83
0	0	0	0	0	1	1193	148	18	10	8	1378	1407.4	1	1	781	57	21	22	2	885

	C => B									C => C								
PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
5	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
7	0	0	17	0	1	0	0	18	18.5	0	0	0	0	0	0	0	0	0
8.5	0	0	16	1	0	0	0	17	17	0	0	0	0	0	0	0	0	0
3	0	0	7	2	0	2	0	11	13.6	0	0	0	0	0	0	0	0	0
23.5	0	0	47	3	1	2	0	53	56.1	0	0	0	0	0	0	0	0	0
12.5	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0
16.3	0	0	16	1	0	0	0	17	17	0	0	0	0	0	0	0	0	0
34.6	0	0	27	2	0	0	0	29	29	0	0	0	0	0	0	0	0	0
39.5	0	0	17	4	0	0	0	21	21	0	0	0	0	0	0	0	0	0
102.9	0	0	72	7	0	0	0	79	79	0	0	0	0	0	0	0	0	0
25.3	0	0	10	3	0	0	0	13	13	0	0	0	0	0	0	0	0	0
12.5	0	0	17	3	0	0	0	20	20	0	0	0	0	0	0	0	0	0
5	0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0
18.9	0	0	15	2	1	1	0	19	20.8	0	0	0	0	0	0	0	0	0
61.7	0	0	52	9	1	1	0	63	64.8	0	0	0	0	0	0	0	0	0
5	0	0	12	5	0	0	0	17	17	0	0	0	0	0	0	0	0	0
7.5	0	0	11	1	0	0	0	12	12	0	0	0	0	0	0	0	0	0
10	0	0	12	3	0	1	0	16	17.3	0	0	0	0	0	0	0	0	0
11.6	0	0	18	0	0	0	0	18	18	0	0	0	0	0	0	0	0	0
34.1	0	0	53	9	0	1	0	63	64.3	0	0	0	0	0	0	0	0	0
8.5	0	0	7	1	0	1	0	9	10.3	0	0	0	0	0	0	0	0	0
7	0	0	21	1	0	0	0	22	22	0	0	0	0	0	0	0	0	0
12	0	0	13	1	0	0	0	14	14	0	0	0	0	0	0	0	0	0
14.5	0	0	15	5	0	0	0	20	20	0	0	0	0	0	0	0	0	0
42	0	0	56	8	0	1	0	65	66.3	0	0	0	0	0	0	0	0	0
16.5	0	0	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0	0
9.7	0	0	16	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0
19.8	0	0	23	1	0	0	0	24	24	0	0	0	0	0	0	0	0	0
15.5	0	0	20	6	0	0	0	26	26	0	0	0	0	0	0	0	0	0
61.5	0	0	79	8	0	0	0	87	87	0	0	0	0	0	0	0	0	0
16	0	0	19	3	1	0	0	23	23.5	0	0	0	0	0	0	0	0	0
31.8	0	0	29	1	1	0	0	31	31.5	0	0	0	0	0	0	0	0	0
23.3	0	0	29	3	0	0	0	32	32	0	0	0	0	0	0	0	0	0
25.1	0	0	30	1	0	0	1	32	33	0	0	0	0	0	0	0	0	0
96.2	0	0	107	8	2	0	1	118	120	0	0	0	0	0	0	0	0	0
17	0	0	22	2	0	0	0	24	24	0	0	0	0	0	0	0	0	0
30.2	0	0	45	1	0	0	0	46	46	0	0	0	0	0	0	0	0	0
28.5	0	0	25	5	2	1	0	33	35.3	0	0	0	0	0	0	0	0	0
22	0	0	21	1	0	1	0	23	24.3	0	0	0	0	0	0	0	0	0
97.7	0	0	113	9	2	2	0	126	129.6	0	0	0	0	0	0	0	0	0
24.1	0	0	24	2	1	1	0	28	29.8	0	0	0	0	0	0	0	0	0
20.3	0	0	30	1	0	0	0	31	31	0	0	0	0	0	0	0	0	0
19	0	0	30	5	0	1	0	36	37.3	0	0	0	0	0	0	0	0	0
22	0	0	33	5	0	0	0	38	38	0	0	0	0	0	0	0	0	0
85.4	0	0	117	13	1	2	0	133	136.1	0	0	0	0	0	0	0	0	0
32.6	0	0	39	6	0	1	0	46	47.3	0	0	0	0	0	0	0	0	0
30.5	0	0	19	3	0	0	0	22	22	0	0	0	0	0	0	0	0	0
33.3	0	0	30	5	0	1	0	36	37.3	0	0	0	0	0	0	0	0	0
32	0	1	39	8	2	1	0	51	52.7	0	0	0	0	0	0	0	0	0
128.4	0	1	127	22	2	3	0	155	159.3	0	0	0	0	0	0	0	0	0
38	0	0	39	3	2	0	0	44	45	0	0	0	0	0	0	0	0	0
18.8	0	0	27	1	0	0	0	28	28	0	0	0	0	0	0	0	0	0
22.5	0	0	31	4	0	1	0	36	37.3	0	0	0	0	0	0	0	0	0
29	0	0	34	5	1	0	0	40	40.5	0	0	0	0	0	0	0	0	0
108.3	0	0	131	13	3	1	0	148	150.8	0	0	0	0	0	0	0	0	0
24	0	0	40	7	1	0	0	48	48.5	0	0	0	0	0	0	0	0	0
29	0	0	42	1	0	0	0	43	43	0	0	0	0	0	0	0	0	0
15	0	0	32	0	1	1	0	34	35.8	0	0	0	0	0	0	0	0	0
15	0	0	24	1	0	0	0	25	25	0	0	0	0	0	0	0	0	0
83	0	0	138	9	2	1	0	150	152.3	0	0	0	0	0	0	0	0	0
924.7	0	1	1092	118	14	14	1	1240	1265.6	0	0	0	0	0	0	0	0	0

Appendix C Autotracks & Visibility Sightlines



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N

NOTES

1. Dimensions are not to be scaled.

KEY

2.4m x 45m visibility splays

rev.	date	description	chk.

Pembroke Hall
38/39 Fitzwilliam Sq.
Dublin 2
D02 NX53
www.hegsons.com

client:

Castle Rock Homes (Midleton) Ltd.

job title:

Proposed Development
Blossom Hill, Midleton - Castlerock

drawing title:

Access Junction Visibility Splay
Access No. 1

scale:	date:	drawn by:	checked by:
1:300	05/10/2023	D. P	S.S

job number:	drawing number:	revision:
HDC1296	01	02



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N

NOTES

1. Dimensions are not to be scaled.

KEY

2.4m x 49m visibility splays

rev.	date	description	chk.

HEGSONS Design Consultancy limited
Pembroke Hall
38/39 Fitzwilliam Sq.
Dublin 2
D02 NX53
www.hegsons.com

client:

Castle Rock Homes (Midleton) Ltd.

job title:

Proposed Development
Blossom Hill, Midleton - Castlerock

drawing title:

Access Junction Visibility Splay
Access No. 2

scale:	date:	drawn by:	checked by:
1:300	05/10/2023	D. P	S.S

job number:	drawing number:	revision:
HDC1296	02	02

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N

NOTES

1. Dimensions are not to be scaled.

KEY

2.4m x 45m visibility splays (50kph)

rev.	date	description	chk.

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job title:

Proposed Development
Blossom Hill, Midleton - Castlerock

drawing title:

Access Junction Visibility Splay
Access No. 3

scale:	date:	drawn by:	checked by:
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job number:	drawing number:	revision:
HDC1296	03	02

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N

NOTES

1. Dimensions are not to be scaled.

KEY

2.4m x 45m visibility splays (50kph)

Left-hand visibility splay to the nearside road edge (2.4m x 45m)

Right-hand visibility splay to the nearside road edge (2.4m x 45m)

100 Ø HDPE 130 Watermain Loop

BLOCK FFL 65.65m
BLOCK FFL 66.35m
BLOCK FFL 65.25m
BLOCK FFL 65.45m
BLOCK FFL 67.00m
BLOCK FFL 66.50m
BLOCK FFL 66.30m
BLOCK FFL 66.80m
BLOCK FFL 65.30m
BLOCK FFL 67.10m
BLOCK FFL 65.95m
BLOCK FFL 66.20m
BLOCK FFL 66.48m
BLOCK FFL 63.15m

6 BIKE SPACES

E.S.B. Substation

rev.	date	description	chk.

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client:

Castle Rock Homes (Midleton) Ltd.

job title:

Proposed Development
Blossom Hill, Midleton - Castlerock

drawing title:

Access Junction Visibility Splay
Access No. 4

scale:	date:	drawn by:	checked by:
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job number:	drawing number:	revision:
HDC1296	04	02

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NOTES

1. Dimensions are not to be scaled.

KEY

DB32 Refuse Vehicle - 7.9 m length

PHASE 3
146 UNITS

HDC1296 05-2

rev.	date	description	chk.

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client:

Castle Rock Homes (Midleton) Ltd.

job title:

Proposed Development
Blossom Hill, Midleton - Castlerock

drawing title:

Vehicle Swept Path Analyis
Refuse Vehicle
Sheet 1 of 2

scale:	date:	drawn by:	checked by:
1:500@A1 1:1000@A3	25/09/2023	D. P	S.S

job number:	drawing number:	revision:
HDC1296	05-1	02

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HDC1296 05-1

PHASE 2
74 UNITS

PHASE 1
52 UNITS

MIDLETON WATER TREATMENT PLANT

BLOSSOM HILL

HOLLYRIDGE

E.S.B. Substation

NOTES

1. Dimensions are not to be scaled.

KEY

DB32 Refuse Vehicle - 7.9 m length

rev.	date	description	chk.

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client:

Castle Rock Homes (Midleton) Ltd.

job title:

Proposed Development
Blossom Hill, Midleton - Castlerock

drawing title:

Vehicle Swept Path Analyis
Refuse Vehicle
Sheet 2 of 2

scale:	date:	drawn by:	checked by:
1:500@A1 1:1000@A3	25/09/2023	D. P	S.S

job number:	drawing number:	revision:
HDC1296	05-2	02

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N

NOTES

1. Dimensions are not to be scaled.

KEY

DB32 Fire Appliance - 8.6 m length

PHASE 3
146 UNITS

HDC1296 06-2

rev.	date	description	chk.

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client:

Castle Rock Homes (Midleton) Ltd.

job title:

Proposed Development
Blossom Hill, Midleton - Castlerock

drawing title:

Vehicle Swept Path Analyis
Fire Tender
Sheet 1 of 2

scale:	date:	drawn by:	checked by:
1:500@A1 1:1000@A3	25/09/2023	D. P	S.S

job number:	drawing number:	revision:
HDC1296	06-1	02

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HDC1296 06-1

PHASE 2
74 UNITS

PHASE 1
52 UNITS

MIDLETON WATER TREATMENT PLANT

BLOSSOM HILL

HOLLYRIDGE

E.S.B. Substation

NOTES

1. Dimensions are not to be scaled.

KEY

DB32 Fire Appliance - 8.6 m length

rev.	date	description	chk.

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Proposed Development
Blossom Hill, Midleton - Castlerock

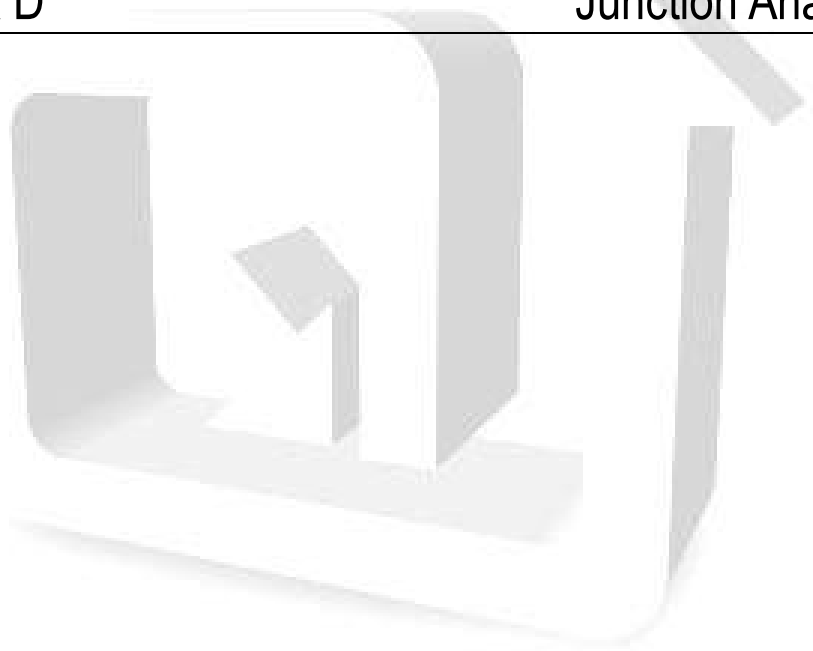
drawing title:

Vehicle Swept Path Analyis
Fire Tender
Sheet 2 of 2

scale:	date:	drawn by:	checked by:
1:500@A1 1:1000@A3	25/09/2023	D. P	S.S

job number:	drawing number:	revision:
HDC1296	06-2	02

Appendix D Junction Analysis

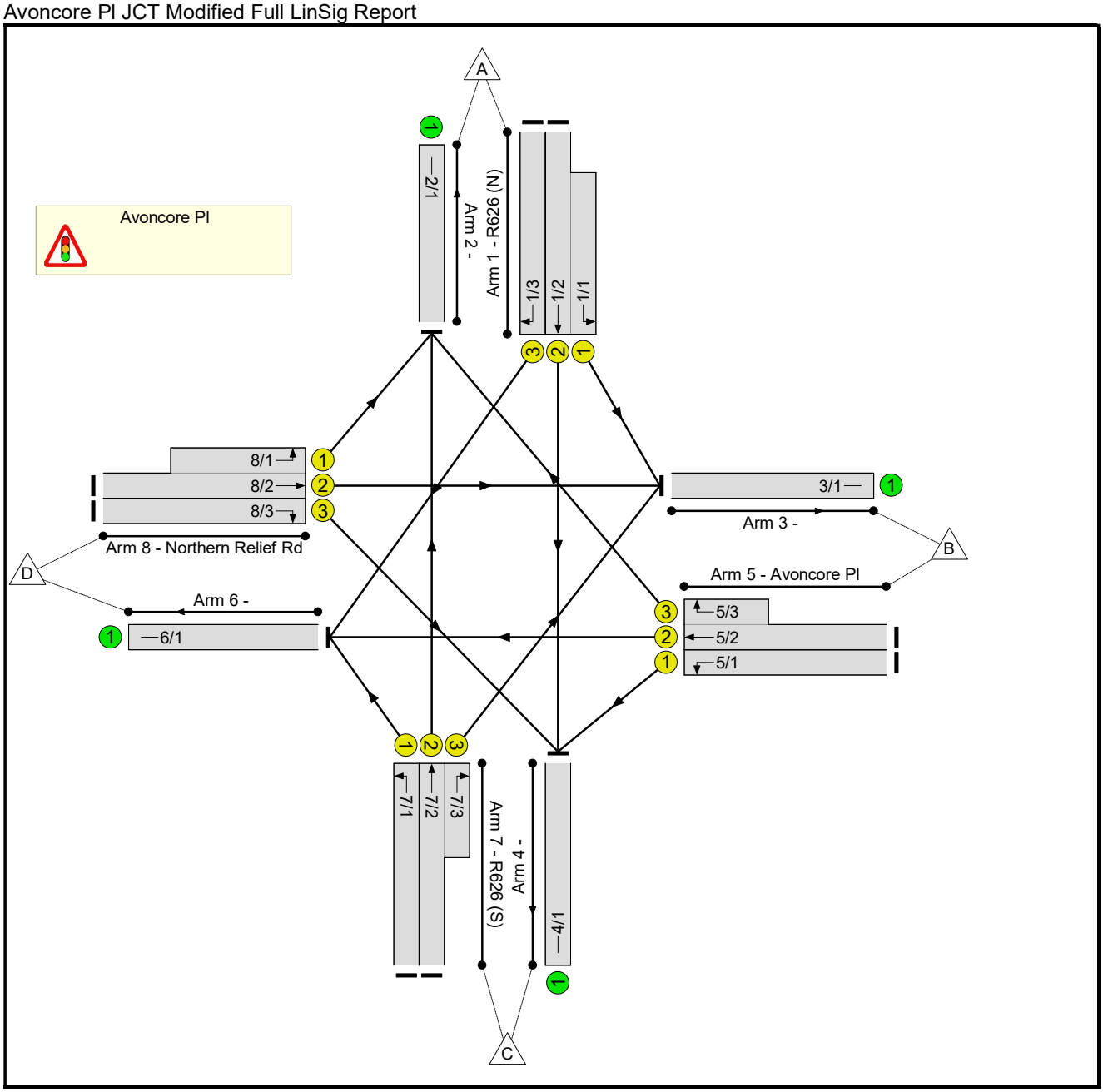


Avoncore Pl JCT Modified Full LinSig Report

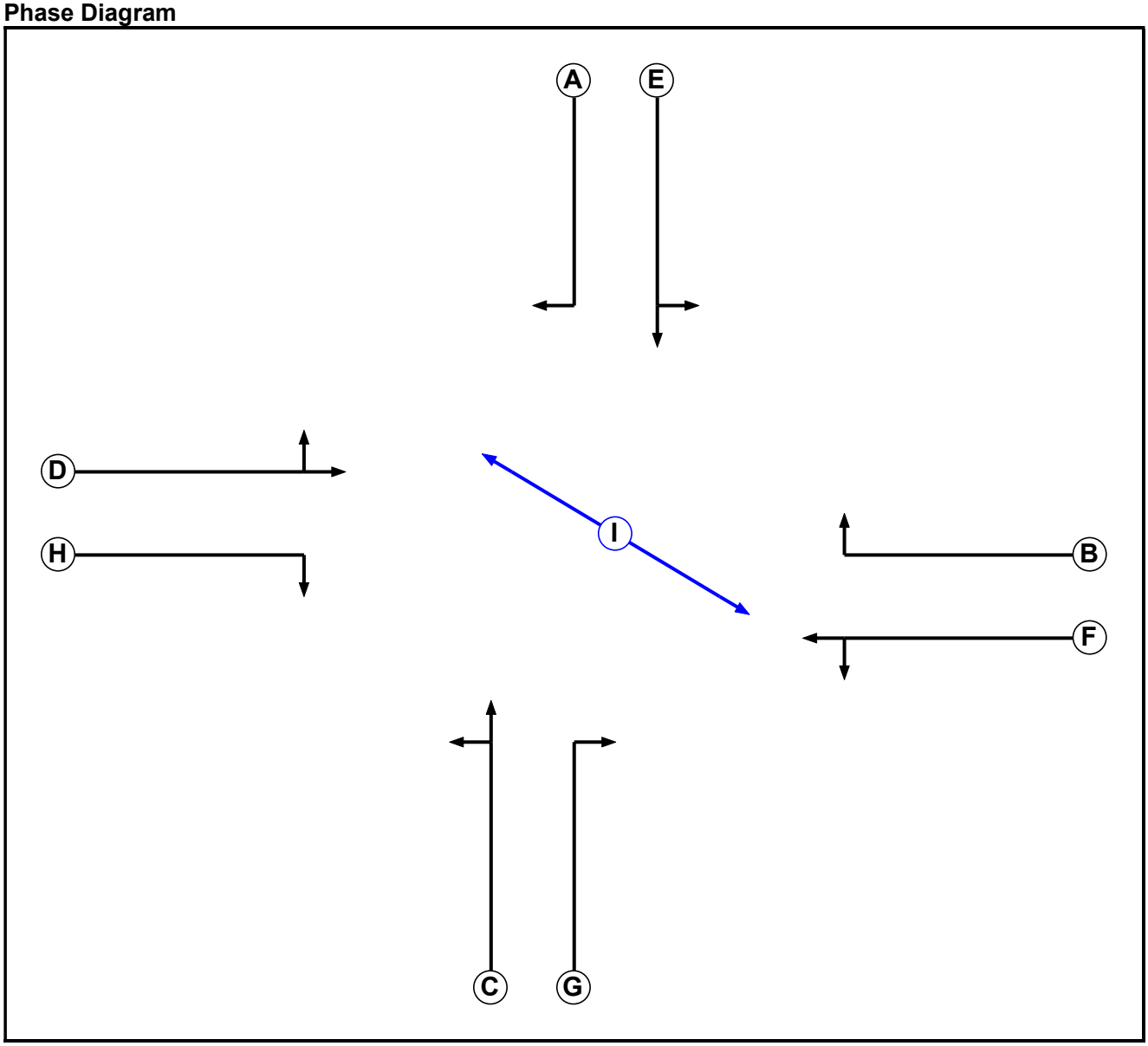
User and Project Details

Project:	**23046 Avoncore Pl (LRD Bloomfield West Midleton Co Cork)**
Title:	**Existing Layout**
Location:	Cork
Client:	Castle Rock Homes (Midleton) Limited (Hegsons Desgin Counsultancy Ltd)
Date Started:	29/09/23
Date Completed:	03/10/23
Model Assumptions:	
Checked By:	Simon Swanston
Checked By Date:	03/10/23
Additional detail:	
File name:	Avoncore Pl JCT Modified.lsg3x
Author:	Stuart Hanson
Company:	JCT Consultancy
Address:	LinSig House, Deepdale Enterprise Park, Nettleham, LN2 2LL

Network Layout Diagram


Avoncore Pl
A
B
C
D
Arm 1 - R626 (N)
Arm 2 -
Arm 3 -
Arm 4 -
Arm 5 - Avoncore Pl
Arm 6 -
Arm 7 - R626 (S)
Arm 8 - Northern Relief Rd
1/1
1/2
1/3
2/1
3/1
4/1
5/1
5/2
5/3
6/1
7/1
7/2
7/3
8/1
8/2
8/3

Phase Diagram



Avoncore Pl JCT Modified Full LinSig Report

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Traffic		7	7
H	Traffic		7	7
I	Pedestrian		7	7

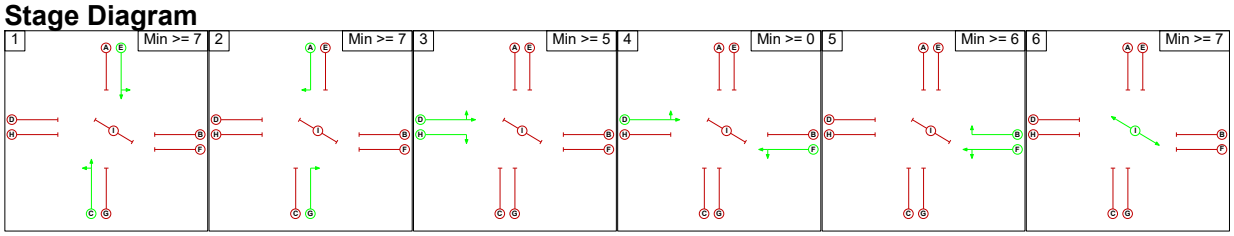
Phase Intergreens Matrix

		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		6	5	5	-	7	-	5	5
	B	6		5	7	7	-	5	-	5
	C	5	5		6	-	5	-	-	5
	D	5	7	6		5	-	6	-	5
	E	-	7	-	5		7	5	5	5
	F	7	-	5	-	7		5	5	5
	G	-	5	-	6	5	5		5	5
	H	5	-	-	-	5	5	5		5
	I	5	5	5	5	5	5	5	5	

Phases in Stage

Stage No.	Phases in Stage
1	C E
2	A G
3	D H
4	D F
5	B F
6	I

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage					
		1	2	3	4	5	6
From Stage	1		5	6	7	7	5
	2	5		6	7	7	5
	3	6	6		5	7	5
	4	7	7	5		7	5
	5	7	7	7	7		5
	6	5	5	5	5	5	

Give-Way Lane Input Data

Junction: Avoncore PI
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: Avoncore Pl												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (R626 (N))	U	E	2	3	11.3	Geom	-	3.00	0.00	Y	Arm 3 Left	20.00
1/2 (R626 (N))	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
1/3 (R626 (N))	U	A	2	3	19.1	Geom	-	3.25	0.00	Y	Arm 6 Right	23.00
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Avoncore Pl)	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Left	12.00
5/2 (Avoncore Pl)	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
5/3 (Avoncore Pl)	U	B	2	3	5.0	Geom	-	3.00	0.00	N	Arm 2 Right	22.00
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (R626 (S))	U	C	2	3	5.6	Geom	-	3.25	0.00	Y	Arm 6 Left	20.00
7/2 (R626 (S))	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Ahead	Inf
7/3 (R626 (S))	U	G	2	3	5.6	Geom	-	3.00	0.00	Y	Arm 3 Right	20.00
8/1 (Northern Relief Rd)	U	D	2	3	8.0	Geom	-	3.25	0.00	Y	Arm 2 Left	8.00
8/2 (Northern Relief Rd)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 3 Ahead	Inf
8/3 (Northern Relief Rd)	U	H	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Right	25.00

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2023 '	08:00	09:00	01:00	
2: 'AM 2025 Do Nothing '	08:00	09:00	01:00	
3: 'AM 2025 Do Something '	08:00	09:00	01:00	
4: 'AM 2030 Do Nothing '	08:00	09:00	01:00	
5: 'AM 2030 Do Something '	08:00	09:00	01:00	
6: 'PM 2023'	17:15	18:15	01:00	
7: 'PM 2025 Do Nothing'	17:15	18:15	01:00	
8: 'PM 2025 Do Something'	17:15	18:15	01:00	

9: 'PM 2030 Do Nothing'	17:15	18:15	01:00	
10: 'PM 2030 Do Something'	17:15	18:15	01:00	

Scenario 1: 'AM23' (FG1: 'AM 2023 ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	89	246	189	524
	B	81	0	54	111	246
	C	336	107	0	41	484
	D	310	304	16	0	630
	Tot.	727	500	316	341	1884

Traffic Lane Flows

Lane	Scenario 1: AM23
Junction: Avoncore Pl	
1/1 (short)	89
1/2 (with short)	335(In) 246(Out)
1/3	189
2/1	727
3/1	500
4/1	316
5/1	54
5/2 (with short)	192(In) 111(Out)
5/3 (short)	81
6/1	341
7/1	41
7/2 (with short)	443(In) 336(Out)
7/3 (short)	107
8/1 (short)	310
8/2 (with short)	614(In) 304(Out)
8/3	16

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 2: 'AM25 DN' (FG2: 'AM 2025 Do Nothing ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	96	256	203	555
	B	87	0	60	135	282
	C	350	113	0	43	506
	D	345	332	19	0	696
	Tot.	782	541	335	381	2039

Traffic Lane Flows

Lane	Scenario 2: AM25 DN
Junction: Avoncore Pl	
1/1 (short)	96
1/2 (with short)	352(In) 256(Out)
1/3	203
2/1	782
3/1	541
4/1	335
5/1	60
5/2 (with short)	222(In) 135(Out)
5/3 (short)	87
6/1	381
7/1	43
7/2 (with short)	463(In) 350(Out)
7/3 (short)	113
8/1 (short)	345
8/2 (with short)	677(In) 332(Out)
8/3	19

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 3: 'AM25 DS' (FG3: 'AM 2025 Do Something ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	96	256	203	555
	B	90	0	66	145	301
	C	350	115	0	43	508
	D	345	334	19	0	698
	Tot.	785	545	341	391	2062

Traffic Lane Flows

Lane	Scenario 3: AM25 DS
Junction: Avoncore Pl	
1/1 (short)	96
1/2 (with short)	352(In) 256(Out)
1/3	203
2/1	785
3/1	545
4/1	341
5/1	66
5/2 (with short)	235(In) 145(Out)
5/3 (short)	90
6/1	391
7/1	43
7/2 (with short)	465(In) 350(Out)
7/3 (short)	115
8/1 (short)	345
8/2 (with short)	679(In) 334(Out)
8/3	19

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 4: 'AM30 DN' (FG4: 'AM 2030 Do Nothing ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	104	282	244	630
	B	95	0	65	162	322
	C	385	124	0	51	560
	D	409	380	25	0	814
	Tot.	889	608	372	457	2326

Traffic Lane Flows

Lane	Scenario 4: AM30 DN
Junction: Avoncore Pl	
1/1 (short)	104
1/2 (with short)	386(In) 282(Out)
1/3	244
2/1	889
3/1	608
4/1	372
5/1	65
5/2 (with short)	257(In) 162(Out)
5/3 (short)	95
6/1	457
7/1	51
7/2 (with short)	509(In) 385(Out)
7/3 (short)	124
8/1 (short)	409
8/2 (with short)	789(In) 380(Out)
8/3	25

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 5: 'AM30 DS' (FG5: 'AM 2030 Do Something ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	106	282	244	632
	B	105	0	86	199	390
	C	385	128	0	51	564
	D	409	388	25	0	822
	Tot.	899	622	393	494	2408

Traffic Lane Flows

Lane	Scenario 5: AM30 DS
Junction: Avoncore Pl	
1/1 (short)	106
1/2 (with short)	388(In) 282(Out)
1/3	244
2/1	899
3/1	622
4/1	393
5/1	86
5/2 (with short)	304(In) 199(Out)
5/3 (short)	105
6/1	494
7/1	51
7/2 (with short)	513(In) 385(Out)
7/3 (short)	128
8/1 (short)	409
8/2 (with short)	797(In) 388(Out)
8/3	25

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 6: 'PM23' (FG6: 'PM 2023', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	27	250	236	513
	B	27	0	103	191	321
	C	176	63	0	50	289
	D	189	129	27	0	345
	Tot.	392	219	380	477	1468

Traffic Lane Flows

Lane	Scenario 6: PM23
Junction: Avoncore Pl	
1/1 (short)	27
1/2 (with short)	277(In) 250(Out)
1/3	236
2/1	392
3/1	219
4/1	380
5/1	103
5/2 (with short)	218(In) 191(Out)
5/3 (short)	27
6/1	477
7/1	50
7/2 (with short)	239(In) 176(Out)
7/3 (short)	63
8/1 (short)	189
8/2 (with short)	318(In) 129(Out)
8/3	27

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 7: 'PM25 DN' (FG7: 'PM 2025 Do Nothing', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	30	260	261	551
	B	30	0	109	217	356
	C	183	70	0	57	310
	D	205	155	29	0	389
	Tot.	418	255	398	535	1606

Traffic Lane Flows

Lane	Scenario 7: PM25 DN
Junction: Avoncore Pl	
1/1 (short)	30
1/2 (with short)	290(In) 260(Out)
1/3	261
2/1	418
3/1	255
4/1	398
5/1	109
5/2 (with short)	247(In) 217(Out)
5/3 (short)	30
6/1	535
7/1	57
7/2 (with short)	253(In) 183(Out)
7/3 (short)	70
8/1 (short)	205
8/2 (with short)	360(In) 155(Out)
8/3	29

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 8: 'PM25 DS' (FG8: 'PM 2025 Do Something', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	32	260	261	553
	B	31	0	111	220	362
	C	183	74	0	57	314
	D	205	163	29	0	397
	Tot.	419	269	400	538	1626

Traffic Lane Flows

Lane	Scenario 8: PM25 DS
Junction: Avoncore Pl	
1/1 (short)	32
1/2 (with short)	292(In) 260(Out)
1/3	261
2/1	419
3/1	269
4/1	400
5/1	111
5/2 (with short)	251(In) 220(Out)
5/3 (short)	31
6/1	538
7/1	57
7/2 (with short)	257(In) 183(Out)
7/3 (short)	74
8/1 (short)	205
8/2 (with short)	368(In) 163(Out)
8/3	29

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 9: 'PM30 DN' (FG9: 'PM 2030 Do Nothing', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	32	287	306	625
	B	32	0	119	252	403
	C	202	75	0	69	346
	D	238	183	34	0	455
	Tot.	472	290	440	627	1829

Traffic Lane Flows

Lane	Scenario 9: PM30 DN
Junction: Avoncore Pl	
1/1 (short)	32
1/2 (with short)	319(In) 287(Out)
1/3	306
2/1	472
3/1	290
4/1	440
5/1	119
5/2 (with short)	284(In) 252(Out)
5/3 (short)	32
6/1	627
7/1	69
7/2 (with short)	277(In) 202(Out)
7/3 (short)	75
8/1 (short)	238
8/2 (with short)	421(In) 183(Out)
8/3	34

Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 10: 'PM30 DS' (FG10: 'PM 2030 Do Something', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	39	287	306	632
	B	36	0	126	264	426
	C	202	89	0	69	360
	D	238	211	34	0	483
	Tot.	476	339	447	639	1901

Traffic Lane Flows

Lane	Scenario 10: PM30 DS
Junction: Avoncore Pl	
1/1 (short)	39
1/2 (with short)	326(In) 287(Out)
1/3	306
2/1	476
3/1	339
4/1	447
5/1	126
5/2 (with short)	300(In) 264(Out)
5/3 (short)	36
6/1	639
7/1	69
7/2 (with short)	291(In) 202(Out)
7/3 (short)	89
8/1 (short)	238
8/2 (with short)	449(In) 211(Out)
8/3	34

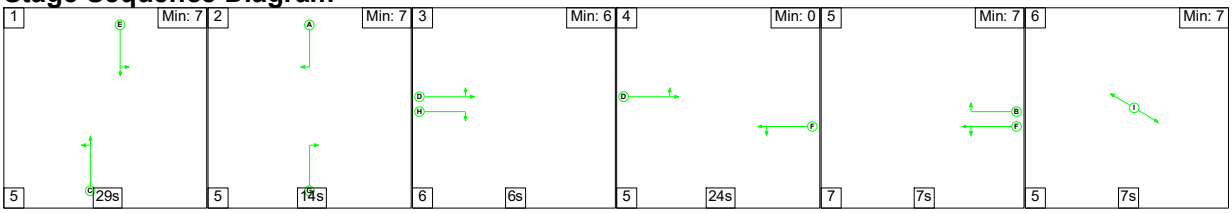
Lane Saturation Flows

Junction: Avoncore Pl								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (R626 (N))	3.00	0.00	Y	Arm 3 Left	20.00	100.0 %	1781	1781
1/2 (R626 (N))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
1/3 (R626 (N))	3.25	0.00	Y	Arm 6 Right	23.00	100.0 %	1821	1821
2/1	Infinite Saturation Flow						Inf	Inf
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Avoncore Pl)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
5/2 (Avoncore Pl)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
5/3 (Avoncore Pl)	3.00	0.00	N	Arm 2 Right	22.00	100.0 %	1924	1924
6/1	Infinite Saturation Flow						Inf	Inf

7/1 (R626 (S))	3.25	0.00	Y	Arm 6 Left	20.00	100.0 %	1805	1805
7/2 (R626 (S))	3.25	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1940	1940
7/3 (R626 (S))	3.00	0.00	Y	Arm 3 Right	20.00	100.0 %	1781	1781
8/1 (Northern Relief Rd)	3.25	0.00	Y	Arm 2 Left	8.00	100.0 %	1634	1634
8/2 (Northern Relief Rd)	3.25	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1940	1940
8/3 (Northern Relief Rd)	3.25	0.00	Y	Arm 4 Right	25.00	100.0 %	1830	1830

Scenario 1: 'AM23' (FG1: 'AM 2023 ', Plan 1: 'Network Control Plan 1')

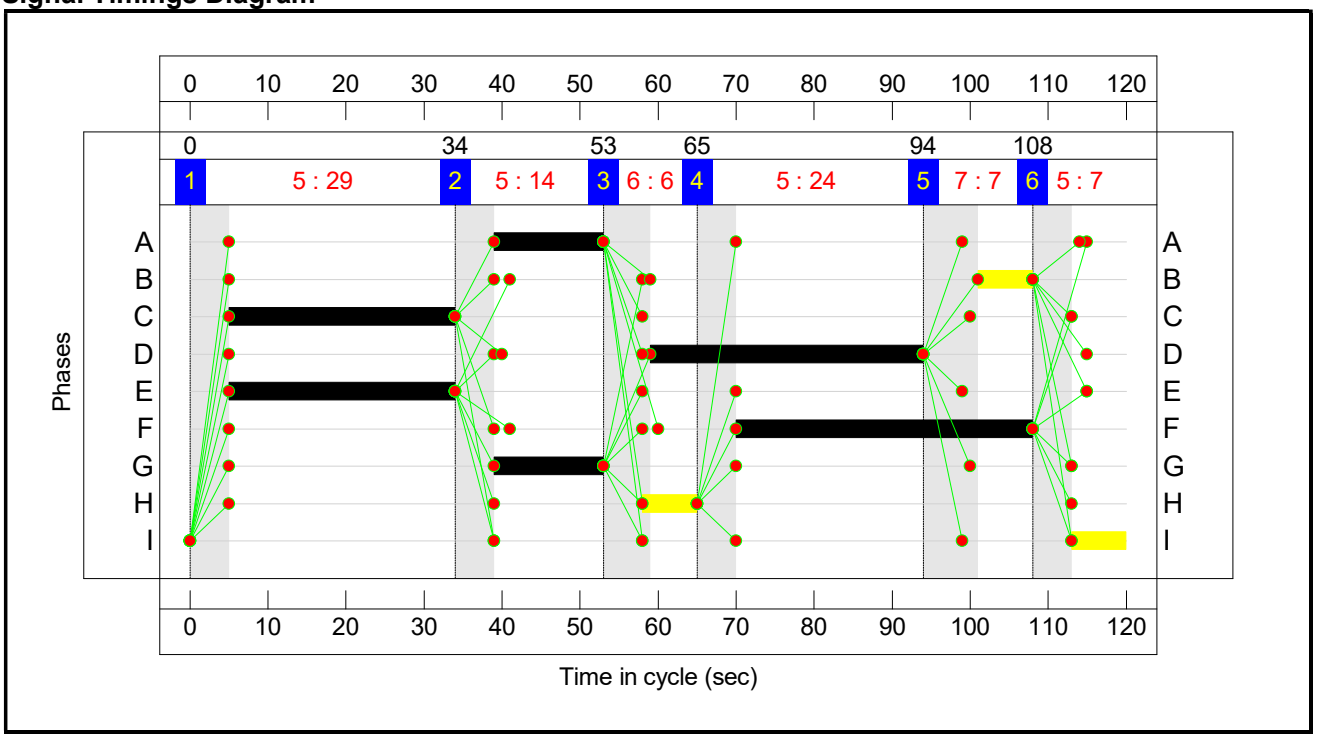
Stage Sequence Diagram



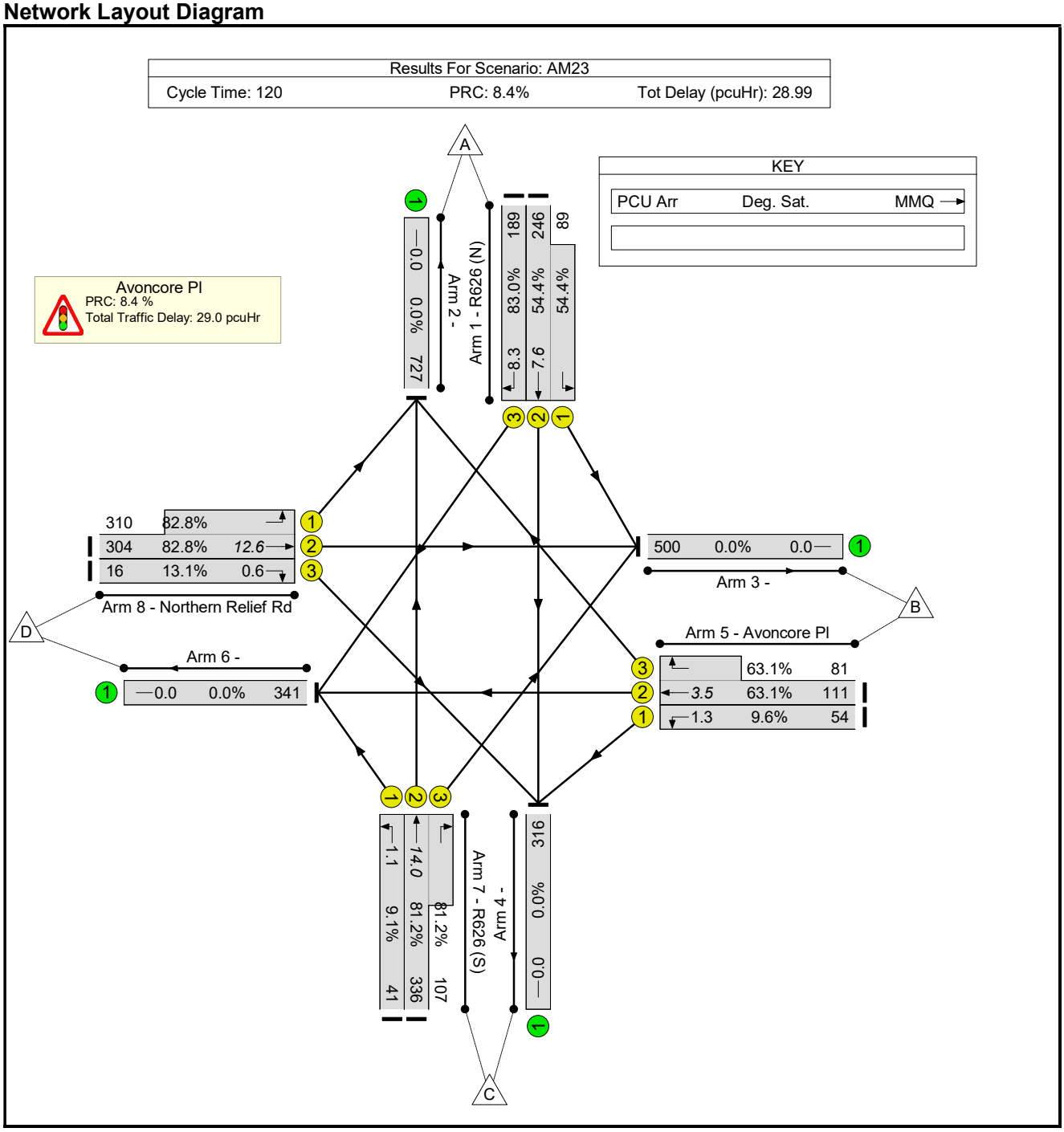
Stage Timings

Stage	1	2	3	4	5	6
Duration	29	14	6	24	7	7
Change Point	0	34	53	65	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.0%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.0%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	29	-	335	1940:1781	452+164	54.4 : 54.4%
1/3	R626 (N) Right	U	N/A	N/A	A		1	14	-	189	1821	228	83.0%
2/1		U	N/A	N/A	-		-	-	-	727	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	500	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	316	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	38	-	54	1724	560	9.6%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	38:7	-	192	1940:1924	176+128	63.1 : 63.1%
6/1		U	N/A	N/A	-		-	-	-	341	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	29	-	41	1805	451	9.1%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	29:14	-	443	1940:1781	414+132	81.2 : 81.2%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	35	-	614	1940:1634	367+374	82.8 : 82.8%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	16	1830	122	13.1%

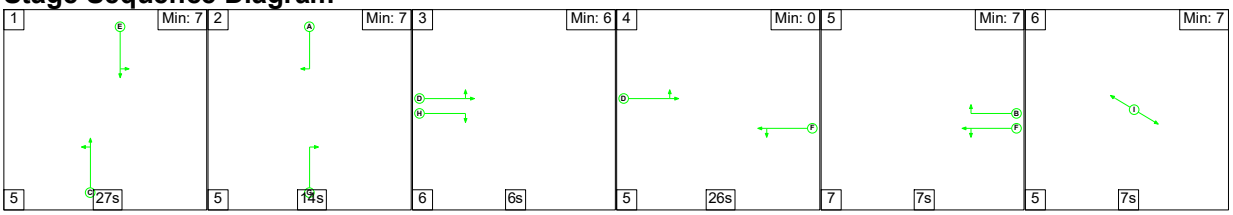
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**20.8**	**8.2**	**0.0**	**29.0**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**20.8**	**8.2**	**0.0**	**29.0**	**-**	**-**	**-**	**-**
1/2+1/1	335	335	-	-	-	3.5	0.6	-	4.1	44.2	7.0	0.6	7.6
1/3	189	189	-	-	-	2.7	2.2	-	4.9	93.1	6.1	2.2	8.3
2/1	727	727	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	500	500	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	316	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	54	54	-	-	-	0.4	0.1	-	0.5	31.8	1.2	0.1	1.3
5/2+5/3	192	192	-	-	-	2.1	0.8	-	3.0	55.6	2.6	0.8	3.5
6/1	341	341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	41	41	-	-	-	0.4	0.0	-	0.4	38.9	1.0	0.0	1.1
7/2+7/3	443	443	-	-	-	5.3	2.1	-	7.4	59.9	11.9	2.1	14.0
8/2+8/1	614	614	-	-	-	6.1	2.3	-	8.4	49.4	10.2	2.3	12.6
8/3	16	16	-	-	-	0.2	0.1	-	0.3	69.7	0.5	0.1	0.6

C1 PRC for Signalled Lanes (%): 8.4 Total Delay for Signalled Lanes (pcuHr): 28.99 Cycle Time (s): 120
PRC Over All Lanes (%): 8.4 Total Delay Over All Lanes(pcuHr): 28.99

Avoncore Pl JCT Modified Full LinSig Report
Scenario 2: 'AM25 DN' (FG2: 'AM 2025 Do Nothing ', Plan 1: 'Network Control Plan 1')

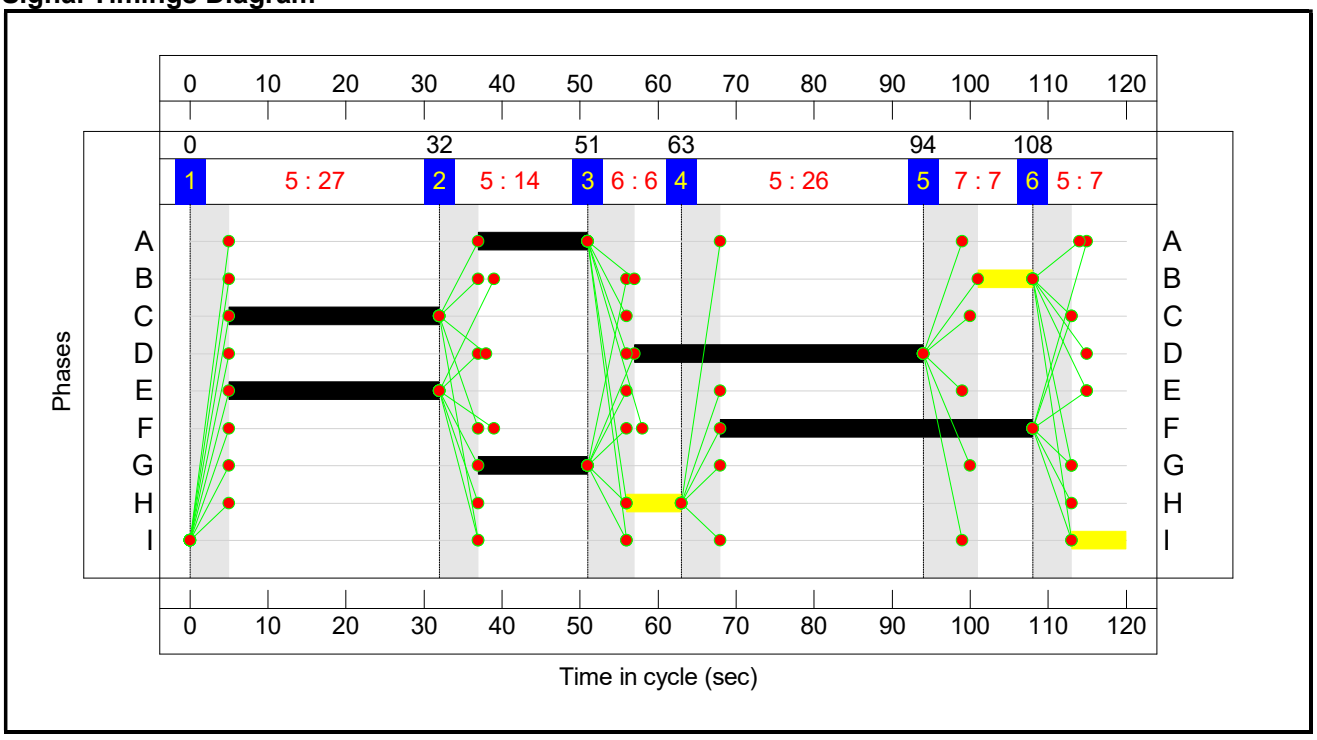
Stage Sequence Diagram



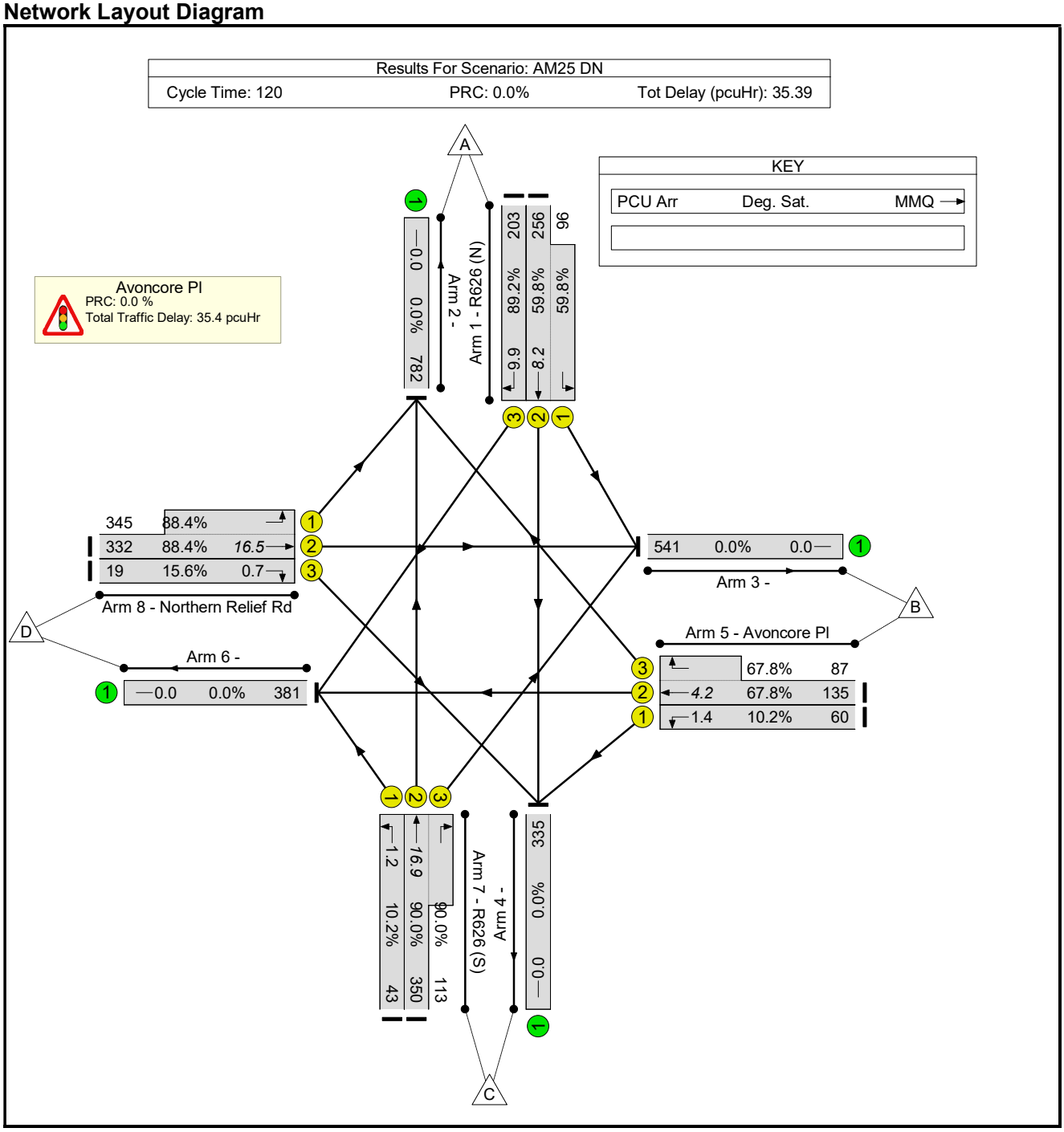
Stage Timings

Stage	1	2	3	4	5	6
Duration	27	14	6	26	7	7
Change Point	0	32	51	63	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.0%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.0%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	27	-	352	1940:1781	428+161	59.8 : 59.8%
1/3	R626 (N) Right	U	N/A	N/A	A		1	14	-	203	1821	228	89.2%
2/1		U	N/A	N/A	-		-	-	-	782	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	541	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	40	-	60	1724	589	10.2%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	40:7	-	222	1940:1924	199+128	67.8 : 67.8%
6/1		U	N/A	N/A	-		-	-	-	381	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	27	-	43	1805	421	10.2%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	27:14	-	463	1940:1781	389+126	90.0 : 90.0%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	37	-	677	1940:1634	376+390	88.4 : 88.4%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	19	1830	122	15.6%

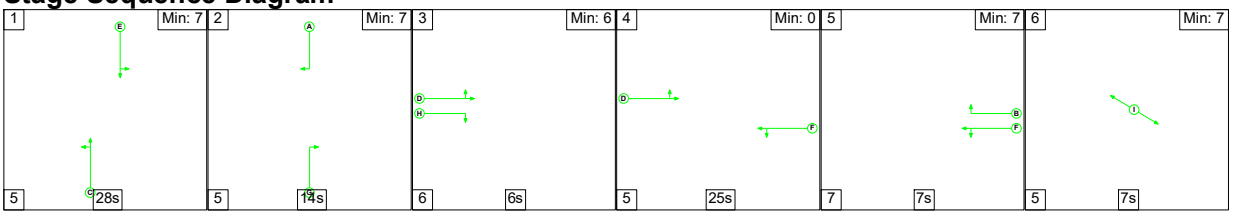
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**22.7**	**12.7**	**0.0**	**35.4**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**22.7**	**12.7**	**0.0**	**35.4**	**-**	**-**	**-**	**-**
1/2+1/1	352	352	-	-	-	3.9	0.7	-	4.6	47.3	7.5	0.7	8.2
1/3	203	203	-	-	-	2.9	3.3	-	6.2	109.5	6.7	3.3	9.9
2/1	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	541	541	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	60	60	-	-	-	0.4	0.1	-	0.5	30.4	1.4	0.1	1.4
5/2+5/3	222	222	-	-	-	2.4	1.0	-	3.4	55.2	3.2	1.0	4.2
6/1	381	381	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	43	43	-	-	-	0.4	0.1	-	0.5	40.9	1.1	0.1	1.2
7/2+7/3	463	463	-	-	-	5.8	3.9	-	9.7	75.2	13.0	3.9	16.9
8/2+8/1	677	677	-	-	-	6.6	3.5	-	10.1	54.0	13.0	3.5	16.5
8/3	19	19	-	-	-	0.3	0.1	-	0.4	70.3	0.6	0.1	0.7

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 35.39 Cycle Time (s): 120
PRC Over All Lanes (%): 0.0 Total Delay Over All Lanes(pcuHr): 35.39

Avoncore Pl JCT Modified Full LinSig Report
Scenario 3: 'AM25 DS' (FG3: 'AM 2025 Do Something ', Plan 1: 'Network Control Plan 1')

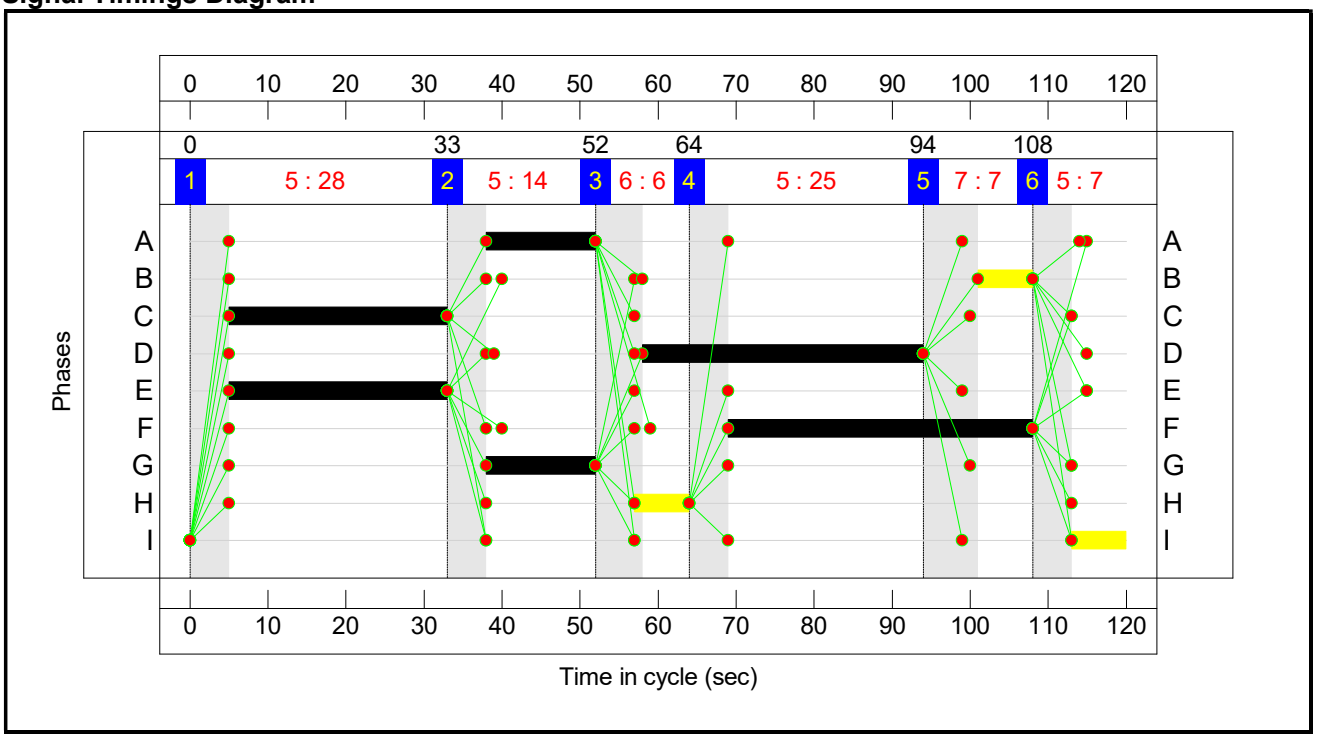
Stage Sequence Diagram



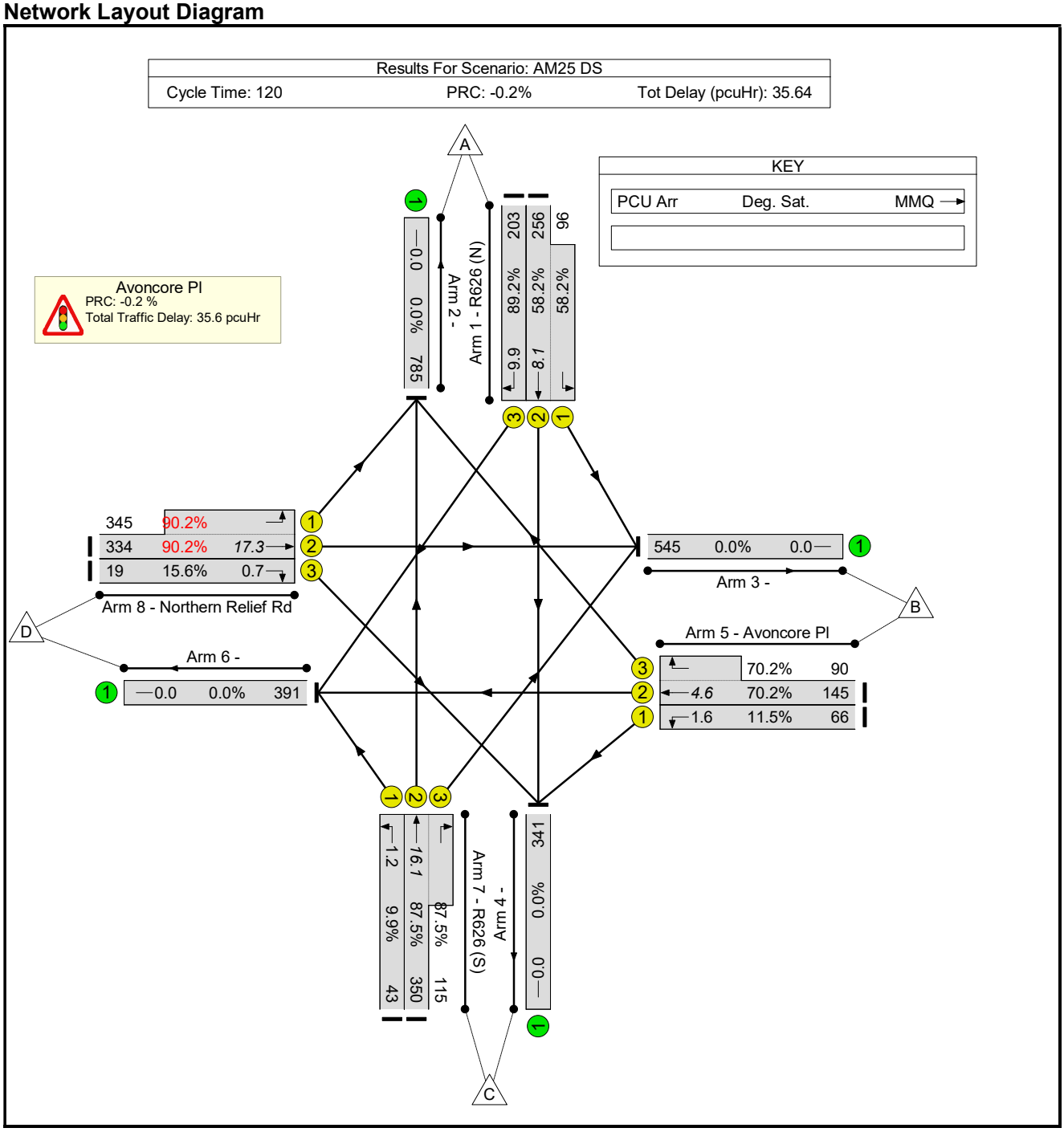
Stage Timings

Stage	1	2	3	4	5	6
Duration	28	14	6	25	7	7
Change Point	0	33	52	64	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.2%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.2%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	28	-	352	1940:1781	440+165	58.2 : 58.2%
1/3	R626 (N) Right	U	N/A	N/A	A		1	14	-	203	1821	228	89.2%
2/1		U	N/A	N/A	-		-	-	-	785	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	545	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	341	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	39	-	66	1724	575	11.5%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	39:7	-	235	1940:1924	207+128	70.2 : 70.2%
6/1		U	N/A	N/A	-		-	-	-	391	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	28	-	43	1805	436	9.9%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	28:14	-	465	1940:1781	400+131	87.5 : 87.5%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	36	-	679	1940:1634	370+383	90.2 : 90.2%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	19	1830	122	15.6%

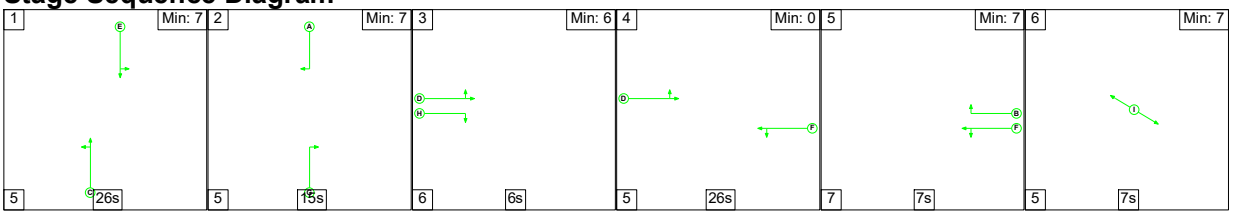
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**23.0**	**12.6**	**0.0**	**35.6**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**23.0**	**12.6**	**0.0**	**35.6**	**-**	**-**	**-**	**-**
1/2+1/1	352	352	-	-	-	3.8	0.7	-	4.5	46.0	7.4	0.7	8.1
1/3	203	203	-	-	-	2.9	3.3	-	6.2	109.5	6.7	3.3	9.9
2/1	785	785	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	545	545	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	341	341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	66	66	-	-	-	0.5	0.1	-	0.6	31.3	1.5	0.1	1.6
5/2+5/3	235	235	-	-	-	2.5	1.1	-	3.7	56.4	3.5	1.1	4.6
6/1	391	391	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	43	43	-	-	-	0.4	0.1	-	0.5	40.0	1.1	0.1	1.2
7/2+7/3	465	465	-	-	-	5.7	3.2	-	8.9	69.0	12.9	3.2	16.1
8/2+8/1	679	679	-	-	-	6.8	4.1	-	11.0	58.1	13.2	4.1	17.3
8/3	19	19	-	-	-	0.3	0.1	-	0.4	70.3	0.6	0.1	0.7

C1 PRC for Signalled Lanes (%): -0.2 Total Delay for Signalled Lanes (pcuHr): 35.64 Cycle Time (s): 120
PRC Over All Lanes (%): -0.2 Total Delay Over All Lanes(pcuHr): 35.64

Avoncore Pl JCT Modified Full LinSig Report
Scenario 4: 'AM30 DN' (FG4: 'AM 2030 Do Nothing ', Plan 1: 'Network Control Plan 1')

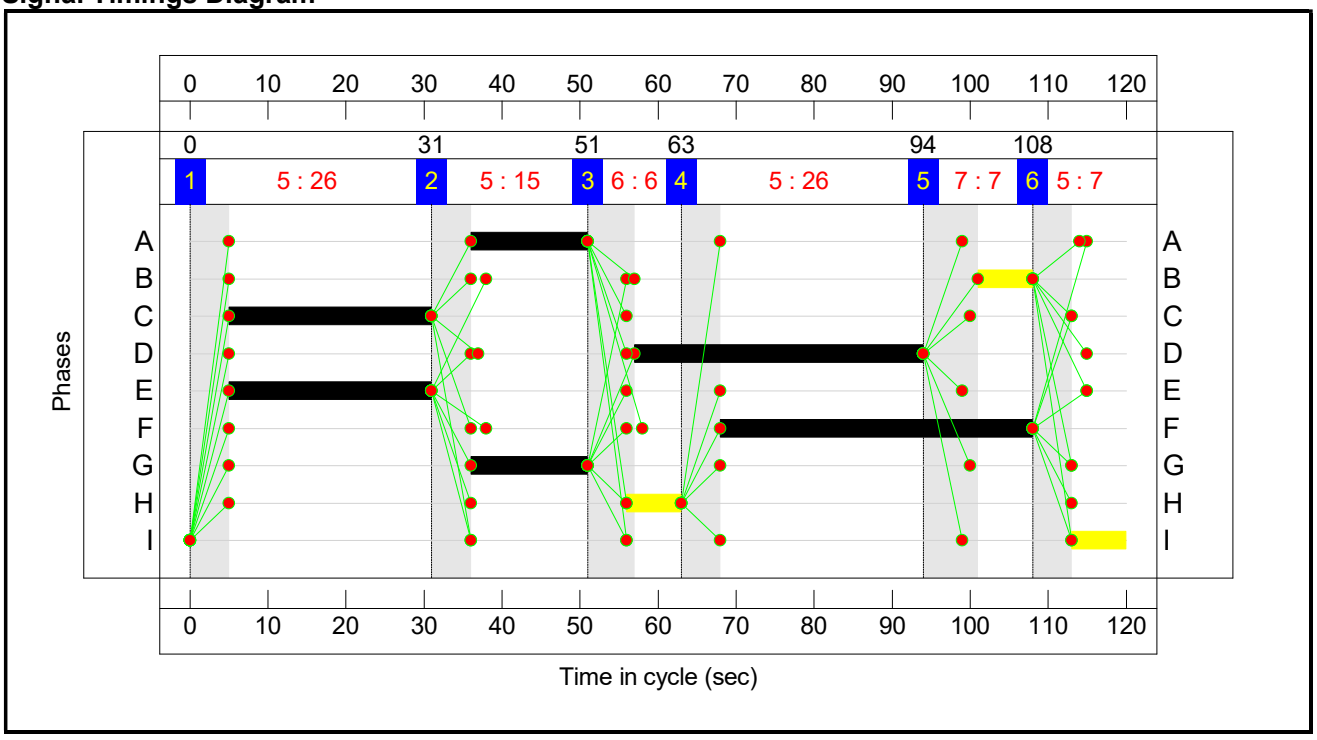
Stage Sequence Diagram



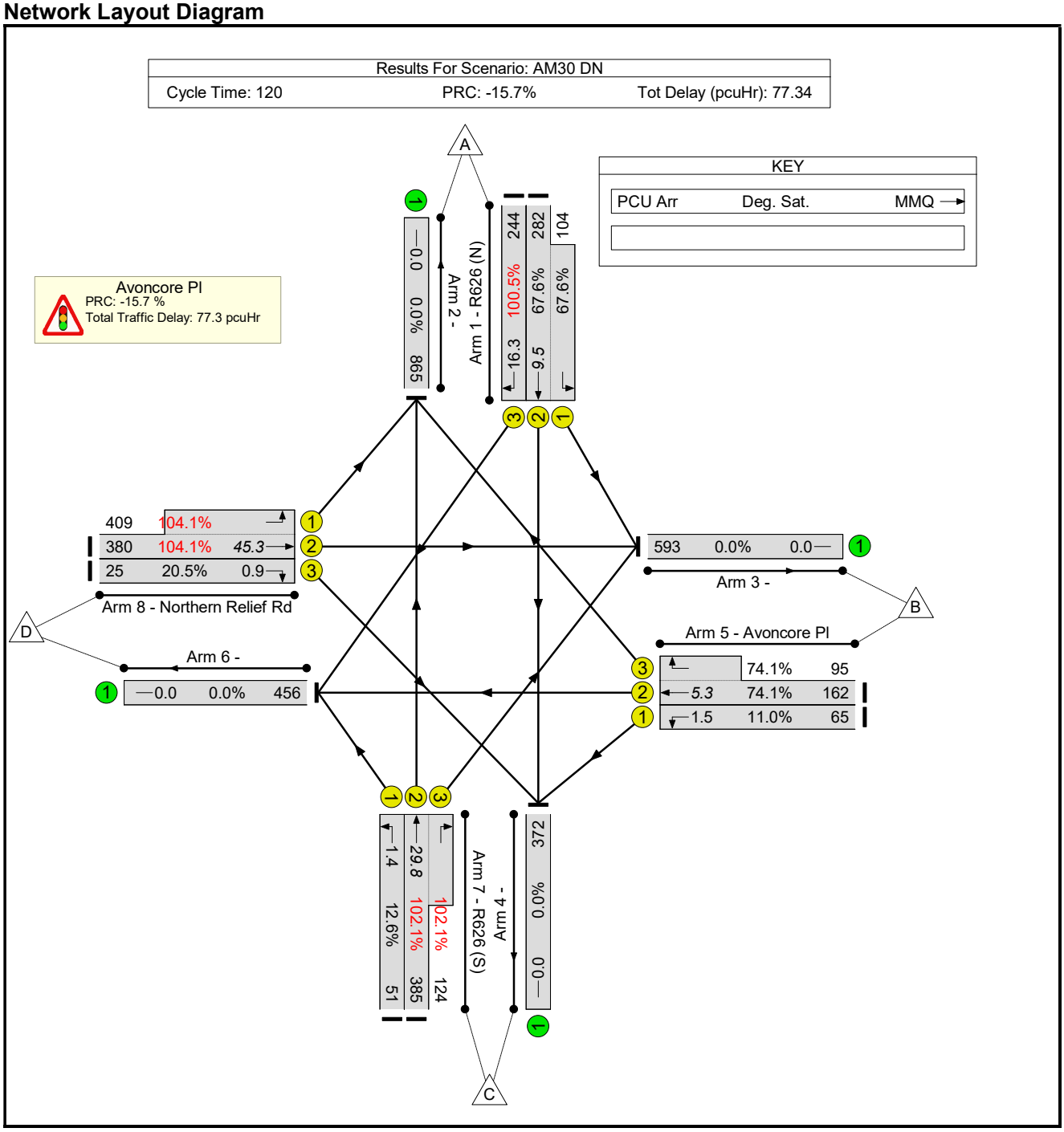
Stage Timings

Stage	1	2	3	4	5	6
Duration	26	15	6	26	7	7
Change Point	0	31	51	63	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.1%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.1%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	26	-	386	1940:1781	417+154	67.6 : 67.6%
1/3	R626 (N) Right	U	N/A	N/A	A		1	15	-	244	1821	243	100.5%
2/1		U	N/A	N/A	-		-	-	-	889	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	608	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	372	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	40	-	65	1724	589	11.0%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	40:7	-	257	1940:1924	219+128	74.1 : 74.1%
6/1		U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	26	-	51	1805	406	12.6%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	26:15	-	509	1940:1781	377+121	102.1 : 102.1%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	37	-	789	1940:1634	365+393	104.1 : 104.1%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	25	1830	122	20.5%

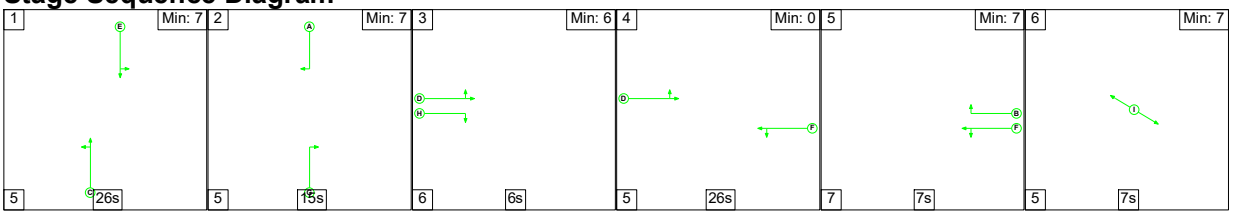
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**28.5**	**48.9**	**0.0**	**77.3**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**28.5**	**48.9**	**0.0**	**77.3**	**-**	**-**	**-**	**-**
1/2+1/1	386	386	-	-	-	4.4	1.0	-	5.4	50.8	8.5	1.0	9.5
1/3	244	243	-	-	-	3.6	8.1	-	11.7	172.7	8.2	8.1	16.3
2/1	865	865	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	593	593	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	372	372	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	65	65	-	-	-	0.5	0.1	-	0.6	30.5	1.5	0.1	1.5
5/2+5/3	257	257	-	-	-	2.7	1.4	-	4.1	57.6	3.9	1.4	5.3
6/1	456	456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	51	51	-	-	-	0.5	0.1	-	0.6	42.2	1.3	0.1	1.4
7/2+7/3	509	501	-	-	-	7.0	14.2	-	21.2	149.9	15.7	14.2	29.8
8/2+8/1	789	758	-	-	-	9.3	23.9	-	33.2	151.6	21.4	23.9	45.3
8/3	25	25	-	-	-	0.4	0.1	-	0.5	71.6	0.8	0.1	0.9

C1 PRC for Signalled Lanes (%): -15.7 Total Delay for Signalled Lanes (pcuHr): 77.34 Cycle Time (s): 120
PRC Over All Lanes (%): -15.7 Total Delay Over All Lanes(pcuHr): 77.34

Avoncore Pl JCT Modified Full LinSig Report
Scenario 5: 'AM30 DS' (FG5: 'AM 2030 Do Something ', Plan 1: 'Network Control Plan 1')

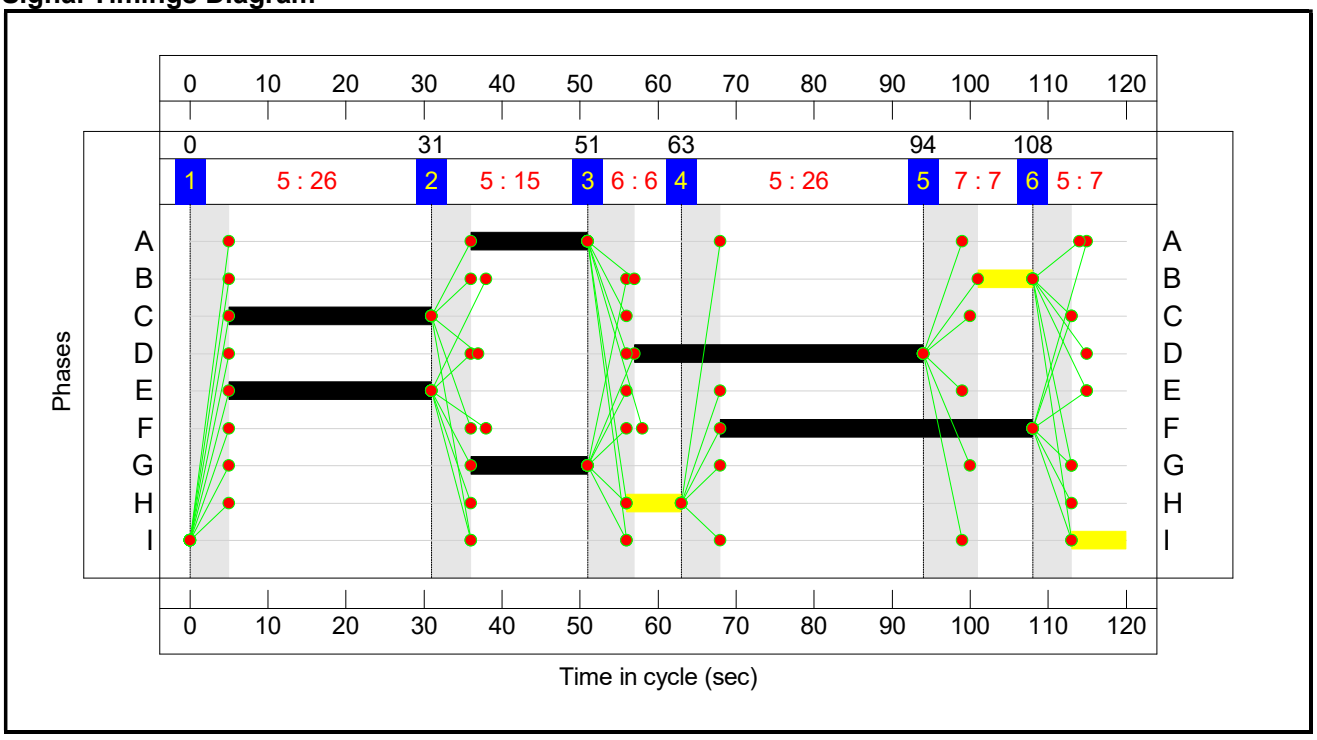
Stage Sequence Diagram



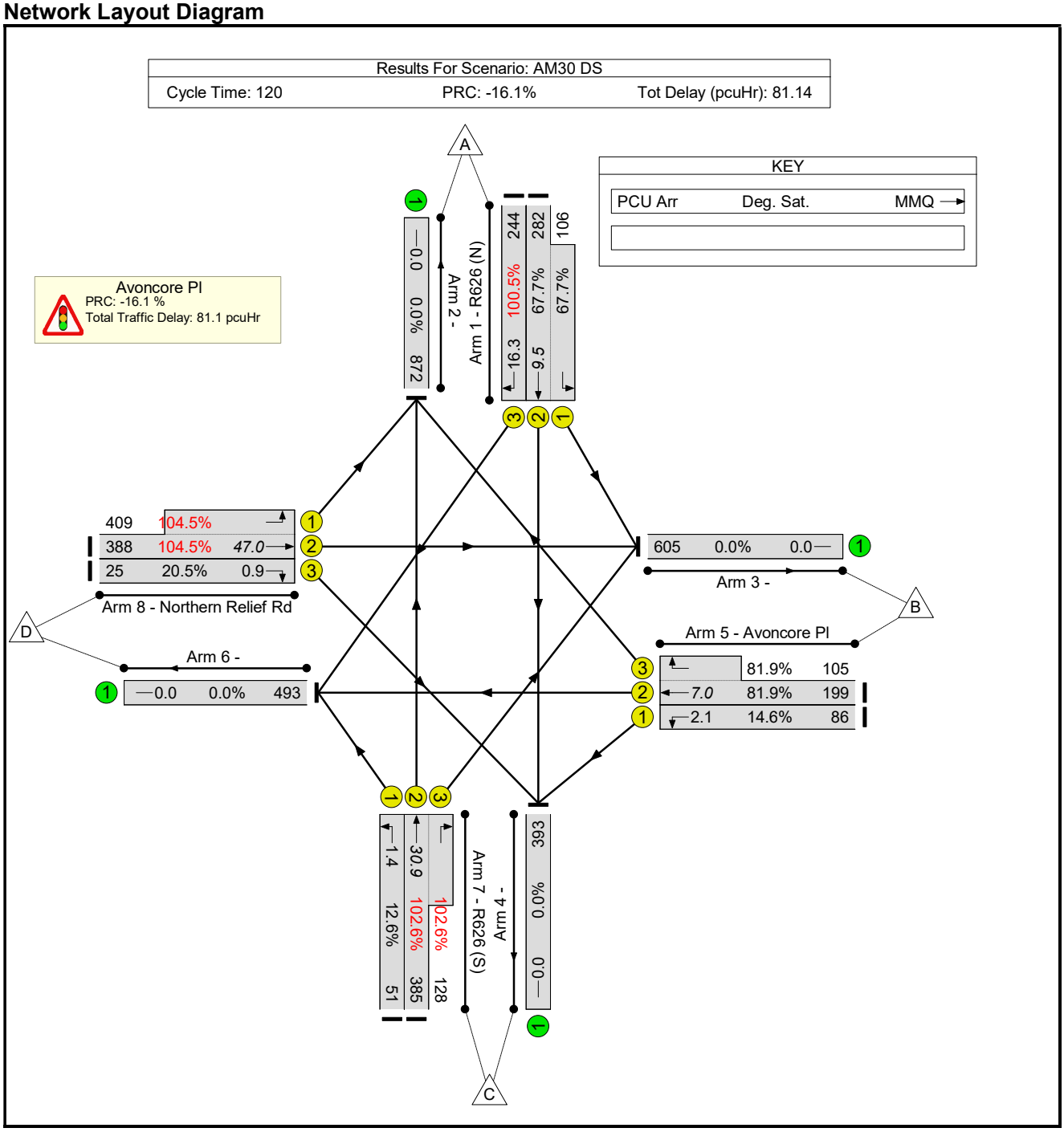
Stage Timings

Stage	1	2	3	4	5	6
Duration	26	15	6	26	7	7
Change Point	0	31	51	63	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.5%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.5%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	26	-	388	1940:1781	417+157	67.7 : 67.7%
1/3	R626 (N) Right	U	N/A	N/A	A		1	15	-	244	1821	243	100.5%
2/1		U	N/A	N/A	-		-	-	-	899	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	622	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	393	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	40	-	86	1724	589	14.6%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	40:7	-	304	1940:1924	243+128	81.9 : 81.9%
6/1		U	N/A	N/A	-		-	-	-	494	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	26	-	51	1805	406	12.6%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	26:15	-	513	1940:1781	375+125	102.6 : 102.6%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	37	-	797	1940:1634	371+391	104.5 : 104.5%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	25	1830	122	20.5%

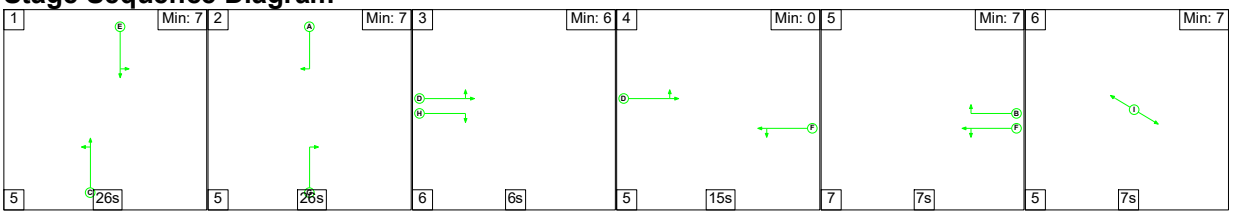
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**29.5**	**51.6**	**0.0**	**81.1**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**29.5**	**51.6**	**0.0**	**81.1**	**-**	**-**	**-**	**-**
1/2+1/1	388	388	-	-	-	4.4	1.0	-	5.5	50.7	8.5	1.0	9.5
1/3	244	243	-	-	-	3.6	8.1	-	11.7	172.7	8.2	8.1	16.3
2/1	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	393	393	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	86	86	-	-	-	0.7	0.1	-	0.7	31.0	2.0	0.1	2.1
5/2+5/3	304	304	-	-	-	3.2	2.1	-	5.3	63.2	4.9	2.1	7.0
6/1	493	493	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	51	51	-	-	-	0.5	0.1	-	0.6	42.2	1.3	0.1	1.4
7/2+7/3	513	503	-	-	-	7.2	15.0	-	22.1	155.3	15.9	15.0	30.9
8/2+8/1	797	763	-	-	-	9.6	25.1	-	34.7	156.6	21.9	25.1	47.0
8/3	25	25	-	-	-	0.4	0.1	-	0.5	71.6	0.8	0.1	0.9

C1 PRC for Signalled Lanes (%): -16.1 Total Delay for Signalled Lanes (pcuHr): 81.14 Cycle Time (s): 120
PRC Over All Lanes (%): -16.1 Total Delay Over All Lanes(pcuHr): 81.14

Avoncore Pl JCT Modified Full LinSig Report
Scenario 6: 'PM23' (FG6: 'PM 2023', Plan 1: 'Network Control Plan 1')

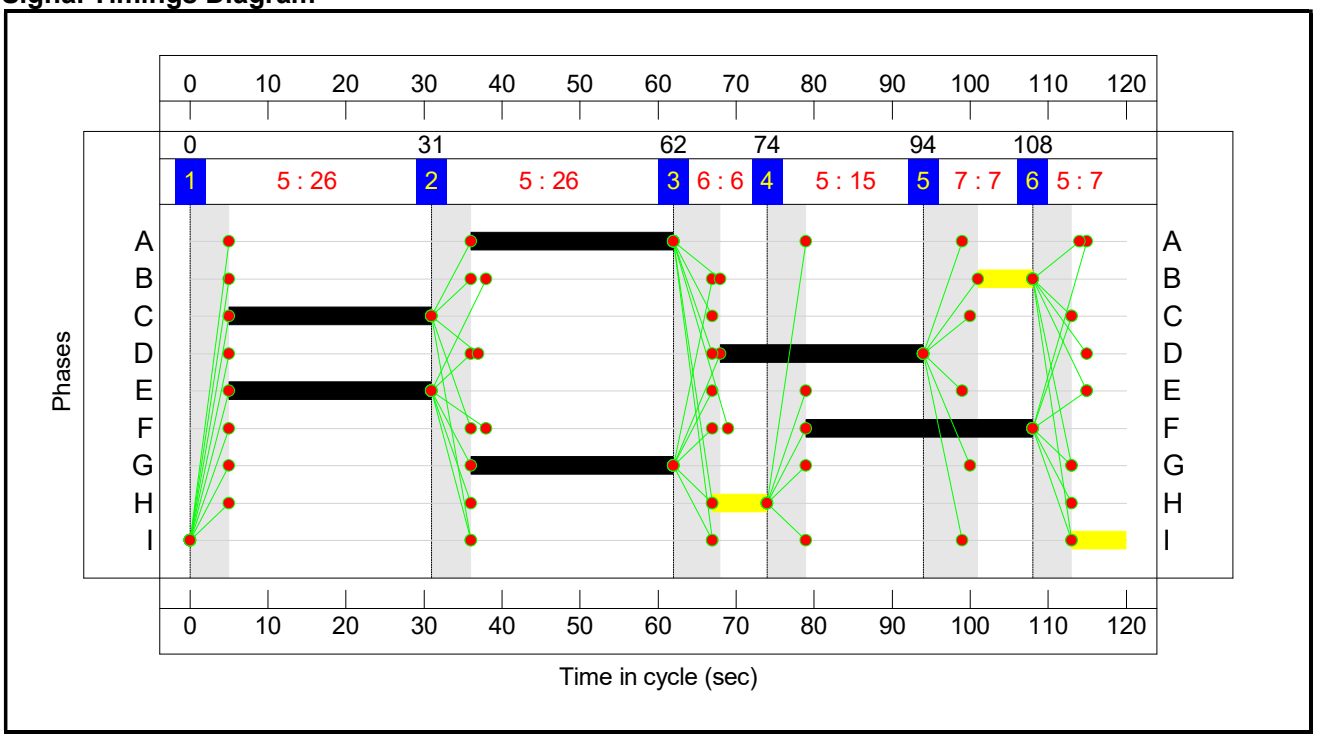
Stage Sequence Diagram



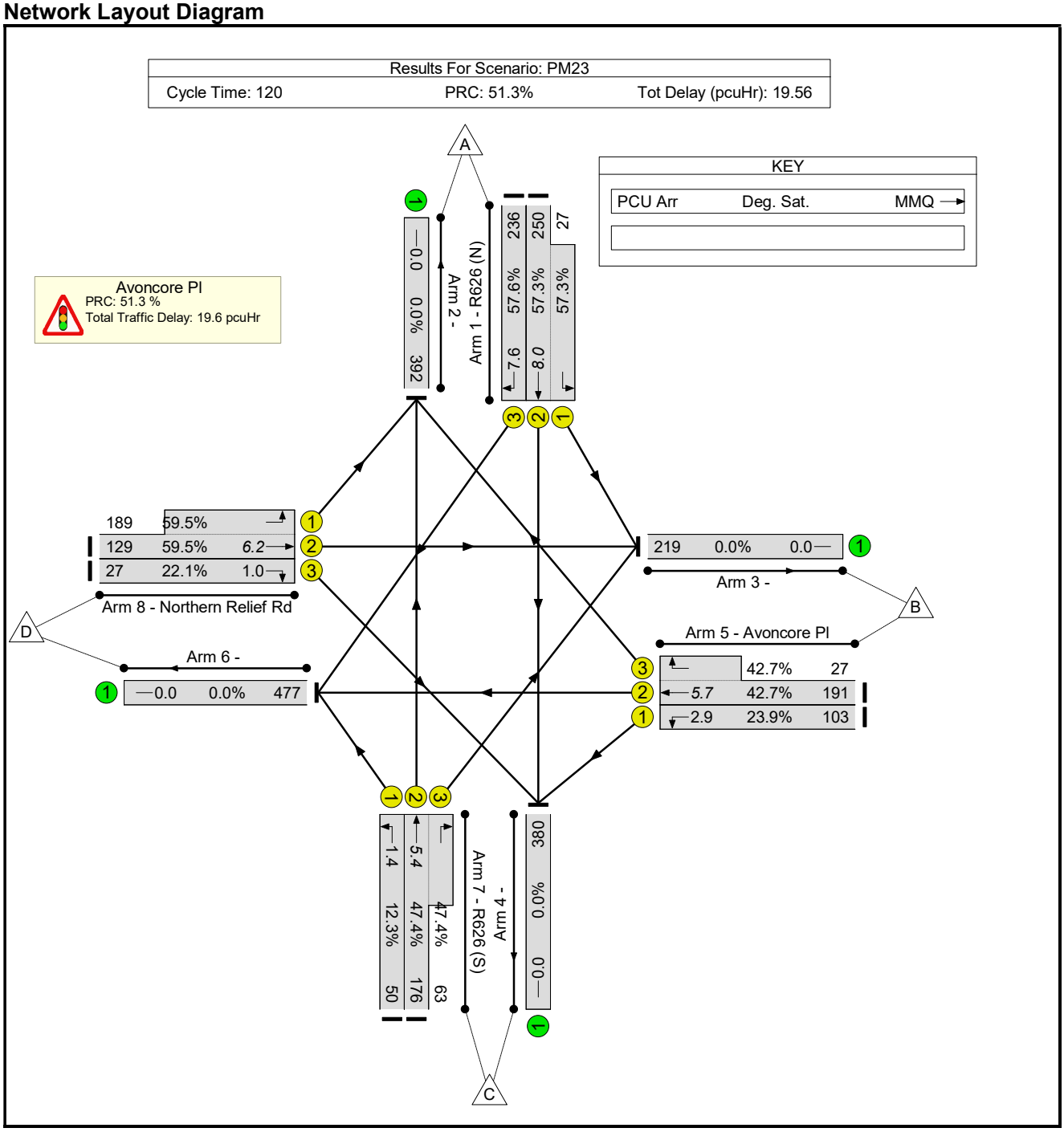
Stage Timings

Stage	1	2	3	4	5	6
Duration	26	26	6	15	7	7
Change Point	0	31	62	74	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**59.5%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**59.5%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	26	-	277	1940:1781	436+47	57.3 : 57.3%
1/3	R626 (N) Right	U	N/A	N/A	A		1	26	-	236	1821	410	57.6%
2/1		U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	380	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	29	-	103	1724	431	23.9%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	29:7	-	218	1940:1924	447+63	42.7 : 42.7%
6/1		U	N/A	N/A	-		-	-	-	477	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	26	-	50	1805	406	12.3%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	26	-	239	1940:1781	371+133	47.4 : 47.4%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	26	-	318	1940:1634	217+318	59.5 : 59.5%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	27	1830	122	22.1%

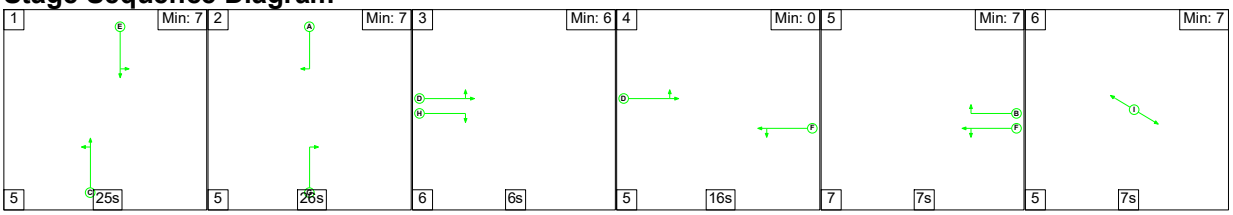
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**16.3**	**3.3**	**0.0**	**19.6**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**16.3**	**3.3**	**0.0**	**19.6**	**-**	**-**	**-**	**-**
1/2+1/1	277	277	-	-	-	3.1	0.7	-	3.8	49.6	7.4	0.7	8.0
1/3	236	236	-	-	-	2.7	0.7	-	3.4	51.7	6.9	0.7	7.6
2/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	380	380	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	103	103	-	-	-	1.0	0.2	-	1.2	41.4	2.7	0.2	2.9
5/2+5/3	218	218	-	-	-	2.4	0.4	-	2.8	45.5	5.3	0.4	5.7
6/1	477	477	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	50	50	-	-	-	0.5	0.1	-	0.6	42.1	1.3	0.1	1.4
7/2+7/3	239	239	-	-	-	2.6	0.4	-	3.0	45.8	5.0	0.4	5.4
8/2+8/1	318	318	-	-	-	3.5	0.7	-	4.3	48.1	5.5	0.7	6.2
8/3	27	27	-	-	-	0.4	0.1	-	0.5	72.0	0.8	0.1	1.0

C1 PRC for Signalled Lanes (%): 51.3 Total Delay for Signalled Lanes (pcuHr): 19.56 Cycle Time (s): 120
PRC Over All Lanes (%): 51.3 Total Delay Over All Lanes(pcuHr): 19.56

Avoncore Pl JCT Modified Full LinSig Report
Scenario 7: 'PM25 DN' (FG7: 'PM 2025 Do Nothing', Plan 1: 'Network Control Plan 1')

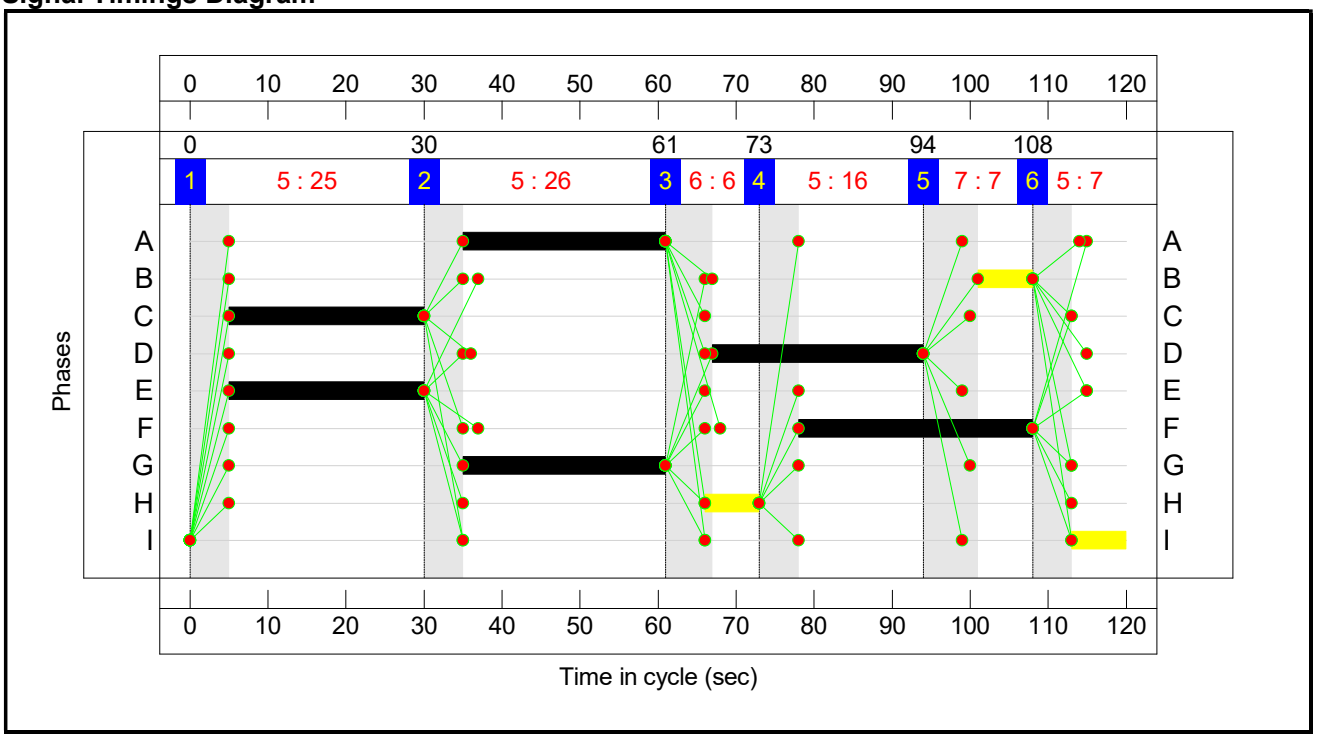
Stage Sequence Diagram



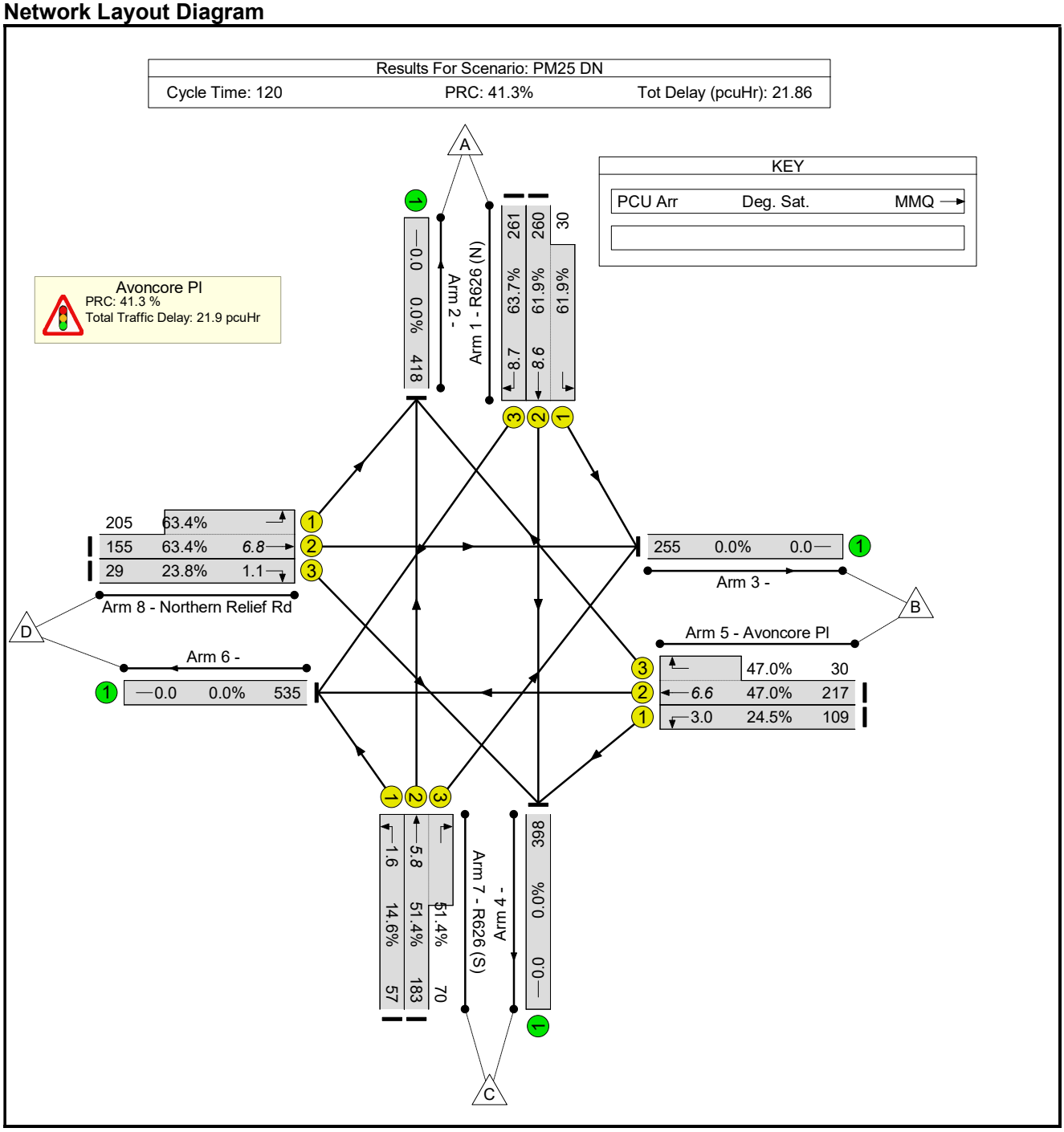
Stage Timings

Stage	1	2	3	4	5	6
Duration	25	26	6	16	7	7
Change Point	0	30	61	73	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.7%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.7%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	25	-	290	1940:1781	420+48	61.9 : 61.9%
1/3	R626 (N) Right	U	N/A	N/A	A		1	26	-	261	1821	410	63.7%
2/1		U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	255	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	398	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	30	-	109	1724	445	24.5%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	30:7	-	247	1940:1924	462+64	47.0 : 47.0%
6/1		U	N/A	N/A	-		-	-	-	535	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	25	-	57	1805	391	14.6%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	25:26	-	253	1940:1781	356+136	51.4 : 51.4%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	27	-	360	1940:1634	244+323	63.4 : 63.4%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	29	1830	122	23.8%

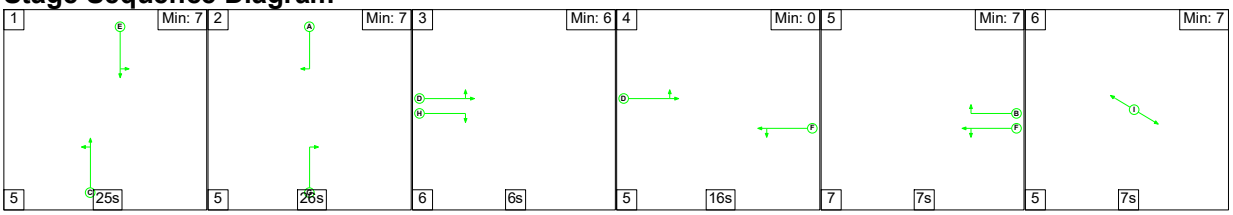
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**18.0**	**3.9**	**0.0**	**21.9**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**18.0**	**3.9**	**0.0**	**21.9**	**-**	**-**	**-**	**-**
1/2+1/1	290	290	-	-	-	3.4	0.8	-	4.2	52.0	7.8	0.8	8.6
1/3	261	261	-	-	-	3.1	0.9	-	3.9	54.0	7.8	0.9	8.7
2/1	418	418	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	255	255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	398	398	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	109	109	-	-	-	1.1	0.2	-	1.2	40.6	2.9	0.2	3.0
5/2+5/3	247	247	-	-	-	2.7	0.4	-	3.1	45.5	6.2	0.4	6.6
6/1	535	535	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	57	57	-	-	-	0.6	0.1	-	0.7	43.4	1.5	0.1	1.6
7/2+7/3	253	253	-	-	-	2.8	0.5	-	3.3	47.3	5.2	0.5	5.8
8/2+8/1	360	360	-	-	-	3.9	0.9	-	4.8	48.1	6.0	0.9	6.8
8/3	29	29	-	-	-	0.4	0.2	-	0.6	72.4	0.9	0.2	1.1

C1 PRC for Signalled Lanes (%): 41.3 Total Delay for Signalled Lanes (pcuHr): 21.86 Cycle Time (s): 120
PRC Over All Lanes (%): 41.3 Total Delay Over All Lanes(pcuHr): 21.86

Avoncore Pl JCT Modified Full LinSig Report
Scenario 8: 'PM25 DS' (FG8: 'PM 2025 Do Something', Plan 1: 'Network Control Plan 1')

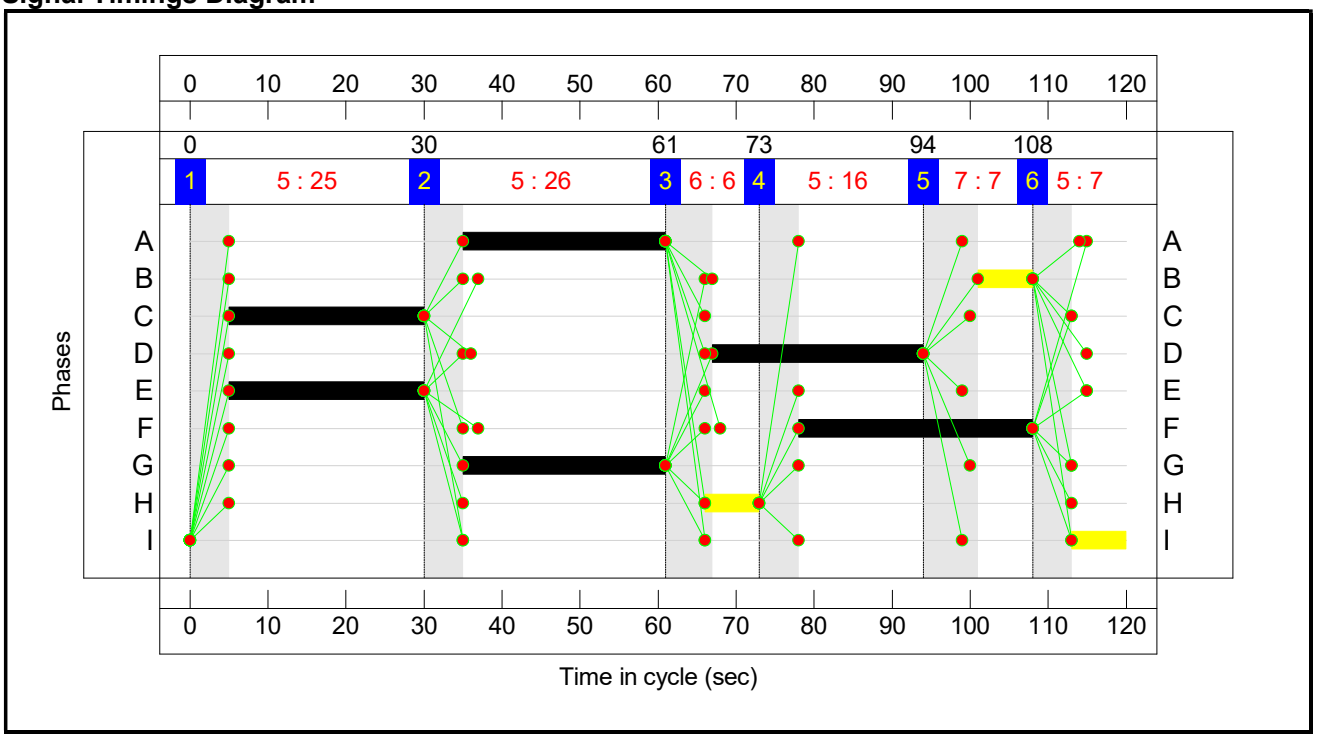
Stage Sequence Diagram



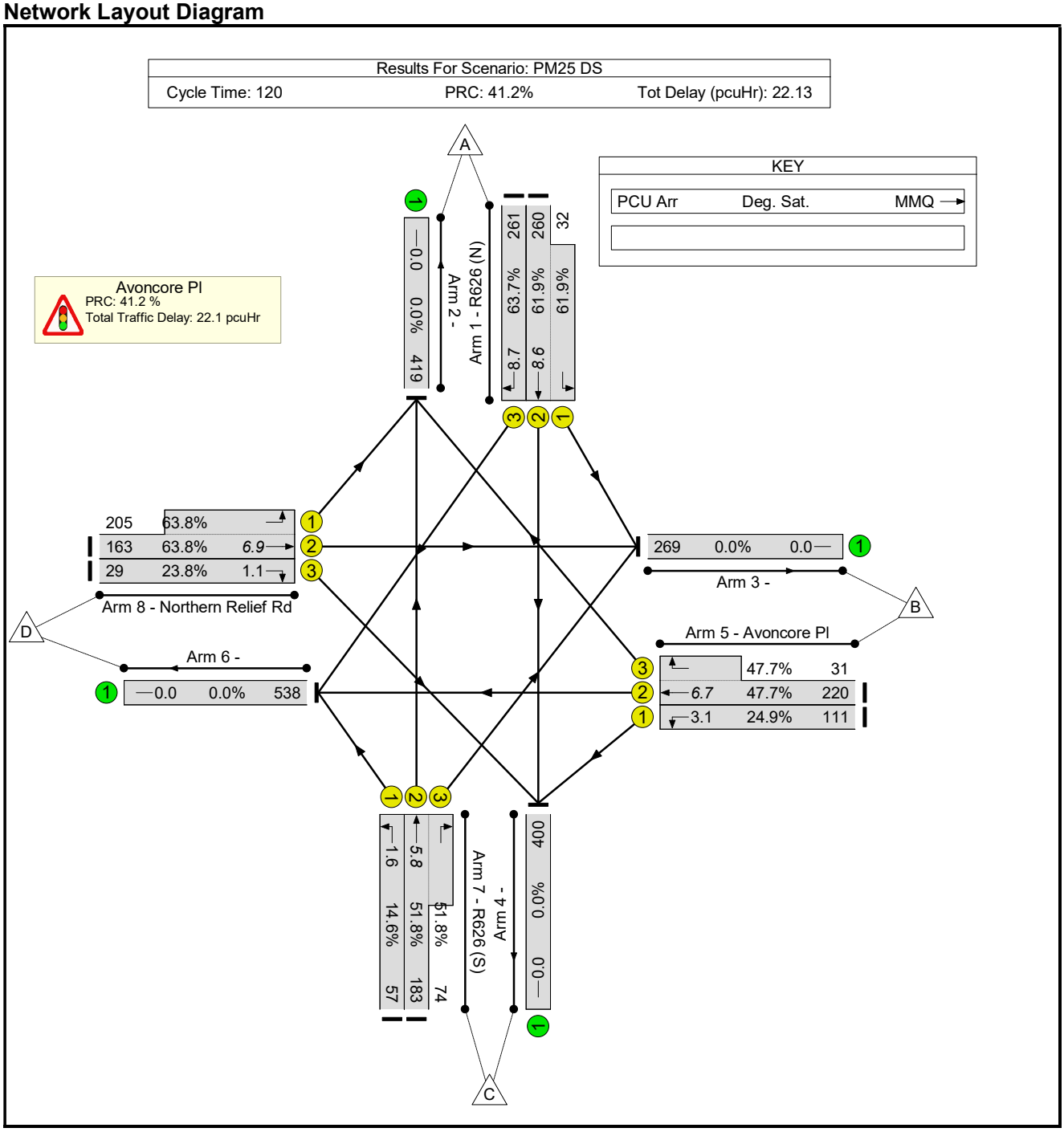
Stage Timings

Stage	1	2	3	4	5	6
Duration	25	26	6	16	7	7
Change Point	0	30	61	73	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.8%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.8%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	25	-	292	1940:1781	420+52	61.9 : 61.9%
1/3	R626 (N) Right	U	N/A	N/A	A		1	26	-	261	1821	410	63.7%
2/1		U	N/A	N/A	-		-	-	-	419	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	269	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	400	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	30	-	111	1724	445	24.9%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	30:7	-	251	1940:1924	461+65	47.7 : 47.7%
6/1		U	N/A	N/A	-		-	-	-	538	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	25	-	57	1805	391	14.6%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	25:26	-	257	1940:1781	353+143	51.8 : 51.8%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	27	-	368	1940:1634	256+322	63.8 : 63.8%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	29	1830	122	23.8%

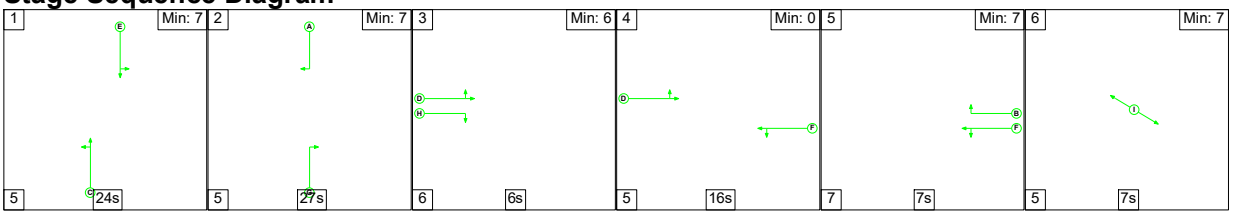
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**18.2**	**3.9**	**0.0**	**22.1**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**18.2**	**3.9**	**0.0**	**22.1**	**-**	**-**	**-**	**-**
1/2+1/1	292	292	-	-	-	3.4	0.8	-	4.2	51.9	7.8	0.8	8.6
1/3	261	261	-	-	-	3.1	0.9	-	3.9	54.0	7.8	0.9	8.7
2/1	419	419	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	269	269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	400	400	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	111	111	-	-	-	1.1	0.2	-	1.3	40.7	2.9	0.2	3.1
5/2+5/3	251	251	-	-	-	2.7	0.5	-	3.2	45.7	6.3	0.5	6.7
6/1	538	538	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	57	57	-	-	-	0.6	0.1	-	0.7	43.4	1.5	0.1	1.6
7/2+7/3	257	257	-	-	-	2.8	0.5	-	3.4	47.3	5.2	0.5	5.8
8/2+8/1	368	368	-	-	-	4.0	0.9	-	4.9	48.1	6.0	0.9	6.9
8/3	29	29	-	-	-	0.4	0.2	-	0.6	72.4	0.9	0.2	1.1

C1 PRC for Signalled Lanes (%): 41.2 Total Delay for Signalled Lanes (pcuHr): 22.13 Cycle Time (s): 120
PRC Over All Lanes (%): 41.2 Total Delay Over All Lanes(pcuHr): 22.13

Avoncore Pl JCT Modified Full LinSig Report
Scenario 9: 'PM30 DN' (FG9: 'PM 2030 Do Nothing', Plan 1: 'Network Control Plan 1')

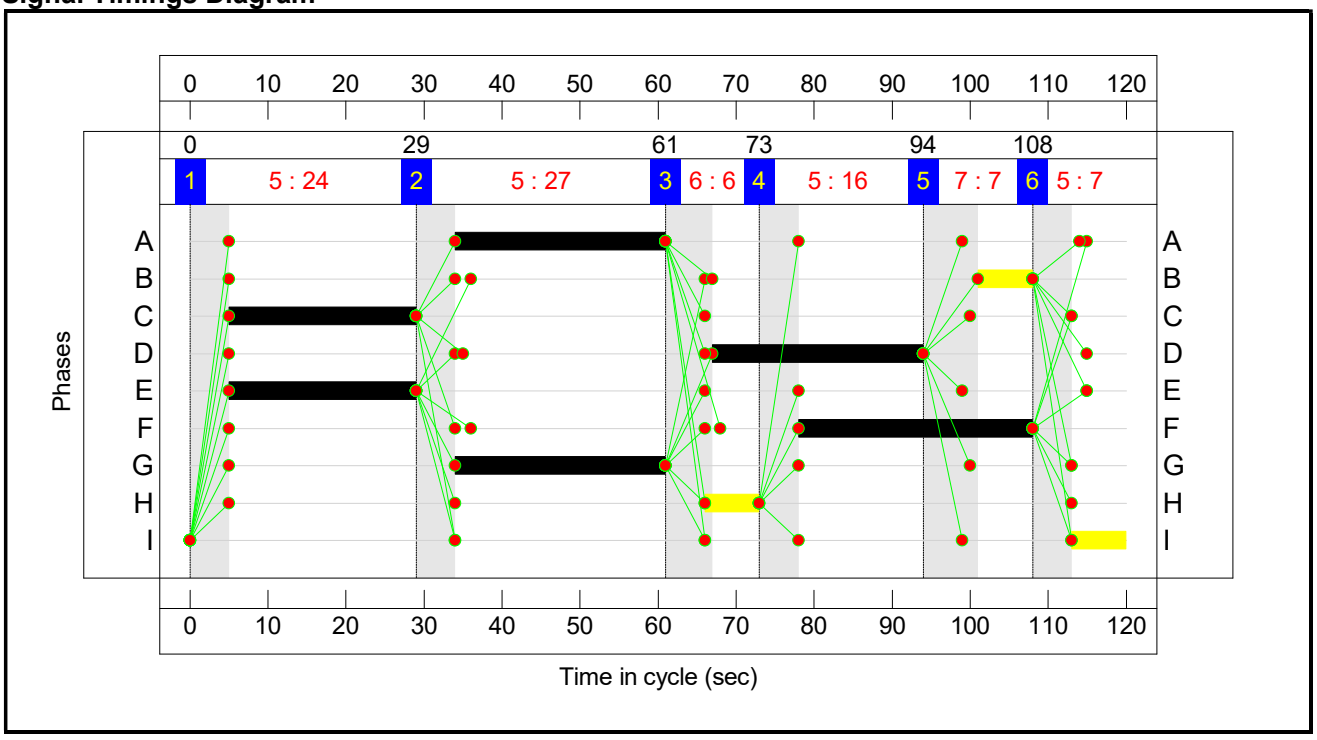
Stage Sequence Diagram



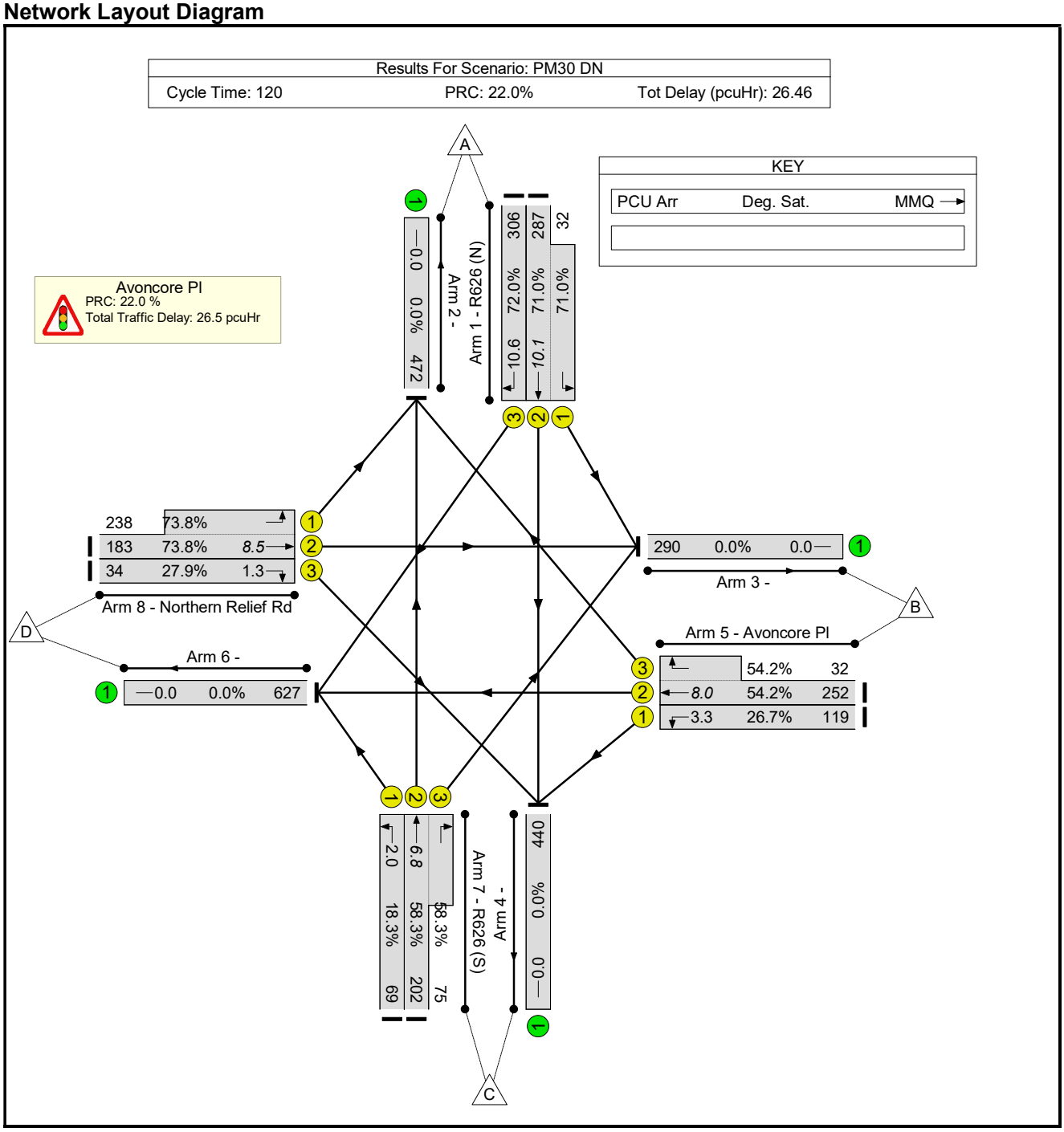
Stage Timings

Stage	1	2	3	4	5	6
Duration	24	27	6	16	7	7
Change Point	0	29	61	73	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**73.8%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**73.8%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	24	-	319	1940:1781	404+45	71.0 : 71.0%
1/3	R626 (N) Right	U	N/A	N/A	A		1	27	-	306	1821	425	72.0%
2/1		U	N/A	N/A	-		-	-	-	472	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	290	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	440	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	30	-	119	1724	445	26.7%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	30:7	-	284	1940:1924	465+59	54.2 : 54.2%
6/1		U	N/A	N/A	-		-	-	-	627	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	24	-	69	1805	376	18.3%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	24:27	-	277	1940:1781	346+129	58.3 : 58.3%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	27	-	421	1940:1634	248+323	73.8 : 73.8%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	34	1830	122	27.9%

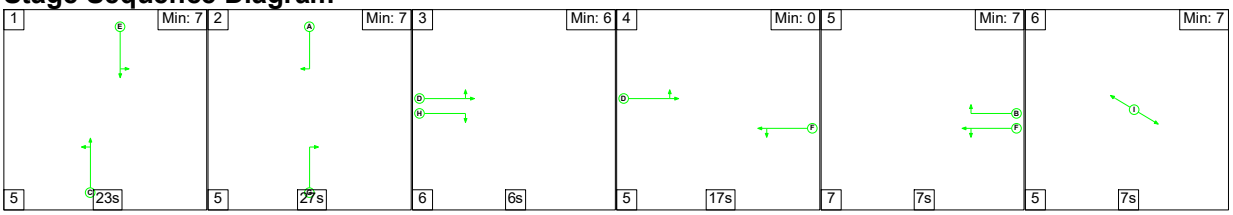
Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**20.8**	**5.6**	**0.0**	**26.5**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**20.8**	**5.6**	**0.0**	**26.5**	**-**	**-**	**-**	**-**
1/2+1/1	319	319	-	-	-	3.9	1.2	-	5.1	57.1	8.8	1.2	10.1
1/3	306	306	-	-	-	3.6	1.3	-	4.9	57.2	9.3	1.3	10.6
2/1	472	472	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	290	290	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	440	440	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	119	119	-	-	-	1.2	0.2	-	1.4	41.0	3.1	0.2	3.3
5/2+5/3	284	284	-	-	-	3.1	0.6	-	3.7	47.1	7.4	0.6	8.0
6/1	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	69	69	-	-	-	0.7	0.1	-	0.9	45.0	1.9	0.1	2.0
7/2+7/3	277	277	-	-	-	3.1	0.7	-	3.8	49.6	6.1	0.7	6.8
8/2+8/1	421	421	-	-	-	4.7	1.4	-	6.1	52.1	7.1	1.4	8.5
8/3	34	34	-	-	-	0.5	0.2	-	0.7	73.6	1.1	0.2	1.3

C1 PRC for Signalled Lanes (%): 22.0 Total Delay for Signalled Lanes (pcuHr): 26.46 Cycle Time (s): 120
PRC Over All Lanes (%): 22.0 Total Delay Over All Lanes(pcuHr): 26.46

Avoncore Pl JCT Modified Full LinSig Report
Scenario 10: 'PM30 DS' (FG10: 'PM 2030 Do Something', Plan 1: 'Network Control Plan 1')

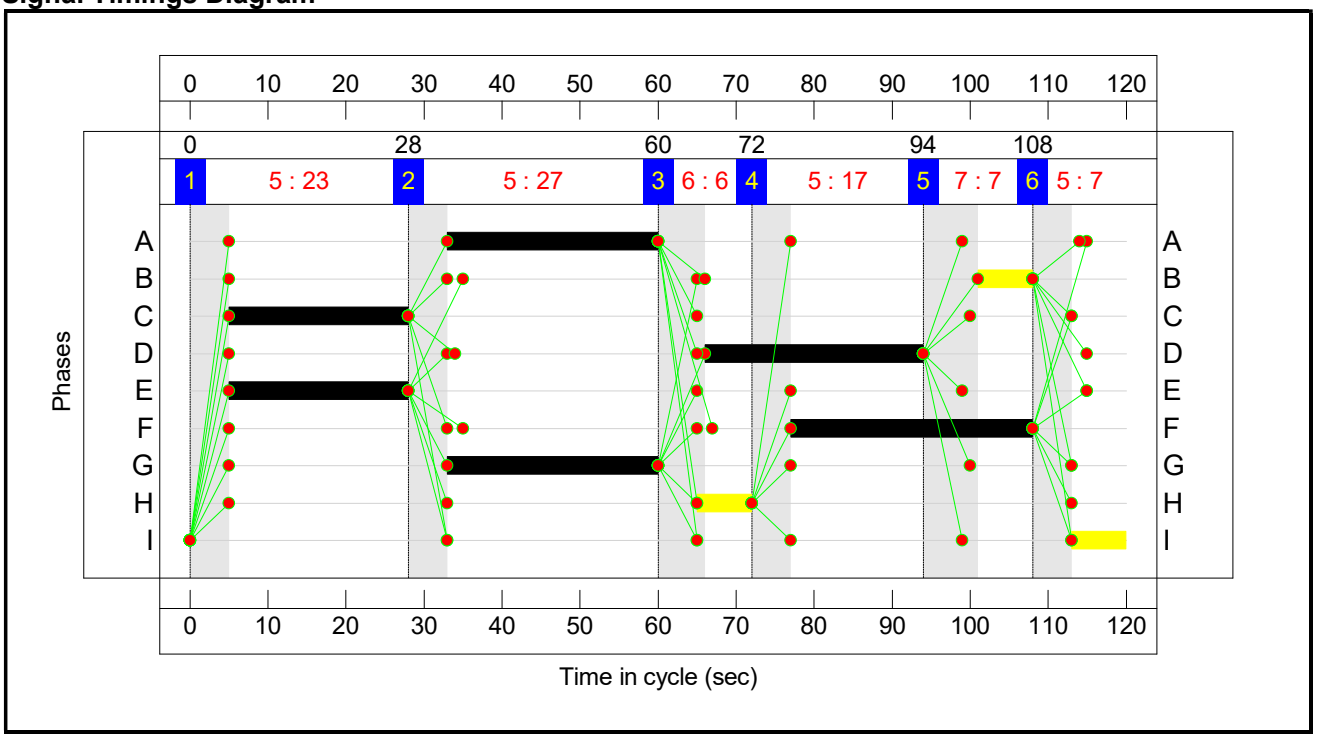
Stage Sequence Diagram



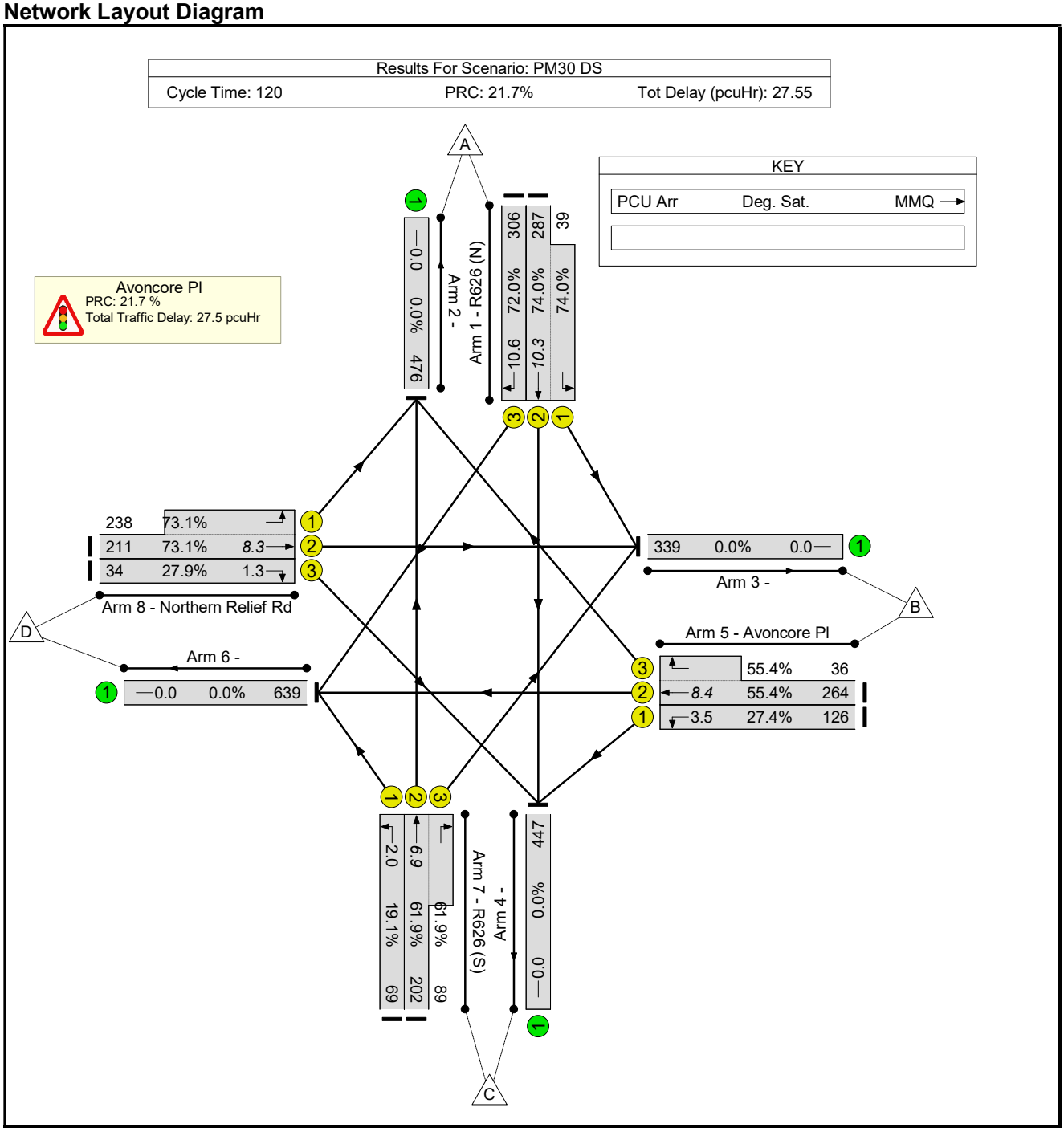
Stage Timings

Stage	1	2	3	4	5	6
Duration	23	27	6	17	7	7
Change Point	0	28	60	72	94	108

Signal Timings Diagram



Network Layout Diagram



Avoncore PI JCT Modified Full LinSig Report

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.0%**
Avoncore PI	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.0%**
1/2+1/1	R626 (N) Left Ahead	U	N/A	N/A	E		1	23	-	326	1940:1781	388+53	74.0 : 74.0%
1/3	R626 (N) Right	U	N/A	N/A	A		1	27	-	306	1821	425	72.0%
2/1		U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%
3/1		U	N/A	N/A	-		-	-	-	339	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
5/1	Avoncore PI Left	U	N/A	N/A	F		1	31	-	126	1724	460	27.4%
5/2+5/3	Avoncore PI Right Ahead	U	N/A	N/A	F B		1	31:7	-	300	1940:1924	477+65	55.4 : 55.4%
6/1		U	N/A	N/A	-		-	-	-	639	Inf	Inf	0.0%
7/1	R626 (S) Left	U	N/A	N/A	C		1	23	-	69	1805	361	19.1%
7/2+7/3	R626 (S) Ahead Right	U	N/A	N/A	C G		1	23:27	-	291	1940:1781	326+144	61.9 : 61.9%
8/2+8/1	Northern Relief Rd Left Ahead	U	N/A	N/A	D		1	28	-	449	1940:1634	289+326	73.1 : 73.1%
8/3	Northern Relief Rd Right	U	N/A	N/A	H		1	7	-	34	1830	122	27.9%

Avoncore PI JCT Modified Full LinSig Report

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Existing Layout	**-**	**-**	**0**	**0**	**0**	**21.6**	**5.9**	**0.0**	**27.5**	**-**	**-**	**-**	**-**
Avoncore PI	**-**	**-**	**0**	**0**	**0**	**21.6**	**5.9**	**0.0**	**27.5**	**-**	**-**	**-**	**-**
1/2+1/1	326	326	-	-	-	4.0	1.4	-	5.4	59.7	8.9	1.4	10.3
1/3	306	306	-	-	-	3.6	1.3	-	4.9	57.2	9.3	1.3	10.6
2/1	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	339	339	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	126	126	-	-	-	1.2	0.2	-	1.4	40.2	3.3	0.2	3.5
5/2+5/3	300	300	-	-	-	3.3	0.6	-	3.9	46.7	7.8	0.6	8.4
6/1	639	639	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	69	69	-	-	-	0.8	0.1	-	0.9	46.1	1.9	0.1	2.0
7/2+7/3	291	291	-	-	-	3.3	0.8	-	4.1	51.1	6.1	0.8	6.9
8/2+8/1	449	449	-	-	-	4.9	1.3	-	6.3	50.3	7.0	1.3	8.3
8/3	34	34	-	-	-	0.5	0.2	-	0.7	73.6	1.1	0.2	1.3

C1 PRC for Signalled Lanes (%): 21.7 Total Delay for Signalled Lanes (pcuHr): 27.55 Cycle Time (s): 120
PRC Over All Lanes (%): 21.7 Total Delay Over All Lanes(pcuHr): 27.55

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\2023 AM Bloomfield Base .vpi" at 11:56:25 on Wednesday, 7 June 2023

RUN TITLE
****
2023 Base Year_AM_Broomfield Jutn

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

INPUT DATA

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

ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

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

ARM B	15.00	45.00	75.00	2.28	3.41	2.28
ARM C	15.00	45.00	75.00	5.24	7.86	5.24

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.200	0.800
		0.0	1.0	4.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.005	0.000	0.995
		1.0	0.0	181.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.021	0.979	0.000
		9.0	410.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.28	11.97	0.190		0.0	0.2	3.4	
C-A	0.11							
C-B	5.13	11.43	0.448		0.0	0.8	11.3	
A-B	0.01							
A-C	0.05							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-AC	2.72	11.96	0.227		0.2	0.3	4.3	
C-A	0.13							
C-B	6.12	11.43	0.535		0.8	1.1	16.1	
A-B	0.01							
A-C	0.06							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.33	11.95	0.279		0.3	0.4	5.6	
C-A	0.16							
C-B	7.50	11.43	0.656		1.1	1.8	25.5	
A-B	0.02							
A-C	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)
08.30-08.45								
B-AC	3.33	11.95	0.279		0.4	0.4	5.7	
C-A	0.16							
C-B	7.50	11.43	0.656		1.8	1.9	27.7	
A-B	0.02							
A-C	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)
08.45-09.00								
B-AC	2.72	11.96	0.227		0.4	0.3	4.6	
C-A	0.13							
C-B	6.12	11.43	0.535		1.9	1.2	18.7	
A-B	0.01							
A-C	0.06							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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	2.28	11.97	0.190		0.3	0.2	3.6	
C-A	0.11							
C-B	5.13	11.43	0.448		1.2	0.8	12.9	
A-B	0.01							
A-C	0.05							

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.4	
08.45	0.4	
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.1	*
08.30	1.8	**
08.45	1.9	**
09.00	1.2	*
09.15	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	249.6	166.4	27.2	0.11	27.2	0.11
C-A	12.3	8.2				
C-B	562.2	374.8	112.3	0.20	112.3	0.20
A-B	1.4	0.9				
A-C	5.5	3.7				
ALL	831.0	554.0	139.5	0.17	139.5	0.17

* 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

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

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RUN TITLE
****
2023 Base Year_PM_Broomfield Jutn

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

INPUT DATA

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

ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.10	0.15	0.10

ARM B	15.00	45.00	75.00	3.39	5.08	3.39
ARM C	15.00	45.00	75.00	2.21	3.32	2.21

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.375	0.625
		0.0	3.0	5.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	1.000
		0.0	0.0	271.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.045	0.955	0.000
		8.0	169.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	3.39	12.00	0.282		0.0	0.4	5.6	
C-A	0.10							
C-B	2.11	11.42	0.185		0.0	0.2	3.3	
A-B	0.04							
A-C	0.06							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	4.05	11.99	0.337		0.4	0.5	7.3	
C-A	0.12							
C-B	2.52	11.42	0.221		0.2	0.3	4.1	
A-B	0.04							
A-C	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)
17.15-17.30								
B-AC	4.95	11.99	0.413		0.5	0.7	10.1	
C-A	0.15							
C-B	3.09	11.41	0.271		0.3	0.4	5.4	
A-B	0.05							
A-C	0.09							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	4.95	11.99	0.413		0.7	0.7	10.5	
C-A	0.15							
C-B	3.09	11.41	0.271		0.4	0.4	5.5	
A-B	0.05							
A-C	0.09							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	4.05	11.99	0.337		0.7	0.5	8.0	
C-A	0.12							
C-B	2.52	11.42	0.221		0.4	0.3	4.4	
A-B	0.04							
A-C	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)

18.00-18.15							
B-AC	3.39	12.00	0.282	0.5	0.4	6.1	
C-A	0.10						
C-B	2.11	11.42	0.185	0.3	0.2	3.5	
A-B	0.04						
A-C	0.06						

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	*
17.30	0.7	*
17.45	0.7	*
18.00	0.5	*
18.15	0.4	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	371.6	247.7	47.6	0.13	47.6	0.13
C-A	11.0	7.3				
C-B	231.7	154.5	26.2	0.11	26.2	0.11
A-B	4.1	2.7				
A-C	6.9	4.6				
ALL	625.3	416.8	73.8	0.12	73.8	0.12

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\2025 AM Bloomfield Design Do Not.vpi" at 11:59:17 on Wednesday, 7 June 2023

RUN TITLE
****
2025 Opening Year_AM_Broomfield Jutn_Do Nothing

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

INPUT DATA

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

ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.36	0.54	0.36

I ARM B I	15.00	I	45.00	I	75.00	I 2.45 I	3.68 I 2.45 I
I ARM C I	15.00	I	45.00	I	75.00	I 5.69 I	8.53 I 5.69 I

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.172	0.828
		0.0	5.0	24.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.005	0.000	0.995
		1.0	0.0	195.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.035	0.965	0.000
		16.0	439.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.45	11.90	0.206		0.0	0.3	3.7	
C-A	0.20							
C-B	5.49	11.36	0.483		0.0	0.9	12.9	
A-B	0.06							
A-C	0.30							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.93	11.87	0.246		0.3	0.3	4.8	
C-A	0.24							
C-B	6.55	11.34	0.578		0.9	1.3	18.9	
A-B	0.07							
A-C	0.36							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.58	11.84	0.303		0.3	0.4	6.3	
C-A	0.29							
C-B	8.03	11.32	0.709		1.3	2.3	31.6	
A-B	0.09							
A-C	0.44							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.58	11.84	0.303		0.4	0.4	6.5	
C-A	0.29							
C-B	8.03	11.32	0.709		2.3	2.4	35.0	
A-B	0.09							
A-C	0.44							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.93	11.87	0.246		0.4	0.3	5.1	
C-A	0.24							
C-B	6.55	11.34	0.578		2.4	1.4	22.6	
A-B	0.07							
A-C	0.36							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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 09.00-09.15                                                                                    I
I   B-AC      2.45     11.90    0.206                0.3    0.3        4.0                     I
I   C-A       0.20                                                                           I
I   C-B       5.49     11.36    0.483                1.4    1.0       15.0                     I
I   A-B       0.06                                                                           I
I   A-C       0.30                                                                           I
I                                                                                            I
------------------------------------------------------------------------------------------------
```

```
QUEUE FOR STREAM   B-AC
-------------------------
TIME SEGMENT    NO. OF
  ENDING      VEHICLES
              IN QUEUE
  08.00           0.3
  08.15           0.3
  08.30           0.4
  08.45           0.4
  09.00           0.3
  09.15           0.3
```

```
QUEUE FOR STREAM   C-B
-------------------------
TIME SEGMENT    NO. OF
  ENDING      VEHICLES
              IN QUEUE
  08.00           0.9    *
  08.15           1.3    *
  08.30           2.3    **
  08.45           2.4    **
  09.00           1.4    *
  09.15           1.0    *
```

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

-------------------------------------------------------------------------
I STREAM I   TOTAL DEMAND  I   * QUEUEING *      I * INCLUSIVE QUEUEING * I
I        I                 I    * DELAY *        I       * DELAY *        I
I        I-----------------------------------------------------------------I
I        I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)     (MIN/VEH) I
-------------------------------------------------------------------------
I  B-AC  I  268.8 I  179.2 I    30.3 I    0.11   I      30.3  I    0.11   I
I  C-A   I   21.9 I   14.6 I         I           I           I           I
I  C-B   I  602.0 I  401.3 I   136.0 I    0.23   I     136.0  I    0.23   I
I  A-B   I    6.9 I    4.6 I         I           I           I           I
I  A-C   I   32.9 I   21.9 I         I           I           I           I
-------------------------------------------------------------------------
I  ALL   I  932.4 I  621.6 I   166.2 I    0.18   I     166.3  I    0.18   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
```

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\2.Bloomfield Junction\2025 AM Bloomfield Design Do Some.vpi" at 19:51:14 on Wednesday, 27 September 2023

RUN TITLE
****
2025 Opening Year_AM_Broomfield Jutn_Do Some

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

INPUT DATA

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

ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TO RISE	IS REACHED	FALLING	RATE OF FLOW (VEH/MIN) PEAK	OF PEAK	PEAK

I ARM A I	15.00	I	45.00	I	75.00	I	0.50	I	0.75	I	0.50 I
I ARM B I	15.00	I	45.00	I	75.00	I	2.53	I	3.79	I	2.53 I
I ARM C I	15.00	I	45.00	I	75.00	I	5.94	I	8.91	I	5.94 I

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS (VEH/HR)	I
I	I	(PERCENTAGE OF H.V.S)	I

I TIME	I FROM/TO I	ARM A I	ARM B I	ARM C I
I 07.45 - 09.15	I	I	I	I
I	I ARM A	I 0.000	I 0.400	I 0.600 I
I	I	I 0.0	I 16.0	I 24.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I
I	I ARM B	I 0.015	I 0.000	I 0.985 I
I	I	I 3.0	I 0.0	I 199.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I
I	I ARM C	I 0.034	I 0.966	I 0.000 I
I	I	I 16.0	I 459.0	I 0.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 07.45-08.00								I
I B-AC	2.53	11.81	0.214		0.0	0.3	3.9	I
I C-A	0.20							I
I C-B	5.74	11.32	0.507		0.0	1.0	14.1	I
I A-B	0.20							I
I A-C	0.30							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 08.00-08.15								I
I B-AC	3.02	11.77	0.256		0.3	0.3	5.0	I
I C-A	0.24							I
I C-B	6.85	11.30	0.606		1.0	1.5	21.1	I
I A-B	0.24							I
I A-C	0.36							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 08.15-08.30								I
I B-AC	3.69	11.72	0.315		0.3	0.5	6.6	I
I C-A	0.29							I
I C-B	8.39	11.27	0.745		1.5	2.7	36.6	I
I A-B	0.29							I
I A-C	0.44							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-AC	3.69	11.72	0.315		0.5	0.5	6.8	I
I C-A	0.29							I
I C-B	8.39	11.27	0.745		2.7	2.8	41.4	I
I A-B	0.29							I
I A-C	0.44							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 08.45-09.00								I
I B-AC	3.02	11.77	0.256		0.5	0.3	5.3	I
I C-A	0.24							I
I C-B	6.85	11.30	0.606		2.8	1.6	25.7	I
I A-B	0.24							I
I A-C	0.36							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
09.00-09.15								
	B-AC	2.53	11.81	0.214	0.3	0.3	4.2	
	C-A	0.20						
	C-B	5.74	11.32	0.507	1.6	1.1	16.6	
	A-B	0.20						
	A-C	0.30						

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.3

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.5	*
08.30	2.7	***
08.45	2.8	***
09.00	1.6	**
09.15	1.1	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *			
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)		(MIN/VEH)	
B-AC	277.0	184.7	31.9	0.12	32.0		0.12	
C-A	21.9	14.6						
C-B	629.4	419.6	155.5	0.25	155.5		0.25	
A-B	21.9	14.6						
A-C	32.9	21.9						
ALL	983.2	655.4	187.4	0.19	187.5		0.19	

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\2025 PM Bloomfield Design Do Not.vpi" at 12:00:53 on Wednesday, 7 June 2023

RUN TITLE
****
2025 Design Year_PM_Broomfield Jutn_Do Not

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

INPUT DATA

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

ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.22	0.34	0.22

I ARM B I	15.00	I	45.00	I	75.00	I 3.69 I	5.53 I 3.69 I
I ARM C I	15.00	I	45.00	I	75.00	I 2.65 I	3.98 I 2.65 I

TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)			
TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000 0.0 (0.0)	0.167 3.0 (0.0)	0.833 15.0 (0.0)
	ARM B	0.003 1.0 (0.0)	0.000 0.0 (0.0)	0.997 294.0 (0.0)
	ARM C	0.123 26.0 (0.0)	0.877 186.0 (0.0)	0.000 0.0 (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	3.69	11.95	0.309		0.0	0.4	6.4	
C-A	0.32							
C-B	2.33	11.39	0.204		0.0	0.3	3.7	
A-B	0.04							
A-C	0.19							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	4.40	11.94	0.369		0.4	0.6	8.4	
C-A	0.39							
C-B	2.78	11.38	0.244		0.3	0.3	4.7	
A-B	0.04							
A-C	0.22							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	5.39	11.92	0.452		0.6	0.8	11.7	
C-A	0.48							
C-B	3.40	11.37	0.299		0.3	0.4	6.2	
A-B	0.05							
A-C	0.27							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	5.39	11.92	0.452		0.8	0.8	12.2	
C-A	0.48							
C-B	3.40	11.37	0.299		0.4	0.4	6.4	
A-B	0.05							
A-C	0.27							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	4.40	11.94	0.369		0.8	0.6	9.2	
C-A	0.39							
C-B	2.78	11.38	0.244		0.4	0.3	5.0	
A-B	0.04							
A-C	0.22							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)

18.00-18.15							
B-AC	3.69	11.95	0.309	0.6	0.5	7.0	
C-A	0.32						
C-B	2.33	11.39	0.204	0.3	0.3	4.0	
A-B	0.04						
A-C	0.19						

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.5	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	(VEH/H)	* QUEUEING * DELAY (MIN)	(MIN/VEH)	* INCLUSIVE QUEUEING * DELAY (MIN)	(MIN/VEH)
B-AC	404.5	269.7	54.9	0.14	54.9	0.14
C-A	35.7	23.8				
C-B	255.0	170.0	29.9	0.12	29.9	0.12
A-B	4.1	2.7				
A-C	20.6	13.7				
ALL	719.9	479.9	84.7	0.12	84.8	0.12

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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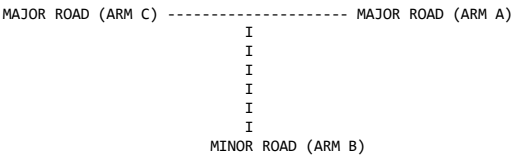
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RUN TITLE
****
2025 Design Year_PM_Broomfield Jutn_Do Some

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

INPUT DATA



ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK

I ARM A I	15.00	I	45.00	I	75.00	I 0.28 I 0.41 I 0.28 I
I ARM B I	15.00	I	45.00	I	75.00	I 3.96 I 5.94 I 3.96 I
I ARM C I	15.00	I	45.00	I	75.00	I 2.72 I 4.09 I 2.72 I

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS (VEH/HR)	I
I	I	(PERCENTAGE OF H.V.S)	I

I TIME	I FROM/TO I	ARM A I	ARM B I	ARM C I
I 16.45 - 18.15	I	I	I	I
I	I ARM A	I 0.000	I 0.318	I 0.682 I
I	I	I 0.0	I 7.0	I 15.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I
I	I ARM B	I 0.028	I 0.000	I 0.972 I
I	I	I 9.0	I 0.0	I 308.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I
I	I ARM C	I 0.119	I 0.881	I 0.000 I
I	I	I 26.0	I 192.0	I 0.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 16.45-17.00								I
I B-AC	3.96	11.83	0.335		0.0	0.5	7.2	I
I C-A	0.32							I
I C-B	2.40	11.38	0.211		0.0	0.3	3.8	I
I A-B	0.09							I
I A-C	0.19							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 17.00-17.15								I
I B-AC	4.73	11.80	0.401		0.5	0.7	9.6	I
I C-A	0.39							I
I C-B	2.87	11.37	0.252		0.3	0.3	4.9	I
I A-B	0.10							I
I A-C	0.22							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 17.15-17.30								I
I B-AC	5.80	11.78	0.492		0.7	0.9	13.7	I
I C-A	0.48							I
I C-B	3.51	11.35	0.309		0.3	0.4	6.5	I
I A-B	0.13							I
I A-C	0.27							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 17.30-17.45								I
I B-AC	5.80	11.77	0.492		0.9	1.0	14.3	I
I C-A	0.48							I
I C-B	3.51	11.35	0.309		0.4	0.4	6.7	I
I A-B	0.13							I
I A-C	0.27							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 17.45-18.00								I
I B-AC	4.73	11.80	0.401		1.0	0.7	10.6	I
I C-A	0.39							I
I C-B	2.87	11.37	0.252		0.4	0.3	5.2	I
I A-B	0.10							I
I A-C	0.22							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
18.00-18.15								
	B-AC	3.96	11.83	0.335	0.7	0.5	7.9	
	C-A	0.32						
	C-B	2.40	11.38	0.211	0.3	0.3	4.1	
	A-B	0.09						
	A-C	0.19						

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	0.9	*
17.45	1.0	*
18.00	0.7	*
18.15	0.5	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	434.7	289.8	63.2	0.15	63.2	0.15
C-A	35.7	23.8				
C-B	263.3	175.5	31.2	0.12	31.2	0.12
A-B	9.6	6.4				
A-C	20.6	13.7				
ALL	763.8	509.2	94.4	0.12	94.4	0.12

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

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RUN TITLE
****
2030 Opening Year_AM_Broomfield Jutn_Do Nothing

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

INPUT DATA

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

ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP OF PEAK	AFTER
	TO RISE	IS REACHED	FALLING			

I ARM A I	15.00	I	45.00	I	75.00	I 0.29 I 0.43 I 0.29 I
I ARM B I	15.00	I	45.00	I	75.00	I 2.94 I 4.41 I 2.94 I
I ARM C I	15.00	I	45.00	I	75.00	I 6.44 I 9.66 I 6.44 I

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.174	0.826
		0.0	4.0	19.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.004	0.000	0.996
		1.0	0.0	234.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.029	0.971	0.000
		15.0	500.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.94	11.92	0.247		0.0	0.3	4.7	
C-A	0.19							
C-B	6.25	11.38	0.549		0.0	1.2	16.5	
A-B	0.05							
A-C	0.24							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-AC	3.51	11.90	0.295		0.3	0.4	6.1	
C-A	0.22							
C-B	7.46	11.36	0.657		1.2	1.8	25.7	
A-B	0.06							
A-C	0.28							

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)
08.15-08.30								
B-AC	4.30	11.87	0.362		0.4	0.6	8.2	
C-A	0.27							
C-B	9.14	11.34	0.806		1.8	3.7	48.2	
A-B	0.07							
A-C	0.35							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.30	11.87	0.362		0.6	0.6	8.4	
C-A	0.27							
C-B	9.14	11.34	0.806		3.7	3.9	56.8	
A-B	0.07							
A-C	0.35							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.51	11.90	0.295		0.6	0.4	6.5	
C-A	0.22							
C-B	7.46	11.36	0.657		3.9	2.0	32.7	
A-B	0.06							
A-C	0.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/

			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
09.00-09.15								
	B-AC	2.94	11.92	0.247	0.4	0.3	5.1	
	C-A	0.19						
	C-B	6.25	11.38	0.549	2.0	1.3	19.9	
	A-B	0.05						
	A-C	0.24						

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.2	*
08.15	1.8	**
08.30	3.7	****
08.45	3.9	****
09.00	2.0	**
09.15	1.3	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *			
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)		(MIN/VEH)	
B-AC	322.2	214.8	38.9	0.12	38.9		0.12	
C-A	20.6	13.7						
C-B	685.6	457.1	199.8	0.29	199.9		0.29	
A-B	5.5	3.7						
A-C	26.1	17.4						
ALL	1059.9	706.6	238.7	0.23	238.8		0.23	

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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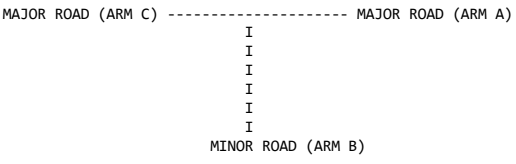
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RUN TITLE
****
2030 Design Year_AM_Broomfield Jutn_Do Some

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

INPUT DATA



ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK

ARM A	15.00	45.00	75.00	0.75	1.13	0.75
ARM B	15.00	45.00	75.00	3.22	4.84	3.22
ARM C	15.00	45.00	75.00	7.29	10.93	7.29

TURNING PROPORTIONS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.683	0.317
		0.0	41.0	19.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.039	0.000	0.961
		10.0	0.0	248.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.026	0.974	0.000
		15.0	568.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.22	11.57	0.279		0.0	0.4	5.5	
C-A	0.19							
C-B	7.10	11.26	0.630		0.0	1.6	22.4	
A-B	0.51							
A-C	0.24							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-AC	3.85	11.49	0.335		0.4	0.5	7.3	
C-A	0.22							
C-B	8.48	11.23	0.755		1.6	2.8	38.5	
A-B	0.61							
A-C	0.28							

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)
08.15-08.30								
B-AC	4.72	11.36	0.415		0.5	0.7	10.1	
C-A	0.27							
C-B	10.38	11.18	0.929		2.8	7.8	91.3	
A-B	0.75							
A-C	0.35							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.72	11.34	0.416		0.7	0.7	10.5	
C-A	0.27							
C-B	10.38	11.18	0.929		7.8	9.3	129.4	
A-B	0.75							
A-C	0.35							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.85	11.47	0.336		0.7	0.5	7.9	
C-A	0.22							
C-B	8.48	11.23	0.755		9.3	3.4	64.1	
A-B	0.61							
A-C	0.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/

		(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	
09.00-09.15								
B-AC	3.22	11.57	0.279	0.5	0.4	6.0		
C-A	0.19							
C-B	7.10	11.26	0.630	3.4	1.8	28.8		
A-B	0.51							
A-C	0.24							

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	*
09.15	0.4	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.6	**
08.15	2.8	***
08.30	7.8	********
08.45	9.3	*********
09.00	3.4	***
09.15	1.8	**

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	353.8	235.8	47.4	0.13	47.4	0.13
C-A	20.6	13.7				
C-B	778.8	519.2	374.5	0.48	374.6	0.48
A-B	56.2	37.5				
A-C	26.1	17.4				
ALL	1235.5	823.6	421.9	0.34	422.0	0.34

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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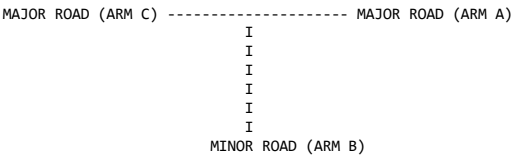
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RUN TITLE
****
2030 Design Year_PM_Broomfield Jutn_Do Not

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

INPUT DATA



ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK

I ARM A I	15.00	I	45.00	I 75.00	I 0.20 I 0.30 I 0.20 I
I ARM B I	15.00	I	45.00	I 75.00	I 4.26 I 6.39 I 4.26 I
I ARM C I	15.00	I	45.00	I 75.00	I 3.04 I 4.56 I 3.04 I

I	TURNING PROPORTIONS		
I	TURNING COUNTS (VEH/HR)		
I	(PERCENTAGE OF H.V.S)		
I TIME	I FROM/TO I ARM A I	ARM B I	ARM C I
I 16.45 - 18.15	I	I	I
I	I ARM A I 0.000 I	0.188 I	0.813 I
I	I 0.0 I	3.0 I	13.0 I
I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I
I	I ARM B I 0.003 I	0.000 I	0.997 I
I	I 1.0 I	0.0 I	340.0 I
I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I
I	I ARM C I 0.091 I	0.909 I	0.000 I
I	I 22.0 I	221.0 I	0.0 I
I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 16.45-17.00								I
I B-AC	4.26	11.96	0.357		0.0	0.5	7.8	I
I C-A	0.28							I
I C-B	2.76	11.40	0.242		0.0	0.3	4.6	I
I A-B	0.04							I
I A-C	0.16							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 17.00-17.15								I
I B-AC	5.09	11.95	0.426		0.5	0.7	10.6	I
I C-A	0.33							I
I C-B	3.30	11.39	0.290		0.3	0.4	5.9	I
I A-B	0.04							I
I A-C	0.19							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 17.15-17.30								I
I B-AC	6.23	11.93	0.522		0.7	1.1	15.3	I
I C-A	0.40							I
I C-B	4.04	11.38	0.355		0.4	0.5	7.9	I
I A-B	0.05							I
I A-C	0.24							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 17.30-17.45								I
I B-AC	6.23	11.93	0.522		1.1	1.1	16.1	I
I C-A	0.40							I
I C-B	4.04	11.38	0.355		0.5	0.5	8.2	I
I A-B	0.05							I
I A-C	0.24							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 17.45-18.00								I
I B-AC	5.09	11.95	0.426		1.1	0.8	11.8	I
I C-A	0.33							I
I C-B	3.30	11.39	0.290		0.5	0.4	6.4	I
I A-B	0.04							I
I A-C	0.19							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

		(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	
18.00-18.15								
B-AC	4.26	11.96	0.357	0.8	0.6	8.7		
C-A	0.28							
C-B	2.76	11.40	0.242	0.4	0.3	5.0		
A-B	0.04							
A-C	0.16							

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.1	*
17.45	1.1	*
18.00	0.8	*
18.15	0.6	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.5	*
17.45	0.5	*
18.00	0.4	
18.15	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	467.6	311.7	70.4	0.15	70.4	0.15
C-A	30.2	20.1				
C-B	303.0	202.0	37.9	0.13	37.9	0.13
A-B	4.1	2.7				
A-C	17.8	11.9				
ALL	822.7	548.5	108.3	0.13	108.3	0.13

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

END OF JOB

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

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RUN TITLE
****
2030 Design Year_PM_Broomfield Jutn_Do Some

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

INPUT DATA

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

ARM A IS Bloomfield North
ARM B IS Bloomfield Crescent
ARM C IS Bloomfield South

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP OF PEAK	AFTER
	TO RISE	IS REACHED	FALLING			

I ARM A I	15.00	I	45.00	I	75.00	I 0.35 I 0.52 I 0.35 I
I ARM B I	15.00	I	45.00	I	75.00	I 5.20 I 7.80 I 5.20 I
I ARM C I	15.00	I	45.00	I	75.00	I 3.31 I 4.97 I 3.31 I

I	I	TURNING PROPORTIONS		I
I	I	TURNING COUNTS (VEH/HR)		I
I	I	(PERCENTAGE OF H.V.S)		I
I TIME	I FROM/TO I	ARM A I	ARM B I	ARM C I
I 16.45 - 18.15	I	I	I	I
I	I ARM A	I 0.000 I	0.536 I	0.464 I
I	I	I 0.0 I	15.0 I	13.0 I
I	I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I	I
I	I ARM B	I 0.065 I	0.000 I	0.935 I
I	I	I 27.0 I	0.0 I	389.0 I
I	I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I	I
I	I ARM C	I 0.083 I	0.917 I	0.000 I
I	I	I 22.0 I	243.0 I	0.0 I
I	I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 16.45-17.00								I
I B-AC	5.20	11.63	0.447		0.0	0.8	11.3	I
I C-A	0.28							I
I C-B	3.04	11.36	0.267		0.0	0.4	5.2	I
I A-B	0.19							I
I A-C	0.16							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 17.00-17.15								I
I B-AC	6.21	11.59	0.536		0.8	1.1	16.2	I
I C-A	0.33							I
I C-B	3.63	11.34	0.320		0.4	0.5	6.8	I
I A-B	0.22							I
I A-C	0.19							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 17.15-17.30								I
I B-AC	7.60	11.53	0.660		1.1	1.9	25.9	I
I C-A	0.40							I
I C-B	4.44	11.32	0.392		0.5	0.6	9.2	I
I A-B	0.27							I
I A-C	0.24							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 17.30-17.45								I
I B-AC	7.60	11.53	0.660		1.9	1.9	28.1	I
I C-A	0.40							I
I C-B	4.44	11.32	0.392		0.6	0.6	9.6	I
I A-B	0.27							I
I A-C	0.24							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 17.45-18.00								I
I B-AC	6.21	11.59	0.536		1.9	1.2	18.8	I
I C-A	0.33							I
I C-B	3.63	11.34	0.320		0.6	0.5	7.4	I
I A-B	0.22							I
I A-C	0.19							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

		(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	
18.00-18.15								
B-AC	5.20	11.63	0.447	1.2	0.8	12.9		
C-A	0.28							
C-B	3.04	11.36	0.267	0.5	0.4	5.7		
A-B	0.19							
A-C	0.16							

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.1	*
17.30	1.9	**
17.45	1.9	**
18.00	1.2	*
18.15	0.8	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.6	*
17.45	0.6	*
18.00	0.5	
18.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	570.4	380.3	113.1	0.20	113.1	0.20
C-A	30.2	20.1				
C-B	333.2	222.1	43.8	0.13	43.9	0.13
A-B	20.6	13.7				
A-C	17.8	11.9				
ALL	972.2	648.1	156.9	0.16	157.0	0.16

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2023 AM Meadowlands Base.vpi" at 12:13:51 on Wednesday, 7 June 2023

RUN TITLE
****
2023 Base Year_AM_Meadowlands Jutn

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

INPUT DATA

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

ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	2.86	4.29	2.86

ARM B	15.00	45.00	75.00	2.60	3.90	2.60
ARM C	15.00	45.00	75.00	0.16	0.24	0.16

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.900	0.100
		0.0	206.0	23.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.952	0.000	0.048
		198.0	0.0	10.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.692	0.308	0.000
		9.0	4.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.60	9.23	0.282		0.0	0.4	5.5	
C-AB	0.05	10.78	0.005		0.0	0.0	0.1	
C-A	0.11							
A-B	2.58							
A-C	0.29							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.10	9.16	0.339		0.4	0.5	7.3	
C-AB	0.06	10.65	0.006		0.0	0.0	0.1	
C-A	0.13							
A-B	3.07							
A-C	0.34							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
B-AC	3.80	9.06	0.420		0.5	0.7	10.2	
C-AB	0.07	10.47	0.007		0.0	0.0	0.1	
C-A	0.16							
A-B	3.77							
A-C	0.42							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-AC	3.80	9.06	0.420		0.7	0.7	10.7	
C-AB	0.07	10.47	0.007		0.0	0.0	0.1	
C-A	0.16							
A-B	3.77							
A-C	0.42							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
B-AC	3.10	9.16	0.339		0.7	0.5	8.1	
C-AB	0.06	10.65	0.006		0.0	0.0	0.1	
C-A	0.13							
A-B	3.07							
A-C	0.34							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)

09.00-09.15							
B-AC	2.60	9.23	0.282	0.5	0.4	6.1	
C-AB	0.05	10.78	0.005	0.0	0.0	0.1	
C-A	0.11						
A-B	2.58						
A-C	0.29						

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	*
08.30	0.7	*
08.45	0.7	*
09.00	0.5	*
09.15	0.4	

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QUEUE FOR STREAM C-AB

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

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	285.2	190.1	48.0	0.17	48.0	0.17
C-AB	5.6	3.7	0.5	0.10	0.5	0.10
C-A	12.3	8.2				
A-B	282.5	188.3				
A-C	31.5	21.0				
ALL	617.0	411.4	48.6	0.08	48.6	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.

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2023 PM Meadowlands Base.vpi" at 12:19:52 on Wednesday, 7 June 2023

RUN TITLE
****
2023 Base Year_PM_Meadowlands Jutn

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

INPUT DATA

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

ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

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.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	1.84	2.76	1.84

I ARM B I	15.00	I	45.00	I	75.00	I 2.01 I	3.02 I 2.01 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.28 I	0.41 I 0.28 I

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.912	0.088
		0.0	134.0	13.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.944	0.000	0.056
		152.0	0.0	9.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.682	0.318	0.000
		15.0	7.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	2.01	9.35	0.215		0.0	0.3	3.9	
C-AB	0.09	11.09	0.008		0.0	0.0	0.1	
C-A	0.19							
A-B	1.67							
A-C	0.16							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	2.40	9.29	0.259		0.3	0.3	5.0	
C-AB	0.11	11.02	0.010		0.0	0.0	0.2	
C-A	0.22							
A-B	2.00							
A-C	0.19							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	2.94	9.22	0.319		0.3	0.5	6.7	
C-AB	0.13	10.92	0.012		0.0	0.0	0.2	
C-A	0.27							
A-B	2.45							
A-C	0.24							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	2.94	9.22	0.319		0.5	0.5	7.0	
C-AB	0.13	10.92	0.012		0.0	0.0	0.2	
C-A	0.27							
A-B	2.45							
A-C	0.24							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	2.40	9.29	0.259		0.5	0.4	5.5	
C-AB	0.11	11.02	0.010		0.0	0.0	0.2	
C-A	0.22							
A-B	2.00							
A-C	0.19							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)

18.00-18.15							
B-AC	2.01	9.35	0.215	0.4	0.3	4.3	
C-AB	0.09	11.09	0.008	0.0	0.0	0.1	
C-A	0.19						
A-B	1.67						
A-C	0.16						

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.4
18.15	0.3

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	220.8	147.2	32.3	0.15	32.4	0.15
C-AB	9.8	6.5	1.0	0.10	1.0	0.10
C-A	20.4	13.6				
A-B	183.7	122.5				
A-C	17.8	11.9				
ALL	452.5	301.7	33.3	0.07	33.3	0.07

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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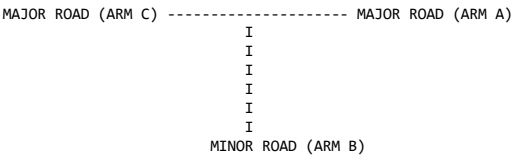
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2025 AM Meadowlands Opening_Do Not.vpi" at 12:16:13 on Wednesday, 7 June 2023

RUN TITLE
****
2025 Opening Year_AM_Meadowlands Jutn_Do not

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

INPUT DATA



ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK

I ARM A I	15.00	I	45.00	I	75.00	I 3.06 I 4.59 I 3.06 I
I ARM B I	15.00	I	45.00	I	75.00	I 2.90 I 4.35 I 2.90 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.16 I 0.24 I 0.16 I

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.902	0.098
		0.0	221.0	24.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.957	0.000	0.043
		222.0	0.0	10.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.692	0.308	0.000
		9.0	4.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.90	9.20	0.315		0.0	0.5	6.5	
C-AB	0.05	10.72	0.005		0.0	0.0	0.1	
C-A	0.11							
A-B	2.76							
A-C	0.30							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.46	9.12	0.380		0.5	0.6	8.7	
C-AB	0.06	10.58	0.006		0.0	0.0	0.1	
C-A	0.13							
A-B	3.30							
A-C	0.36							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.24	9.02	0.470		0.6	0.9	12.4	
C-AB	0.07	10.39	0.007		0.0	0.0	0.1	
C-A	0.16							
A-B	4.04							
A-C	0.44							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.24	9.02	0.470		0.9	0.9	13.1	
C-AB	0.07	10.39	0.007		0.0	0.0	0.1	
C-A	0.16							
A-B	4.04							
A-C	0.44							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.46	9.12	0.380		0.9	0.6	9.7	
C-AB	0.06	10.58	0.006		0.0	0.0	0.1	
C-A	0.13							
A-B	3.30							
A-C	0.36							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/

			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
09.00-09.15								
	B-AC	2.90	9.20	0.315	0.6	0.5	7.2	
	C-AB	0.05	10.72	0.005	0.0	0.0	0.1	
	C-A	0.11						
	A-B	2.76						
	A-C	0.30						

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.5	

.

QUEUE FOR STREAM C-AB

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

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	318.1	212.1	57.7	0.18	57.7	0.18
C-AB	5.6	3.7	0.6	0.10	0.6	0.10
C-A	12.3	8.2				
A-B	303.0	202.0				
A-C	32.9	21.9				
ALL	671.9	447.9	58.2	0.09	58.2	0.09

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2025 AM Meadowlands Opening_Do Some.vpi" at 09:56:04 on Thursday, 28 September 2023

RUN TITLE
****
2025 Opening Year_AM_Meadowlands Jutn_Do Some

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

INPUT DATA

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

ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP OF PEAK	AFTER
	TO RISE	IS REACHED	FALLING			

I ARM A I	15.00	I	45.00	I	75.00	I 3.09 I 4.63 I 3.09 I
I ARM B I	15.00	I	45.00	I	75.00	I 3.04 I 4.56 I 3.04 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.16 I 0.24 I 0.16 I

I	I TURNING PROPORTIONS I		
I	I TURNING COUNTS (VEH/HR) I		
I	I (PERCENTAGE OF H.V.S) I		
I TIME	I FROM/TO I	ARM A I	ARM B I ARM C I
I 07.45 - 09.15	I	I	I I
I	I ARM A	I 0.000 I	0.903 I 0.097 I
I	I	I 0.0 I	223.0 I 24.0 I
I	I	I (0.0)I	(0.0)I (0.0)I
I	I	I	I I
I	I ARM B	I 0.959 I	0.000 I 0.041 I
I	I	I 233.0 I	0.0 I 10.0 I
I	I	I (0.0)I	(0.0)I (0.0)I
I	I	I	I I
I	I ARM C	I 0.692 I	0.308 I 0.000 I
I	I	I 9.0 I	4.0 I 0.0 I
I	I	I (0.0)I	(0.0)I (0.0)I
I	I	I	I I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 07.45-08.00								I
I B-AC	3.04	9.19	0.330		0.0	0.5	6.9	I
I C-AB	0.05	10.72	0.005		0.0	0.0	0.1	I
I C-A	0.11							I
I A-B	2.79							I
I A-C	0.30							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 08.00-08.15								I
I B-AC	3.63	9.11	0.398		0.5	0.6	9.4	I
I C-AB	0.06	10.58	0.006		0.0	0.0	0.1	I
I C-A	0.13							I
I A-B	3.33							I
I A-C	0.36							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 08.15-08.30								I
I B-AC	4.44	9.01	0.493		0.6	0.9	13.5	I
I C-AB	0.07	10.38	0.007		0.0	0.0	0.1	I
I C-A	0.16							I
I A-B	4.08							I
I A-C	0.44							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-AC	4.44	9.01	0.493		0.9	1.0	14.3	I
I C-AB	0.07	10.38	0.007		0.0	0.0	0.1	I
I C-A	0.16							I
I A-B	4.08							I
I A-C	0.44							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 08.45-09.00								I
I B-AC	3.63	9.11	0.398		1.0	0.7	10.5	I
I C-AB	0.06	10.58	0.006		0.0	0.0	0.1	I
I C-A	0.13							I
I A-B	3.33							I
I A-C	0.36							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

```
I                              (RFC)    (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT) I
I 09.00-09.15                                                                                 I
I   B-AC      3.04      9.19    0.330                0.7    0.5        7.8                    I
I   C-AB      0.05     10.72    0.005                0.0    0.0        0.1                    I
I   C-A       0.11                                                                          I
I   A-B       2.79                                                                          I
I   A-C       0.30                                                                          I
I                                                                                           I
-----------------------------------------------------------------------------------------------

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

QUEUE FOR STREAM   B-AC
-------------------------
TIME SEGMENT    NO. OF
  ENDING      VEHICLES
              IN QUEUE
  08.00           0.5
  08.15           0.6    *
  08.30           0.9    *
  08.45           1.0    *
  09.00           0.7    *
  09.15           0.5    *

QUEUE FOR STREAM   C-AB
-------------------------
TIME SEGMENT    NO. OF
  ENDING      VEHICLES
              IN QUEUE
  08.00           0.0
  08.15           0.0
  08.30           0.0
  08.45           0.0
  09.00           0.0
  09.15           0.0

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

-------------------------------------------------------------------------
I STREAM I   TOTAL DEMAND  I   * QUEUEING *      I * INCLUSIVE QUEUEING * I
I        I                 I    * DELAY *        I       * DELAY *        I
I        I-----------------------------------------------------------------I
I        I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)     (MIN/VEH) I
-------------------------------------------------------------------------
I  B-AC  I  333.2 I  222.1 I    62.5 I    0.19   I      62.5  I    0.19   I
I  C-AB  I    5.6 I    3.7 I     0.6 I    0.10   I       0.6  I    0.10   I
I  C-A   I   12.3 I    8.2 I         I           I            I           I
I  A-B   I  305.8 I  203.9 I         I           I            I           I
I  A-C   I   32.9 I   21.9 I         I           I            I           I
-------------------------------------------------------------------------
I  ALL   I  689.7 I  459.8 I    63.0 I    0.09   I      63.1  I    0.09   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
```

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2025 PM Meadowlands Opening_Do Not.vpi" at 12:20:44 on Wednesday, 7 June 2023

RUN TITLE
****
2025 Opening Year_PM_Meadowlands Jutn_Do Not

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

INPUT DATA

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

ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK

I ARM A I	15.00	I	45.00	I	75.00	I 2.09 I 3.13 I 2.09 I
I ARM B I	15.00	I	45.00	I	75.00	I 2.22 I 3.34 I 2.22 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.29 I 0.43 I 0.29 I

I	I	TURNING PROPORTIONS		I
I	I	TURNING COUNTS (VEH/HR)		I
I	I	(PERCENTAGE OF H.V.S)		I
I				
I TIME	I FROM/TO I	ARM A I	ARM B I	ARM C I
I 16.45 - 18.15	I	I	I	I
I	I ARM A	I 0.000 I	0.916 I	0.084 I
I	I	I 0.0 I	153.0 I	14.0 I
I	I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I	I
I	I ARM B	I 0.949 I	0.000 I	0.051 I
I	I	I 169.0 I	0.0 I	9.0 I
I	I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I	I
I	I ARM C	I 0.696 I	0.304 I	0.000 I
I	I	I 16.0 I	7.0 I	0.0 I
I	I	I (0.0)I	(0.0)I	(0.0)I
I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 16.45-17.00								I
I B-AC	2.22	9.31	0.239		0.0	0.3	4.5	I
I C-AB	0.09	11.03	0.008		0.0	0.0	0.1	I
I C-A	0.20							I
I A-B	1.91							I
I A-C	0.18							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 17.00-17.15								I
I B-AC	2.66	9.25	0.287		0.3	0.4	5.8	I
I C-AB	0.11	10.95	0.010		0.0	0.0	0.2	I
I C-A	0.24							I
I A-B	2.28							I
I A-C	0.21							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 17.15-17.30								I
I B-AC	3.25	9.17	0.355		0.4	0.5	7.9	I
I C-AB	0.13	10.84	0.012		0.0	0.0	0.2	I
I C-A	0.29							I
I A-B	2.80							I
I A-C	0.26							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 17.30-17.45								I
I B-AC	3.25	9.17	0.355		0.5	0.5	8.2	I
I C-AB	0.13	10.84	0.012		0.0	0.0	0.2	I
I C-A	0.29							I
I A-B	2.80							I
I A-C	0.26							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 17.45-18.00								I
I B-AC	2.66	9.25	0.287		0.5	0.4	6.3	I
I C-AB	0.11	10.95	0.010		0.0	0.0	0.2	I
I C-A	0.24							I
I A-B	2.28							I
I A-C	0.21							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

		(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	
18.00-18.15								
B-AC	2.22	9.31	0.239	0.4	0.3	4.9		
C-AB	0.09	11.03	0.008	0.0	0.0	0.1		
C-A	0.20							
A-B	1.91							
A-C	0.18							

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.5	*
17.45	0.5	*
18.00	0.4	
18.15	0.3	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	244.1	162.7	37.5	0.15	37.5	0.15
C-AB	9.8	6.5	1.0	0.10	1.0	0.10
C-A	21.7	14.5				
A-B	209.8	139.9				
A-C	19.2	12.8				
ALL	504.6	336.4	38.5	0.08	38.5	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.

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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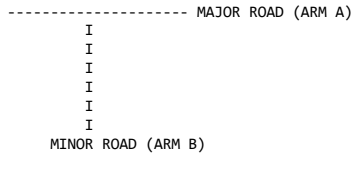
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2025 PM Meadowlands Opening_Do Some.vpi" at 09:58:21 on Thursday, 28 September 2023

RUN TITLE
****
2025 Opening Year_PM_Meadowlands Jutn_Do Some

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

INPUT DATA



ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS TO RISE	IS REACHED	RATE OF FLOW (VEH/MIN) BEFORE FALLING	AT TOP OF PEAK	AFTER PEAK

I ARM A I	15.00	I	45.00	I	75.00	I 2.17 I 3.26 I 2.17 I
I ARM B I	15.00	I	45.00	I	75.00	I 2.26 I 3.39 I 2.26 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.29 I 0.43 I 0.29 I

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.920	0.080
		0.0	160.0	14.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.950	0.000	0.050
		172.0	0.0	9.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.696	0.304	0.000
		16.0	7.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00									
	B-AC	2.26	9.29	0.243		0.0	0.3	4.6	
	C-AB	0.09	11.01	0.008		0.0	0.0	0.1	
	C-A	0.20							
	A-B	2.00							
	A-C	0.17							

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15									
	B-AC	2.70	9.23	0.293		0.3	0.4	6.0	
	C-AB	0.11	10.93	0.010		0.0	0.0	0.2	
	C-A	0.24							
	A-B	2.39							
	A-C	0.21							

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30									
	B-AC	3.31	9.15	0.362		0.4	0.6	8.1	
	C-AB	0.13	10.81	0.012		0.0	0.0	0.2	
	C-A	0.29							
	A-B	2.92							
	A-C	0.26							

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45									
	B-AC	3.31	9.15	0.362		0.6	0.6	8.4	
	C-AB	0.13	10.81	0.012		0.0	0.0	0.2	
	C-A	0.29							
	A-B	2.92							
	A-C	0.26							

TIME		DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00									
	B-AC	2.70	9.23	0.293		0.6	0.4	6.5	
	C-AB	0.11	10.93	0.010		0.0	0.0	0.2	
	C-A	0.24							
	A-B	2.39							
	A-C	0.21							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/

			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
18.00-18.15								
	B-AC	2.26	9.29	0.243	0.4	0.3	5.0	
	C-AB	0.09	11.01	0.008	0.0	0.0	0.1	
	C-A	0.20						
	A-B	2.00						
	A-C	0.17						

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	248.2	165.5	38.5	0.16	38.5	0.16
C-AB	9.8	6.5	1.0	0.10	1.0	0.10
C-A	21.7	14.5				
A-B	219.4	146.3				
A-C	19.2	12.8				
ALL	518.3	345.5	39.5	0.08	39.5	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.

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2030 AM Meadowlands Opening_Do Not.vpi" at 10:00:37 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_AM_Meadowlands Jutn_Do Not

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

INPUT DATA

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

ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP OF PEAK	AFTER
	TO RISE	IS REACHED	FALLING			

I ARM A I	15.00	I	45.00	I	75.00	I 3.61	I 5.42	I 3.61 I
I ARM B I	15.00	I	45.00	I	75.00	I 3.38	I 5.06	I 3.38 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.21	I 0.32	I 0.21 I

I	I TURNING PROPORTIONS I		
I	I TURNING COUNTS (VEH/HR) I		
I	I (PERCENTAGE OF H.V.S) I		
I TIME	I FROM/TO I	ARM A I	ARM B I ARM C I
I 07.45 - 09.15	I	I	I I
I	I ARM A	I 0.000	I 0.910 I 0.090 I
I	I	I 0.0	I 263.0 I 26.0 I
I	I	I (0.0)	I (0.0) I (0.0) I
I	I	I	I I
I	I ARM B	I 0.963	I 0.000 I 0.037 I
I	I	I 260.0	I 0.0 I 10.0 I
I	I	I (0.0)	I (0.0) I (0.0) I
I	I	I	I I
I	I ARM C	I 0.706	I 0.294 I 0.000 I
I	I	I 12.0	I 5.0 I 0.0 I
I	I	I (0.0)	I (0.0) I (0.0) I
I	I	I	I I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 07.45-08.00								I
I B-AC	3.38	9.12	0.370		0.0	0.6	8.2	I
I C-AB	0.06	10.61	0.006		0.0	0.0	0.1	I
I C-A	0.15							I
I A-B	3.29							I
I A-C	0.32							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 08.00-08.15								I
I B-AC	4.03	9.03	0.447		0.6	0.8	11.4	I
I C-AB	0.08	10.44	0.007		0.0	0.0	0.1	I
I C-A	0.18							I
I A-B	3.93							I
I A-C	0.39							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 08.15-08.30								I
I B-AC	4.94	8.90	0.555		0.8	1.2	17.0	I
I C-AB	0.09	10.22	0.009		0.0	0.0	0.1	I
I C-A	0.22							I
I A-B	4.81							I
I A-C	0.48							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-AC	4.94	8.90	0.555		1.2	1.2	18.2	I
I C-AB	0.09	10.22	0.009		0.0	0.0	0.1	I
I C-A	0.22							I
I A-B	4.81							I
I A-C	0.48							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 08.45-09.00								I
I B-AC	4.03	9.03	0.447		1.2	0.8	13.0	I
I C-AB	0.08	10.44	0.007		0.0	0.0	0.1	I
I C-A	0.18							I
I A-B	3.93							I
I A-C	0.39							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

```
I                              (RFC)    (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT) I
I 09.00-09.15                                                                                 I
I   B-AC      3.38      9.12    0.370                0.8    0.6        9.3                    I
I   C-AB      0.06     10.61    0.006                0.0    0.0        0.1                    I
I   C-A       0.15                                                                          I
I   A-B       3.29                                                                          I
I   A-C       0.32                                                                          I
I                                                                                           I
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```

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.2	*
08.45	1.2	*
09.00	0.8	*
09.15	0.6	*

.

QUEUE FOR STREAM C-AB

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

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	370.2	246.8	77.1	0.21	77.1	0.21
C-AB	7.0	4.7	0.7	0.10	0.7	0.10
C-A	16.3	10.9				
A-B	360.6	240.4				
A-C	35.7	23.8				
ALL	789.8	526.5	77.8	0.10	77.8	0.10

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2030 AM Meadowlands Opening_Do Some.vpi" at 10:01:58 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_AM_Meadowlands Jutn_Do Some

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

INPUT DATA

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

ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TO RISE	IS REACHED	FALLING	RATE OF FLOW (VEH/MIN) PEAK	OF PEAK	PEAK	AFTER
	TOP OF PEAK		FLOW STOPS	BEFORE	AT TOP			

ARM A	15.00		45.00		75.00	3.71	5.57	3.71
ARM B	15.00		45.00		75.00	3.84	5.76	3.84
ARM C	15.00		45.00		75.00	0.21	0.32	0.21

	TURNING PROPORTIONS			
	TURNING COUNTS (VEH/HR)			
	(PERCENTAGE OF H.V.S)			
TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.912	0.088
		0.0	271.0	26.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.967	0.000	0.033
		297.0	0.0	10.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.706	0.294	0.000
		12.0	5.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.84	9.10	0.422		0.0	0.7	10.1	
C-AB	0.06	10.58	0.006		0.0	0.0	0.1	
C-A	0.15							
A-B	3.39							
A-C	0.32							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.58	9.00	0.509		0.7	1.0	14.4	
C-AB	0.08	10.41	0.007		0.0	0.0	0.1	
C-A	0.18							
A-B	4.05							
A-C	0.39							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	5.61	8.88	0.632		1.0	1.6	22.8	
C-AB	0.09	10.18	0.009		0.0	0.0	0.1	
C-A	0.22							
A-B	4.95							
A-C	0.48							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
B-AC	5.61	8.88	0.632		1.6	1.7	24.9	
C-AB	0.09	10.18	0.009		0.0	0.0	0.1	
C-A	0.22							
A-B	4.95							
A-C	0.48							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
B-AC	4.58	9.00	0.509		1.7	1.1	17.0	
C-AB	0.08	10.41	0.007		0.0	0.0	0.1	
C-A	0.18							
A-B	4.05							
A-C	0.39							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/

```
I                              (RFC)    (PEDS/MIN) (VEHS) (VEHS)  TIME SEGMENT)  TIME SEGMENT) I
I 09.00-09.15                                                                                 I
I   B-AC      3.84      9.10    0.422                1.1    0.7       11.7                    I
I   C-AB      0.06     10.58    0.006                0.0    0.0        0.1                    I
I   C-A       0.15                                                                          I
I   A-B       3.39                                                                          I
I   A-C       0.32                                                                          I
I                                                                                         I
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```

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.6	**
08.45	1.7	**
09.00	1.1	*
09.15	0.7	*

.

QUEUE FOR STREAM C-AB

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

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	421.0	280.6	100.8	0.24	100.8	0.24
C-AB	7.0	4.7	0.7	0.10	0.7	0.10
C-A	16.3	10.9				
A-B	371.6	247.7				
A-C	35.7	23.8				
ALL	851.5	567.7	101.5	0.12	101.5	0.12

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2030 PM Meadowlands Opening_Do Not.vpi" at 10:03:43 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_PM_Meadowlands Jutn_Do Not

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

INPUT DATA

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

ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK

I ARM A I	15.00	I	45.00	I	75.00	I 2.47 I 3.71 I 2.47 I
I ARM B I	15.00	I	45.00	I	75.00	I 2.74 I 4.11 I 2.74 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.31 I 0.47 I 0.31 I

I	I TURNING PROPORTIONS I		
I	I TURNING COUNTS (VEH/HR) I		
I	I (PERCENTAGE OF H.V.S) I		
I TIME	I FROM/TO I ARM A I	ARM B I	ARM C I
I 16.45 - 18.15	I I	I	I
I	I ARM A I 0.000 I	0.924 I	0.076 I
I	I 0.0 I	183.0 I	15.0 I
I	I (0.0)I	(0.0)I	(0.0)I
I	I I	I	I
I	I ARM B I 0.922 I	0.000 I	0.078 I
I	I 202.0 I	0.0 I	17.0 I
I	I (0.0)I	(0.0)I	(0.0)I
I	I I	I	I
I	I ARM C I 0.600 I	0.400 I	0.000 I
I	I 15.0 I	10.0 I	0.0 I
I	I (0.0)I	(0.0)I	(0.0)I
I	I I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

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 16.45-17.00								I
I B-AC	2.74	9.31	0.294		0.0	0.4	5.9	I
I C-AB	0.13	10.92	0.012		0.0	0.0	0.2	I
I C-A	0.19							I
I A-B	2.29							I
I A-C	0.19							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 17.00-17.15								I
I B-AC	3.27	9.24	0.354		0.4	0.5	7.8	I
I C-AB	0.15	10.82	0.014		0.0	0.0	0.2	I
I C-A	0.22							I
I A-B	2.73							I
I A-C	0.22							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 17.15-17.30								I
I B-AC	4.00	9.14	0.438		0.5	0.8	11.0	I
I C-AB	0.19	10.68	0.018		0.0	0.0	0.3	I
I C-A	0.27							I
I A-B	3.35							I
I A-C	0.27							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 17.30-17.45								I
I B-AC	4.00	9.14	0.438		0.8	0.8	11.5	I
I C-AB	0.19	10.68	0.018		0.0	0.0	0.3	I
I C-A	0.27							I
I A-B	3.35							I
I A-C	0.27							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 17.45-18.00								I
I B-AC	3.27	9.24	0.354		0.8	0.6	8.7	I
I C-AB	0.15	10.82	0.014		0.0	0.0	0.2	I
I C-A	0.22							I
I A-B	2.73							I
I A-C	0.22							I
I								I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/ I

I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT) I
I 18.00-18.15								I
I	B-AC	2.74	9.31	0.294	0.6	0.4	6.5	I
I	C-AB	0.13	10.92	0.012	0.0	0.0	0.2	I
I	C-A	0.19						I
I	A-B	2.29						I
I	A-C	0.19						I
I								I

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.4	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	300.3	200.2	51.4	0.17	51.4	0.17
C-AB	14.0	9.3	1.4	0.10	1.4	0.10
C-A	20.3	13.5				
A-B	250.9	167.3				
A-C	20.6	13.7				
ALL	606.1	404.1	52.8	0.09	52.8	0.09

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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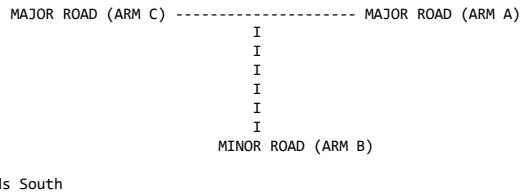
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\3.Meadowlands Junction\2030 PM Meadowlands Opening_Do Some.vpi" at 10:04:40 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_PM_Meadowlands Jutn_Do Some

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

INPUT DATA



ARM A IS Meadowlands South
ARM B IS Bloomfield West
ARM C IS Meadowlands North

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 4.00 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	2 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE TO RISE	AT TOP IS REACHED	AFTER FALLING	PEAK	OF PEAK

I ARM A I	15.00	I	45.00	I	75.00	I 2.81 I 4.22 I 2.81 I
I ARM B I	15.00	I	45.00	I	75.00	I 2.84 I 4.26 I 2.84 I
I ARM C I	15.00	I	45.00	I	75.00	I 0.31 I 0.47 I 0.31 I

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.933	0.067
		0.0	210.0	15.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.925	0.000	0.075
		210.0	0.0	17.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.600	0.400	0.000
		15.0	10.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	2.84	9.27	0.306		0.0	0.4	6.2	
C-AB	0.13	10.84	0.012		0.0	0.0	0.2	
C-A	0.19							
A-B	2.63							
A-C	0.19							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	3.39	9.19	0.369		0.4	0.6	8.3	
C-AB	0.15	10.72	0.014		0.0	0.0	0.2	
C-A	0.22							
A-B	3.13							
A-C	0.22							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	4.15	9.09	0.457		0.6	0.8	11.8	
C-AB	0.19	10.56	0.018		0.0	0.0	0.3	
C-A	0.27							
A-B	3.84							
A-C	0.27							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	4.15	9.09	0.457		0.8	0.8	12.4	
C-AB	0.19	10.56	0.018		0.0	0.0	0.3	
C-A	0.27							
A-B	3.84							
A-C	0.27							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	3.39	9.19	0.369		0.8	0.6	9.3	
C-AB	0.15	10.72	0.014		0.0	0.0	0.2	
C-A	0.22							
A-B	3.13							
A-C	0.22							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW	START QUEUE	END QUEUE	DELAY (VEH.MIN/	GEOMETRIC DELAY (VEH.MIN/

			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)
18.00-18.15								
B-AC	2.84	9.27	0.306		0.6	0.4	6.9	
C-AB	0.13	10.84	0.012		0.0	0.0	0.2	
C-A	0.19							
A-B	2.63							
A-C	0.19							

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.4	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	311.3	207.5	54.9	0.18	54.9	0.18
C-AB	14.0	9.3	1.4	0.10	1.4	0.10
C-A	20.3	13.5				
A-B	288.0	192.0				
A-C	20.6	13.7				
ALL	654.1	436.0	56.3	0.09	56.3	0.09

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

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2023 AM R627 Base.vpi" at 12:41:57 on Wednesday, 7 June 2023

RUN TITLE
****
2023 Base Year_AM_R627 Meadowlands Jutn

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.41	8.12	5.41

ARM B	15.00	45.00	75.00	2.58	3.86	2.58
ARM C	15.00	45.00	75.00	1.49	2.23	1.49

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.423	0.577
		0.0	183.0	250.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.466	0.000	0.534
		96.0	0.0	110.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.664	0.336	0.000
		79.0	40.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.58	8.98	0.287		0.0	0.4	5.7	
C-AB	0.55	10.04	0.055		0.0	0.1	1.0	
C-A	0.93							
A-B	2.29							
A-C	3.13							

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)
08.00-08.15								
B-AC	3.07	8.74	0.352		0.4	0.5	7.7	
C-AB	0.68	9.93	0.068		0.1	0.1	1.3	
C-A	1.10							
A-B	2.73							
A-C	3.73							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.77	8.41	0.448		0.5	0.8	11.3	
C-AB	0.86	9.77	0.088		0.1	0.1	1.7	
C-A	1.32							
A-B	3.35							
A-C	4.57							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.77	8.41	0.448		0.8	0.8	12.0	
C-AB	0.86	9.78	0.088		0.1	0.1	1.7	
C-A	1.32							
A-B	3.35							
A-C	4.57							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.07	8.74	0.352		0.8	0.6	8.6	
C-AB	0.68	9.93	0.068		0.1	0.1	1.3	
C-A	1.10							
A-B	2.73							
A-C	3.73							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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	2.58	8.98	0.287	0.6	0.4	6.3		
C-AB	0.55	10.04	0.055	0.1	0.1	1.0		
C-A	0.93							
A-B	2.29							
A-C	3.13							

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	*
08.30	0.8	*
08.45	0.8	*
09.00	0.6	*
09.15	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	282.5	188.3	51.6	0.18	51.6	0.18
C-AB	62.6	41.8	8.1	0.13	8.1	0.13
C-A	100.5	67.0				
A-B	250.9	167.3				
A-C	342.8	228.5				
ALL	1039.4	692.9	59.7	0.06	59.7	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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2023 PM R627 Base.vpi" at 12:47:07 on Wednesday, 7 June 2023

RUN TITLE
****
2023 Base Year_PM_R627 Meadowlands Jutn

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	1.96	2.94	1.96

ARM B	15.00	45.00	75.00	2.08	3.11	2.08
ARM C	15.00	45.00	75.00	2.88	4.31	2.88

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.439	0.561
		0.0	69.0	88.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.795	0.000	0.205
		132.0	0.0	34.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.665	0.335	0.000
		153.0	77.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	2.08	8.56	0.242		0.0	0.3	4.5	
C-AB	1.15	11.46	0.100		0.0	0.1	2.0	
C-A	1.72							
A-B	0.86							
A-C	1.10							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	2.48	8.38	0.296		0.3	0.4	6.0	
C-AB	1.42	11.61	0.123		0.1	0.2	2.6	
C-A	2.01							
A-B	1.03							
A-C	1.31							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	3.03	8.13	0.373		0.4	0.6	8.4	
C-AB	1.84	11.85	0.156		0.2	0.2	3.5	
C-A	2.36							
A-B	1.26							
A-C	1.61							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	3.03	8.13	0.373		0.6	0.6	8.8	
C-AB	1.84	11.85	0.156		0.2	0.2	3.6	
C-A	2.36							
A-B	1.26							
A-C	1.61							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	2.48	8.38	0.296		0.6	0.4	6.6	
C-AB	1.42	11.62	0.123		0.2	0.2	2.6	
C-A	2.01							
A-B	1.03							
A-C	1.31							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)

18.00-18.15							
B-AC	2.08	8.56	0.242	0.4	0.3	5.0	
C-AB	1.15	11.46	0.101	0.2	0.1	2.1	
C-A	1.72						
A-B	0.86						
A-C	1.10						

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	227.6	151.7	39.4	0.17	39.4	0.17
C-AB	132.6	88.4	16.5	0.12	16.5	0.12
C-A	182.8	121.9				
A-B	94.6	63.1				
A-C	120.7	80.4				
ALL	758.3	505.5	55.9	0.07	55.9	0.07

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2025 AM R627 Opening Do Not.vpi" at 12:43:59 on Wednesday, 7 June 2023

RUN TITLE
****
2025 Opening Year_AM_R627 Meadowlands Jutn_Do Not

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.69	8.53	5.69

I ARM B I	15.00	I	45.00	I	75.00	I 2.91	I 4.37	I 2.91 I
I ARM C I	15.00	I	45.00	I	75.00	I 1.55	I 2.32	I 1.55 I

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.426	0.574
		0.0	194.0	261.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.472	0.000	0.528
		110.0	0.0	123.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.661	0.339	0.000
		82.0	42.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	2.91	8.91	0.327		0.0	0.5	6.8	
C-AB	0.58	10.00	0.058		0.0	0.1	1.1	
C-A	0.97							
A-B	2.42							
A-C	3.26							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.48	8.66	0.402		0.5	0.7	9.5	
C-AB	0.71	9.88	0.072		0.1	0.1	1.4	
C-A	1.14							
A-B	2.90							
A-C	3.90							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.26	8.30	0.513		0.7	1.0	14.5	
C-AB	0.91	9.72	0.093		0.1	0.1	1.9	
C-A	1.36							
A-B	3.55							
A-C	4.77							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.26	8.30	0.513		1.0	1.0	15.5	
C-AB	0.91	9.72	0.093		0.1	0.1	1.9	
C-A	1.36							
A-B	3.55							
A-C	4.77							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.48	8.65	0.402		1.0	0.7	10.8	
C-AB	0.72	9.88	0.072		0.1	0.1	1.4	
C-A	1.14							
A-B	2.90							
A-C	3.90							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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	2.91	8.91	0.327	0.7	0.5	7.7	
C-AB	0.58	10.00	0.058	0.1	0.1	1.1	
C-A	0.97						
A-B	2.42						
A-C	3.26						

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.7	*
08.30	1.0	*
08.45	1.0	*
09.00	0.7	*
09.15	0.5	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	319.5	213.0	64.7	0.20	64.7	0.20
C-AB	66.2	44.1	8.7	0.13	8.7	0.13
C-A	103.9	69.2				
A-B	266.0	177.3				
A-C	357.9	238.6				
ALL	1113.4	742.3	73.4	0.07	73.4	0.07

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2025 AM R627 Opening Do Some.vpi" at 10:56:54 on Thursday, 28 September 2023

RUN TITLE
****
2025 Opening Year_AM_R627 Meadowlands Jutn_Do Some

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	5.70	8.55	5.70

ARM B	15.00	45.00	75.00	3.04	4.56	3.04
ARM C	15.00	45.00	75.00	1.59	2.38	1.59

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.428	0.572
		0.0	195.0	261.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.481	0.000	0.519
		117.0	0.0	126.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.646	0.354	0.000
		82.0	45.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.04	8.87	0.342		0.0	0.5	7.3	
C-AB	0.63	10.00	0.063		0.0	0.1	1.1	
C-A	0.96							
A-B	2.44							
A-C	3.26							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.63	8.62	0.421		0.5	0.7	10.2	
C-AB	0.77	9.88	0.078		0.1	0.1	1.5	
C-A	1.13							
A-B	2.91							
A-C	3.90							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.44	8.26	0.538		0.7	1.1	15.9	
C-AB	0.97	9.72	0.100		0.1	0.1	2.0	
C-A	1.35							
A-B	3.56							
A-C	4.77							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.44	8.26	0.538		1.1	1.1	17.0	
C-AB	0.97	9.72	0.100		0.1	0.1	2.0	
C-A	1.35							
A-B	3.56							
A-C	4.77							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.63	8.62	0.421		1.1	0.7	11.7	
C-AB	0.77	9.88	0.078		0.1	0.1	1.5	
C-A	1.13							
A-B	2.91							
A-C	3.90							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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	3.04	8.87	0.342		0.7	0.5	8.2	
C-AB	0.63	10.00	0.063		0.1	0.1	1.2	
C-A	0.96							
A-B	2.44							
A-C	3.26							

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.7	*
08.30	1.1	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	*

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	333.2	222.1	70.4	0.21	70.4	0.21
C-AB	70.9	47.3	9.3	0.13	9.3	0.13
C-A	103.2	68.8				
A-B	267.4	178.3				
A-C	357.9	238.6				
ALL	1132.6	755.1	79.7	0.07	79.7	0.07

* 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

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2025 PM R627 Opening Do Not.vpi" at 12:48:03 on Wednesday, 7 June 2023

RUN TITLE
****
2025 Opening Year_PM_R627 Meadowlands Jutn_Do Not

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.14	3.21	2.14

ARM B	15.00	45.00	75.00	2.29	3.43	2.29
ARM C	15.00	45.00	75.00	2.99	4.48	2.99

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.462	0.538
		0.0	79.0	92.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.781	0.000	0.219
		143.0	0.0	40.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.665	0.335	0.000
		159.0	80.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	2.29	8.55	0.268		0.0	0.4	5.2	
C-AB	1.20	11.47	0.105		0.0	0.1	2.1	
C-A	1.78							
A-B	0.99							
A-C	1.15							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	2.73	8.36	0.327		0.4	0.5	6.9	
C-AB	1.49	11.63	0.128		0.1	0.2	2.8	
C-A	2.08							
A-B	1.18							
A-C	1.37							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	3.35	8.10	0.413		0.5	0.7	9.9	
C-AB	1.94	11.86	0.163		0.2	0.3	3.8	
C-A	2.43							
A-B	1.44							
A-C	1.68							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	3.35	8.10	0.413		0.7	0.7	10.4	
C-AB	1.94	11.86	0.163		0.3	0.3	3.8	
C-A	2.43							
A-B	1.44							
A-C	1.68							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	2.73	8.36	0.327		0.7	0.5	7.7	
C-AB	1.49	11.63	0.128		0.3	0.2	2.8	
C-A	2.07							
A-B	1.18							
A-C	1.37							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)

18.00-18.15							
B-AC	2.29	8.55	0.268	0.5	0.4	5.7	
C-AB	1.21	11.47	0.105	0.2	0.1	2.2	
C-A	1.78						
A-B	0.99						
A-C	1.15						

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.7	*
17.45	0.7	*
18.00	0.5	
18.15	0.4	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	250.9	167.3	45.8	0.18	45.8	0.18
C-AB	139.1	92.7	17.5	0.13	17.5	0.13
C-A	188.7	125.8				
A-B	108.3	72.2				
A-C	126.2	84.1				
ALL	813.1	542.1	63.3	0.08	63.3	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.

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2025 PM R627 Opening Do Some.vpi" at 10:57:57 on Thursday, 28 September 2023

RUN TITLE
****
2025 Opening Year_PM_R627 Meadowlands Jutn_Do Some

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.20	3.30	2.20

I ARM B I	15.00	I	45.00	I	75.00	I 2.34 I	3.51 I 2.34 I
I ARM C I	15.00	I	45.00	I	75.00	I 3.10 I	4.65 I 3.10 I

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.477	0.523
		0.0	84.0	92.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.775	0.000	0.225
		145.0	0.0	42.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.641	0.359	0.000
		159.0	89.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	2.34	8.53	0.274		0.0	0.4	5.3	
C-AB	1.34	11.45	0.117		0.0	0.2	2.4	
C-A	1.76							
A-B	1.05							
A-C	1.15							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	2.79	8.33	0.335		0.4	0.5	7.2	
C-AB	1.67	11.62	0.144		0.2	0.2	3.1	
C-A	2.03							
A-B	1.25							
A-C	1.37							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	3.42	8.05	0.424		0.5	0.7	10.3	
C-AB	2.16	11.84	0.182		0.2	0.3	4.3	
C-A	2.38							
A-B	1.54							
A-C	1.68							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	3.42	8.05	0.425		0.7	0.7	10.9	
C-AB	2.16	11.84	0.182		0.3	0.3	4.3	
C-A	2.37							
A-B	1.54							
A-C	1.68							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	2.79	8.32	0.335		0.7	0.5	8.0	
C-AB	1.67	11.62	0.144		0.3	0.2	3.2	
C-A	2.03							
A-B	1.25							
A-C	1.37							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)

18.00-18.15							
B-AC	2.34	8.52	0.274	0.5	0.4	5.9	
C-AB	1.34	11.45	0.117	0.2	0.2	2.5	
C-A	1.76						
A-B	1.05						
A-C	1.15						

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.7	*
17.45	0.7	*
18.00	0.5	*
18.15	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	256.4	170.9	47.7	0.19	47.7	0.19
C-AB	155.1	103.4	19.7	0.13	19.7	0.13
C-A	185.0	123.3				
A-B	115.2	76.8				
A-C	126.2	84.1				
ALL	837.8	558.5	67.4	0.08	67.4	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.

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2030 AM R627 Opening Do Not.vpi" at 10:59:12 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_AM_R627 Meadowlands Jutn_Do Not

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	6.38	9.56	6.38

ARM B	15.00	45.00	75.00	3.39	5.08	3.39
ARM C	15.00	45.00	75.00	1.88	2.81	1.88

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.437	0.563
		0.0	223.0	287.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.476	0.000	0.524
		129.0	0.0	142.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.607	0.393	0.000
		91.0	59.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.39	8.72	0.388		0.0	0.6	8.8	
C-AB	0.83	9.92	0.084		0.0	0.1	1.6	
C-A	1.04							
A-B	2.79							
A-C	3.59							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-AC	4.05	8.43	0.480		0.6	0.9	12.8	
C-AB	1.02	9.78	0.104		0.1	0.1	2.1	
C-A	1.22							
A-B	3.33							
A-C	4.28							

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)
08.15-08.30								
B-AC	4.95	8.03	0.617		0.9	1.5	21.3	
C-AB	1.30	9.61	0.135		0.1	0.2	2.8	
C-A	1.44							
A-B	4.08							
A-C	5.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.95	8.03	0.617		1.5	1.6	23.3	
C-AB	1.30	9.61	0.136		0.2	0.2	2.9	
C-A	1.44							
A-B	4.08							
A-C	5.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.05	8.43	0.480		1.6	0.9	15.1	
C-AB	1.02	9.79	0.104		0.2	0.1	2.1	
C-A	1.22							
A-B	3.33							
A-C	4.28							

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)

09.00-09.15								
B-AC	3.39	8.72	0.389		0.9	0.6	10.2	
C-AB	0.83	9.92	0.084		0.1	0.1	1.6	
C-A	1.04							
A-B	2.79							
A-C	3.59							

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

.

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.9	*
08.30	1.5	**
08.45	1.6	**
09.00	0.9	*
09.15	0.6	*

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	371.6	247.7	91.5	0.25	91.5	0.25
C-AB	94.7	63.1	13.0	0.14	13.0	0.14
C-A	111.0	74.0				
A-B	305.8	203.9				
A-C	393.5	262.4				
ALL	1276.6	851.1	104.5	0.08	104.5	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.

END OF JOB

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2030 AM R627 Opening Do Some.vpi" at 11:00:06 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_AM_R627 Meadowlands Jutn_Do Some

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	6.46	9.69	6.46

ARM B	15.00	45.00	75.00	3.85	5.77	3.85
ARM C	15.00	45.00	75.00	1.90	2.85	1.90

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.445	0.555
		0.0	230.0	287.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.497	0.000	0.503
		153.0	0.0	155.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.599	0.401	0.000
		91.0	61.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	3.85	8.65	0.445		0.0	0.8	11.0	
C-AB	0.86	9.90	0.087		0.0	0.1	1.6	
C-A	1.04							
A-B	2.88							
A-C	3.59							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
B-AC	4.60	8.35	0.550		0.8	1.2	16.7	
C-AB	1.06	9.76	0.108		0.1	0.1	2.1	
C-A	1.21							
A-B	3.43							
A-C	4.28							

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)
08.15-08.30								
B-AC	5.63	7.94	0.709		1.2	2.2	30.1	
C-AB	1.35	9.58	0.141		0.1	0.2	3.0	
C-A	1.43							
A-B	4.20							
A-C	5.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	5.63	7.94	0.709		2.2	2.3	34.3	
C-AB	1.35	9.58	0.141		0.2	0.2	3.0	
C-A	1.43							
A-B	4.20							
A-C	5.25							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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-AC	4.60	8.35	0.550		2.3	1.3	20.5	
C-AB	1.06	9.76	0.108		0.2	0.1	2.2	
C-A	1.21							
A-B	3.43							
A-C	4.28							

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)

09.00-09.15								
B-AC	3.85	8.65	0.445		1.3	0.8	13.0	
C-AB	0.86	9.90	0.087		0.1	0.1	1.7	
C-A	1.04							
A-B	2.88							
A-C	3.59							

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.2	*
08.30	2.2	**
08.45	2.3	**
09.00	1.3	*
09.15	0.8	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	422.3	281.6	125.7	0.30	125.7	0.30
C-AB	97.9	65.3	13.5	0.14	13.5	0.14
C-A	110.5	73.7				
A-B	315.4	210.3				
A-C	393.5	262.4				
ALL	1339.7	893.1	139.2	0.10	139.2	0.10

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

END OF JOB

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

Visual PICADY 4 ANALYSIS PROGRAM
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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2030 PM R627 Opening Do Not.vpi" at 11:01:25 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_PM_R627 Meadowlands Jutn_Do Not

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.54	3.81	2.54

I ARM B I	15.00	I	45.00	I	75.00	I 2.72	I 4.09	I 2.72 I
I ARM C I	15.00	I	45.00	I	75.00	I 3.38	I 5.06	I 3.38 I

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.502	0.498
		0.0	102.0	101.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.761	0.000	0.239
		166.0	0.0	52.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.652	0.348	0.000
		176.0	94.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	2.72	8.46	0.322		0.0	0.5	6.6	
C-AB	1.44	11.51	0.125		0.0	0.2	2.6	
C-A	1.93							
A-B	1.27							
A-C	1.26							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	3.25	8.24	0.395		0.5	0.6	9.2	
C-AB	1.81	11.70	0.155		0.2	0.2	3.5	
C-A	2.22							
A-B	1.52							
A-C	1.51							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	3.99	7.94	0.502		0.6	1.0	13.9	
C-AB	2.35	11.94	0.197		0.2	0.3	4.8	
C-A	2.58							
A-B	1.86							
A-C	1.85							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	3.99	7.94	0.502		1.0	1.0	14.8	
C-AB	2.35	11.95	0.197		0.3	0.3	4.8	
C-A	2.58							
A-B	1.86							
A-C	1.85							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	3.25	8.24	0.395		1.0	0.7	10.5	
C-AB	1.81	11.70	0.155		0.3	0.2	3.5	
C-A	2.22							
A-B	1.52							
A-C	1.51							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	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 18.00-18.15                                                                                    I
I   B-AC      2.72      8.46    0.322                0.7    0.5        7.5                     I
I   C-AB      1.45     11.52    0.126                0.2    0.2        2.7                     I
I   C-A       1.93                                                                            I
I   A-B       1.27                                                                            I
I   A-C       1.26                                                                            I
I                                                                                             I
-------------------------------------------------------------------------------------------------

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

QUEUE FOR STREAM   B-AC
------------------------
TIME SEGMENT    NO. OF
  ENDING      VEHICLES
              IN QUEUE
  17.00           0.5
  17.15           0.6    *
  17.30           1.0    *
  17.45           1.0    *
  18.00           0.7    *
  18.15           0.5

QUEUE FOR STREAM   C-AB
------------------------
TIME SEGMENT    NO. OF
  ENDING      VEHICLES
              IN QUEUE
  17.00           0.2
  17.15           0.2
  17.30           0.3
  17.45           0.3
  18.00           0.2
  18.15           0.2

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

-------------------------------------------------------------------------------
I STREAM I   TOTAL DEMAND  I   * QUEUEING *      I * INCLUSIVE QUEUEING * I
I        I                I    * DELAY *        I       * DELAY *        I
I        I----------------------------------------------------------------I
I        I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)     (MIN/VEH) I
-------------------------------------------------------------------------------
I  B-AC  I  298.9 I  199.3 I    62.5 I    0.21   I      62.5  I    0.21   I
I  C-AB  I  168.3 I  112.2 I    22.0 I    0.13   I      22.0  I    0.13   I
I  C-A   I  201.9 I  134.6 I         I           I            I           I
I  A-B   I  139.9 I   93.2 I         I           I            I           I
I  A-C   I  138.5 I   92.3 I         I           I            I           I
-------------------------------------------------------------------------------
I  ALL   I  947.5 I  631.7 I    84.4 I    0.09   I      84.5  I    0.09   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
```

TRANSPORT RESEARCH LABORATORY

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

Visual PICADY 4 ANALYSIS PROGRAM
RELEASE 2.1 (DEC 1998)

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Run with file:- "C:\Users\kenhe\Desktop\Midleton\4. R627 Junction\2030 PM R627 Opening Do Some.vpi" at 11:02:23 on Thursday, 28 September 2023

RUN TITLE
****
2030 Opening Year_PM_R627 Meadowlands Jutn_Do Some

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

INPUT DATA

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

ARM A IS R627 West
ARM B IS Meadowlands Lane North
ARM C IS R627 East

STREAM LABELLING CONVENTION

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

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

ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.50 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 2.50 M.
- VISIBILITY	(VC-B) 80.0 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 50.0 M.
- VISIBILITY TO RIGHT	(VB-A) 50.0 M.
- LANE 1 WIDTH	(WB-C) 3.50 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.
- LENGTH OF FLARED SECTION	1 VEHS

.

.TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.66	3.99	2.66

I ARM B I	15.00	I	45.00	I	75.00	I 2.88	I 4.31	I 2.88 I
I ARM C I	15.00	I	45.00	I	75.00	I 3.59	I 5.38	I 3.59 I

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.526	0.474
		0.0	112.0	101.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.752	0.000	0.248
		173.0	0.0	57.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.613	0.387	0.000
		176.0	111.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
16.45-17.00								
B-AC	2.88	8.41	0.342		0.0	0.5	7.2	
C-AB	1.72	11.49	0.149		0.0	0.2	3.2	
C-A	1.87							
A-B	1.40							
A-C	1.26							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
B-AC	3.43	8.18	0.420		0.5	0.7	10.2	
C-AB	2.14	11.66	0.183		0.2	0.3	4.2	
C-A	2.14							
A-B	1.67							
A-C	1.51							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
B-AC	4.20	7.85	0.535		0.7	1.1	15.7	
C-AB	2.78	11.90	0.234		0.3	0.4	5.9	
C-A	2.46							
A-B	2.05							
A-C	1.85							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
B-AC	4.20	7.85	0.535		1.1	1.1	16.8	
C-AB	2.78	11.91	0.234		0.4	0.4	5.9	
C-A	2.46							
A-B	2.05							
A-C	1.85							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
B-AC	3.43	8.17	0.420		1.1	0.7	11.7	
C-AB	2.14	11.67	0.184		0.4	0.3	4.3	
C-A	2.14							
A-B	1.67							
A-C	1.51							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)

18.00-18.15							
B-AC	2.88	8.40	0.342	0.7	0.5	8.3	
C-AB	1.72	11.50	0.150	0.3	0.2	3.3	
C-A	1.87						
A-B	1.40						
A-C	1.26						

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

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QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.1	*
17.45	1.1	*
18.00	0.7	*
18.15	0.5	*

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QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	315.4	210.3	69.9	0.22	69.9	0.22
C-AB	199.2	132.8	26.7	0.13	26.7	0.13
C-A	194.3	129.5				
A-B	153.6	102.4				
A-C	138.5	92.3				
ALL	1001.0	667.3	96.6	0.10	96.6	0.10

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

END OF JOB

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