

PICADY 5

Prediction of capacities, queues and accidents at isolated non-signalised priority junctions



PICADY

is a computer program for predicting capacities, queue lengths and delays (both queueing and geometric) at non-signalised major/minor priority junctions. It is an aid to designing new junctions as well as assessing the effects of modifying existing designs.

PICADY

can be used to model any of the following situations:

- any three or four arm priority junction.
- major roads with either single or dual carriageway, including single carriageway with ghost islands or bollards.
- minor approaches with single, flared or two lane approaches.
- one-way roads.
- signalled and unsignalled pedestrian crossings can be included.
- accident prediction is available for both rural and urban junction layouts.
- peak or off-peak, using derived or user-defined demand profiles.
- queue lengths can be viewed, animated and printed.
- both drive-on-the-left and drive-on-the-right situations can be catered for.



PICADY

includes the following new features:

- (Average) arriving vehicle delay
- Partial blocking effect by main carriageway turning traffic
- Auto-updating Quick Report
- Report Designer
- Graph Designer
- Multiple demand sets and dual time periods
- Pelican crossing model
- Point-to-point journey times





How PICADY works

PICADY reads the geometric parameters of the junction and the traffic flows – the minimum data required for the program to run. Depending on the user’s specified requirements, additional data such as geometric delays and accident prediction data is also required in order to carry out extra calculations.

The geometric parameters and the controlling flows, split into small contiguous time periods, are used to calculate the capacity of each non-priority traffic stream. The queues and delays are then calculated for each time period, i.e. PICADY uses what is known as ‘time dependent queueing theory’.

PICADY is an empirically derived model, i.e. the principal models it uses are derived from extensive data collection exercises of many existing junctions.

A comprehensive context-sensitive help system and online user guide is provided to ensure users get the most out of the functionality that PICADY provides.

Report Designer

The report designer allows clear, concise professional reports to be created. The customisable reports can include embedded graphs, junction diagrams, queue snapshots and additional annotation. Standard tables from the PICADY output can be selected individually to be included in the report in any order. The report is produced as an HTML formatted file.

Quick Report

An on-screen summary of the most pertinent output results is updated automatically as the input data is changed. The results for the time period with the highest total delay is always shown.

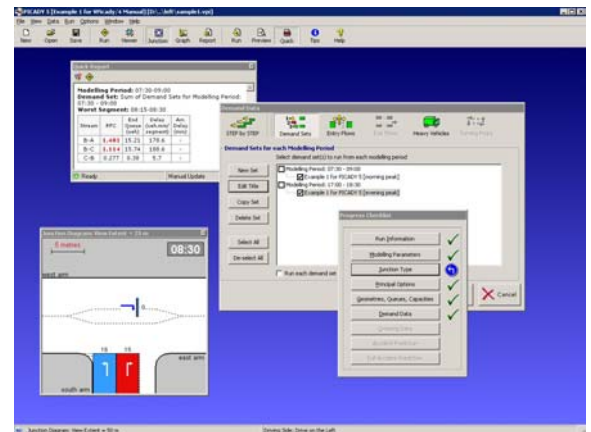
Graph Designer

PICADY’s enhanced analytical capability includes a

graphical reporting system. The Graph Designer allows user-defined graphs to be generated by plotting one parameter against another over a defined range of values, e.g. capacity against visibility to the right. The graphs can also be incorporated into the graphical reports produced by the Report Designer.

(Average) arriving vehicle delay

The output results are enhanced by the addition of the prediction of delay experienced by an average vehicle arriving during a particular time period.



Multiple demand sets

Multiple demand sets can be stored, selected and summed. Additionally, data for two time periods, typically morning peak and evening peak, can be specified.

Minimum system requirements:

- Windows XP/Vista
- 500MHz processor or better
- Colour monitor (256 colours in 800x600 video mode)
- 50MB available hard disk space

Further Information

TRL Software

Telephone 01344 770758

Email software@trl.co.uk

Website www.trlsoftware.co.uk