APPENDIX TO CHAPTER 3

A3.1 THE LONDON CONGESTION CHARGING SCHEME DATA

This research uses the speed survey data from Trafficlink Company Limited (now called INRIX) and traffic flow survey data from Transport for London (TFL). The data were collected in variety of streets on the edge of the London Congestion Charging Scheme, during seven working days in the period of Monday 22nd to Friday 26th and again from Monday 29th to Tuesday 30th September 2008, starting at 0.00 a.m. and carrying on until 23.59 p.m. on the same day.

Traffic flows used for this study were counted by TFL's automatic counters for every hour. These automatic counters were located at the entry points to the LCCS charging zone on each of eight streets, i.e. Blackfrairs Bridge North, Blackfrairs Bridge South, Albert Embankment North, Park Lane North, Embankment East, Embankment West, London Bridge North and London Bridge South. The illustrations of these streets are given in Figure A3.1.1- A3.1.5 respectively. The vehicle flows were counted in both inbound and outbound directions. The investigated hourly flows were 1,344 observations (24 hours x 7 days x 8 streets).
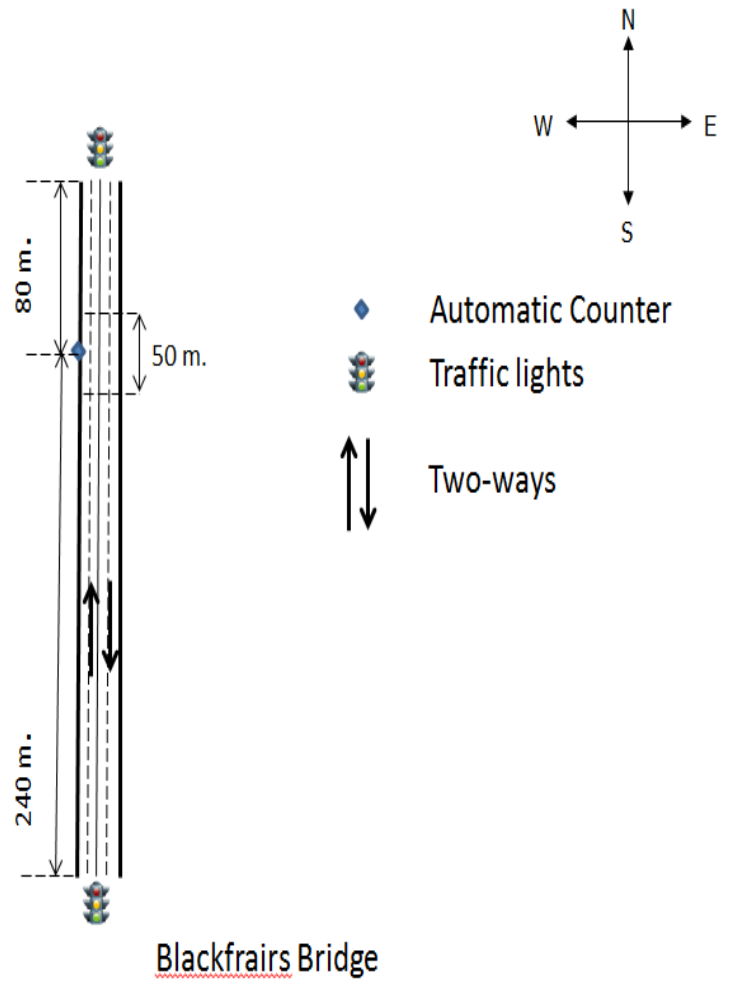
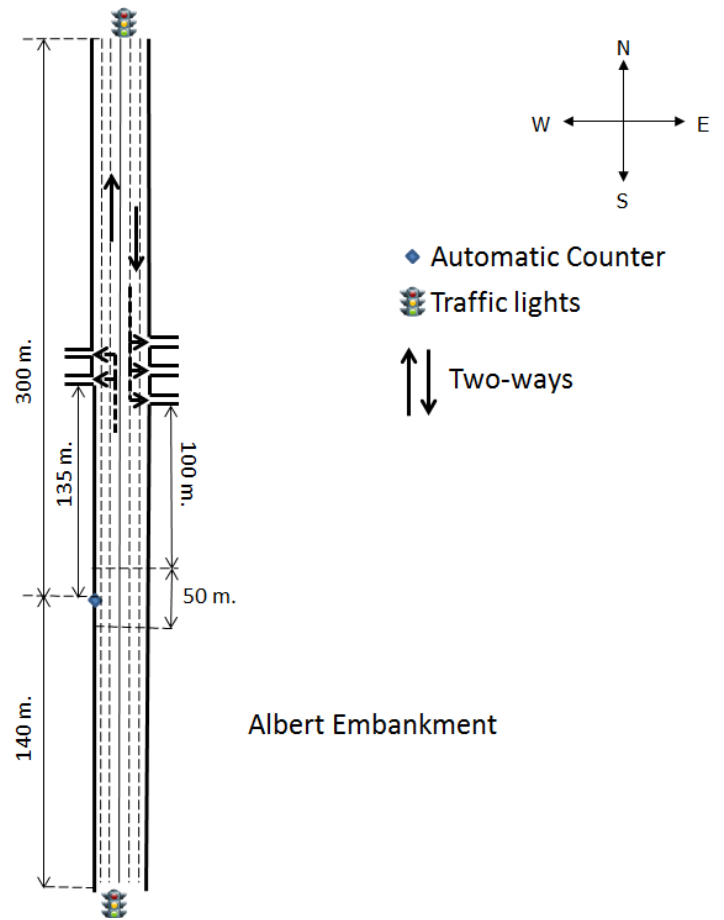Figure A3.1.1 Blackfrairs Bridge (North-South)

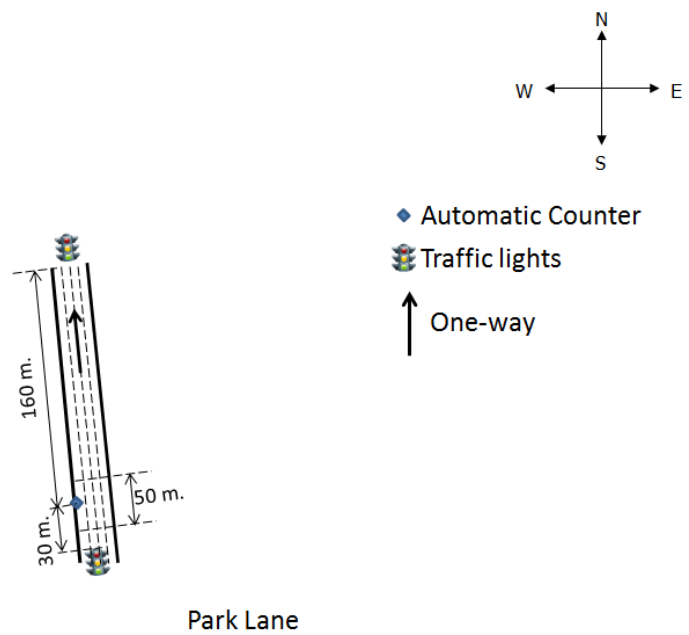Figure A3.1.2 Albert Embankment (North)
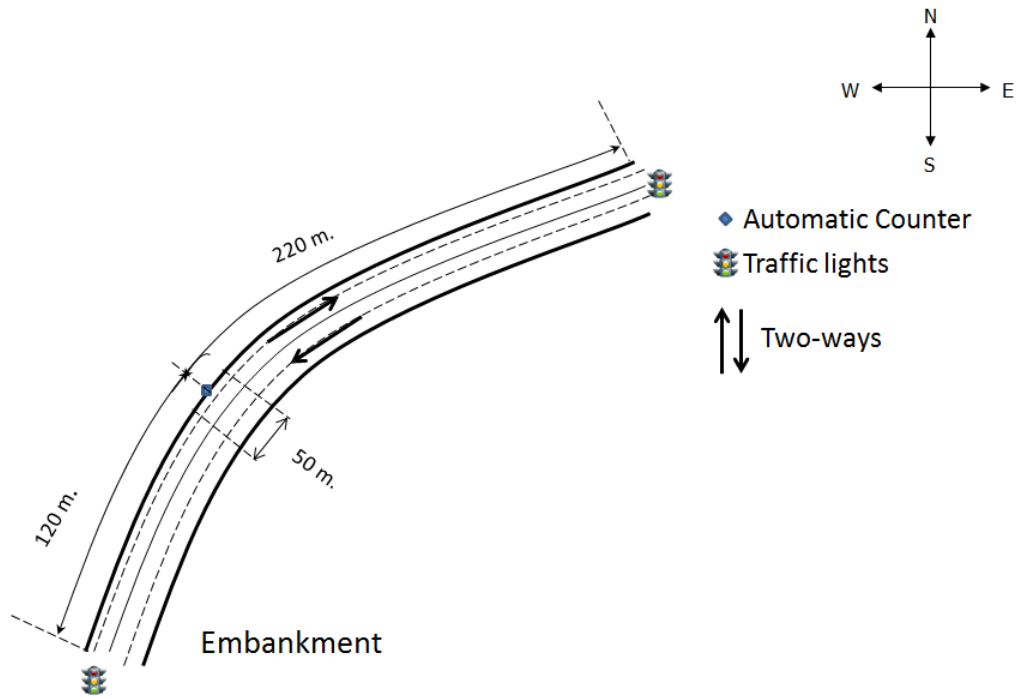

Figure A3.1.3 Park Lane (North)
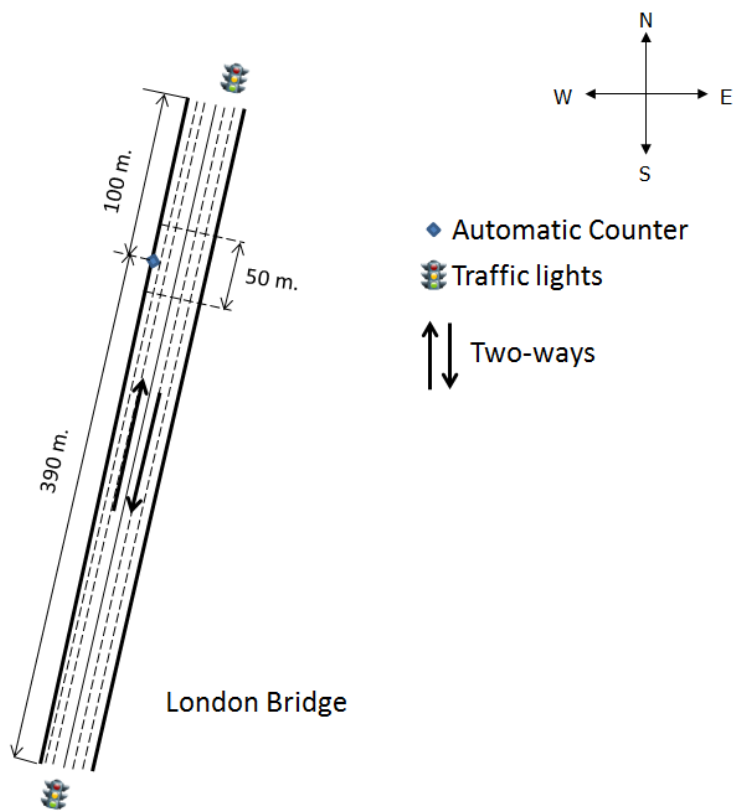
Figure A3.1.4 Embankment (East-West)

Figure A3.1.5 London Bridge (North-South)

Speed observations used in this research were reported by an approximate 1,700 cars with GPRS monitoring (speed data provided by TrafficLink, now called INRIX). Each car with GPRS reported approximately 1.5 speed observations per minute or 85 observations per hour, across Greater London. However, our study investigates only speeds where cars were driving on two 25 metres-length of straight road segments without impediment from each automatic counter.

As discussed earlier, flows were observed at every hour at each automatic counter, whereas speeds were observed at one moment a time. Therefore, we developed a simple method to interpolate flows. Firstly, we estimated the length of time cars took to travel to the automatic counters or had taken by calculating the distance from the counter and dividing by the speed of each car. Secondly, flows were interpolated estimated time for the tracked cars to arrive at the counters.