Overview

Nottingham was the first ever Safety Camera Partnership to install a SPECS average speed enforcement system in 2000. Following the success of the initial trial, eleven roads in the city and county now benefit from SPECS control. This promotes speed compliance within 30 mph, 40 mph and 50 mph speed limits on both single and dual carriageway, covering urban and rural routes.

Customer

Nottinghamshire Safety Camera Partnership.
The partnership consists of Nottinghamshire Police, City of Nottingham Council, Nottinghamshire County Council, the Highways Agency and Nottingham Magistrates Court.

http://www.nottspeed.com/

Problem

Nuthall Road and Western Boulevard had the worst Killed or Seriously Injured (KSI) figures in the county. Nottingham wanted to create ‘speed control zones’ rather than target individual accident black spots, so spot speed cameras were not considered appropriate for these key routes into the city centre.

SCS Solution

In July 2000, the very first SPECS systems were installed at Nuthall Road (A610) and Western Boulevard (A6514). Nottinghamshire was a DfT Safety Camera Partnership pilot partner and gained considerable experience in the operation of the UK’s first average speed enforcement system.

Each SPECS system consists of digital video cameras linked to a remote enforcement cabinet. The video cameras continuously capture images of vehicles as they pass through the cameras’ views. The number plates are read (ANPR) and the average speed of the vehicle is calculated between the two cameras. If this exceeds the Police threshold a violation file is created.

Results

Across all Nottinghamshire SPECS installations, KSI figures have fallen by an average of 65%.
Technology Overview

There are now eleven roads controlled by SPECS digital cameras in Nottingham and the surrounding area. The cameras are mounted on prominent single arm and double arm columns. These camera columns create highly visible gateways to the ‘speed control zone’, with repeat columns acting as a powerful reminder to drivers that they are inside a speed monitored area.

Driver behaviour is noticeably better with average speed cameras as compliance is maintained throughout the whole speed restriction zone. Spot speed cameras often cause ‘surfing’ or sudden braking at the camera, followed by an increase in speed directly after the camera; this creates a wide distribution of speeds promoting flow breakdown and congestion. In contrast to this, average speed enforcement leads to a low standard deviation in speeds, creating a smooth, uniform flow.

Award-Winning Solution

The Nottinghamshire Safety Camera Partnership with SCS were awarded a Prince Michael International Road Safety Award. The Technology Award was presented to the Partnership and SCS in 2002, in recognition of the improvement to road safety offered by the SPECS solution.

Speaking about the award, Alick Whitfield, BSI said “SCS has been honoured for its outstanding innovation which has improved compliance with speed limits and reduced casualties in the areas where SPECS has been installed”.

Solution Benefits

All SPECS sites in Nottinghamshire have delivered significant KSI reductions, with an average reduction of 65%. During the first three years following the SPECS installation on the A610, an average speed reduction of 9 mph was recorded (baseline average 33 mph, 2003 average 24 mph). In addition, there were 9 fatalities on the A610 and the A6514 in the three years prior to installation. Since then, there has only been a single, non-speed-related fatality.

<table>
<thead>
<tr>
<th>Site</th>
<th>KSI (Killed or Seriously Injured)</th>
<th>Before*</th>
<th>After</th>
<th>3 Year**</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A6514 (7y 9m)</td>
<td>36</td>
<td>44</td>
<td>17</td>
<td>-53%</td>
<td></td>
</tr>
<tr>
<td>A610 (7y 8m)</td>
<td>15</td>
<td>21</td>
<td>8.2</td>
<td>-45%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site</th>
<th>PIC (Personal Injury Collisions)</th>
<th>Before*</th>
<th>After</th>
<th>3 Year**</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A6514 (7y 9m)</td>
<td>277</td>
<td>385</td>
<td>149</td>
<td>-46%</td>
<td></td>
</tr>
<tr>
<td>A610 (7y 8m)</td>
<td>82</td>
<td>83</td>
<td>32.5</td>
<td>-60%</td>
<td></td>
</tr>
</tbody>
</table>

* Baseline data for 3 years prior to installation
** Post-installation data adjusted to 3 year equivalent

“Driving habits have been affected within the SPECS zones with a far greater level of compliance than expected. There is a more even traffic flow within SPECS Speed Controlled Zones, and it has almost removed the dash between major junctions”

Nottinghamshire Safety Camera Partnership

SCS Overview

SCS was created in 1999 to bring the SPECS safety camera system to the road safety market. Today, SCS is the global leader in average speed enforcement solutions and one of the UK’s foremost providers of intelligent transport solutions for the road traffic market sector.

Working in partnership with clients from a range of disciplines, we deliver turnkey projects and provide ongoing support and maintenance throughout the life of a contract.

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