

## M1 J6A to J10 widening temporary CCTV solution



### Project Overview

The M1 is the UK's oldest motorway and is the backbone of the UK's national motorway network. Built in 1959, it served 13,000 cars a day compared to 88,000 cars per day now. The southern section of the M1 between junction 6A (M1/M25) and junction 10 is being widened over a thirty month period to accommodate the increasing traffic volumes. The motorway widening program encompasses 10 miles of the M1 on both carriageways running north from the M25/M1 interchange. As part of the program of works a comprehensive CCTV system was required as part of the safety requirements for site personnel and motorists.

Specific requirements included the use of fibre optic transmission for all video and data signals and a flexible control system to accommodate the changing operational needs of the project through a competitive cost-effective design.

COE Limited worked closely with DW Projects to ensure that the site coverage and operational requirements were met within budget.



**M1 motorway**

### Technical solution provided by COE

The project utilises 126 cameras along the 10 mile section and includes fixed and PTZ cameras. Video and data transmission is achieved on single-mode fibre via COE Series 300 single channel and COE Series 4 multi-channel video/data transmission interfaces. COE Series 4 reduces the number of fibres required for multiple video signals by digitally multiplexing up to four signals onto one single-mode fibre. All video and data signals are transmitted back to a central control room at the works site close to junction 8 on the M1 where the signals are

monitored and recorded. COE Telecommand provides the video switching management and control system and provides sequences, tours, salvos and macro functionality for each operator.

### **Key project application needs met by COE fibre transmission and control solution**

- The combination of digital technology and software providing a complex CCTV system with advanced functionality
- Integration between the transmission and control system reduced installation time and potential technical issues
- Provided the highest level of reliability for a motorway deployed CCTV system operating 24/7
- Provided a rugged, flexible and scaleable solution
- Highest quality real-time images for all operators
- Target budgetary constraints met

### **Other COE Ltd road reference sites include:**

Highways Agency NTCC, Birmingham (UK), Singapore MTRC, French motorway - A6, Singapore EMAS toll, Queen Elizabeth Bridge – M25 (UK), Forth road bridge – Edinburgh (UK)

**Series 300 system**



**Series 4 system**



**Telecommand system**



**COE Limited – Photon House – Percy Street – Leeds – LS12 1EG  
www.coe.co.uk**

**United Kingdom: + 44 (0) 113 230 8800  
France (Europe):+ 33 (0) 6 12 698604  
Singapore (Far East): +65 (0) 6 3256018**