DISTRICT 4

EMPOWER | INNOVATION | CHAMPIONS

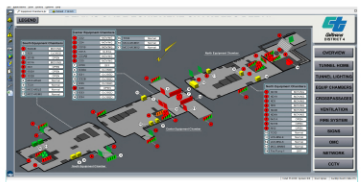
2014 INNOVATION FAIR

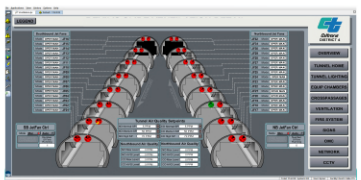
DIVISION OF TRAFFIC OPERATIONS

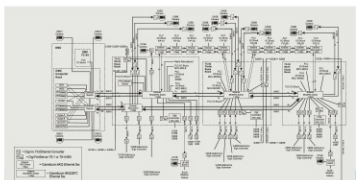
DEVIL'S SLIDE TUNNELS

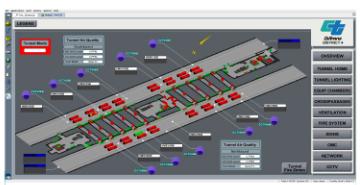
South Portal

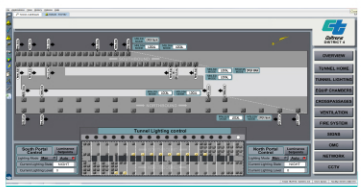
Crosspassage Detail

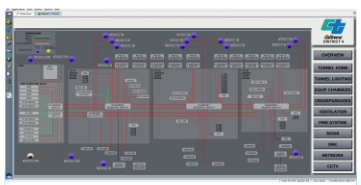

Equipment Chambers Detail

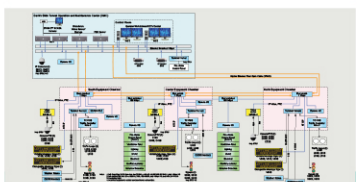

Ventilation Detail


Data Communications Network


Fire System Detail


Lighting Control

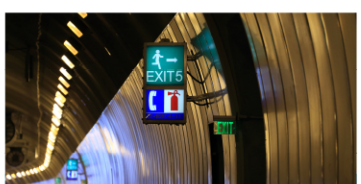

Network


Control System Configuration

CALDECOTT TUNNELS

West Portal

VMS & Jet Fan Detail



Cross Passage Entrance

Jet Fan Installation Detail

SCADA Control Room

Call Box & Fire Equipment Niche

Substation Room

A/V GRAPHICS | CT2624 | IFAIR2014 | 072114

EMPOWER | INNOVATION | CHAMPIONS

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DIVISION OF TRAFFIC OPERATIONS

DISTRICT 4

Deputy District Director: Sean Nozzari
Number of Division Employees: 279
Contact Person: Cheema Gursharnjeet

TUNNELS CONTROL SYSTEMS

OVERVIEW

Tunnel Lighting Control: Photoelectric sensor provides outside ambient light data to SCADA for analysis and control of lighting circuits for optimal lighting in the tunnel.

Carbon Mono Oxide (CO) and Nitro Oxide (NO) Control: If CO or NO exceeds the pre-set limits, SCADA will activate jet fans closest to the sensors with alarming information. If sensors continue to report above the pre-set limit, all other jet fans will be activated in sequence and alarm will notify operator for further actions.

Linear Heat Detector Control: Sensors at various zones in the tunnel constantly provide status information, when pre-set limits exceeds, SCADA will activate the jet fans and alarms the operator for further actions.

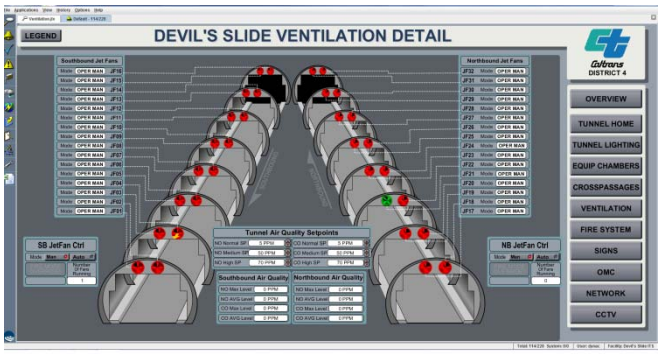
Changeable Message Sign (CMS) and Variable Message Sign (VMS) Control: CMS and VMS display pre-set or free form messages to motorists during emergencies and non emergencies situations.

Call Boxes: Call boxes in the tunnel provide status report to SCADA system, which activates alarm and inform the operator the activated call box location.

Radio- Rebroadcast (AM & FM) Systems: AM and FM systems broadcast pre-set or live messages via operator during emergencies.

Closed Circuit TV Cameras: Allows operator to verify incidents and facilitates timely dispatch of appropriate response to the scene.

Caldecott Control System



Devil's Slide Ventilation System