STATEMENT OF TECHNOLOGY: SMARTCAMred with Video

REDFLEX TRAFFIC SYSTEMS

Operation

Digital SMARTCAMred Camera Systems only trigger during the red light signal phase. All system thresholds are set based on contractual requirements of the city.

The Camera System records still images, video and data for each suspected violation.

- Four separate still images for each red light violation are recorded.
- The date, time, time into the red cycle, location, detected vehicle speed and posted speed limit for each violation are recorded on the data bar, which is displayed at the top of all four still images.

The Camera System

Each Camera System consists of two main components, the Main Camera and the Face Camera.

The Main Camera is comprised of three elements:

- The main camera that captures Scene A and Scene B images of the vehicle.
- The Plate Camera that provides a zoomed image of the vehicle's rear license plate
- A video camera the provides video images of the scene.

The Face Camera captures the image of the driver's face.

The Camera System is connected to the traffic signal controller and detector sensors. During the green and amber phases, the camera is NOT active. It only becomes active after a delay period from the start of the red phase.

When the sensors detect a vehicle's speed above a pre-determined threshold, the Main Camera triggers. The Scene A Image shows the vehicle behind the stop bar with the traffic signal red phase visible. The Plate and Scene B Image are activated when the vehicle has proceeded through the detection zone. The Face Camera, placed across the intersection, is triggered by the Main Camera based on the vehicle's detected speed.

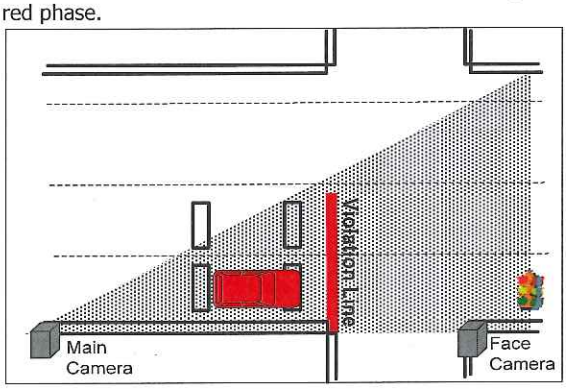
Continuous live video, not recorded, is captured by the Main Camera, and fed through a memory buffer. At completion of the still image capture sequence described above, the Main Camera records the information in the memory buffer, plus an additional period. This results in a 12 second recording.

Security

The Camera System has safeguards to protect the image evidence from alteration. At the scene, the Camera System gives each image and its data a unique signature to confirm its authentic status. Public key cryptography and additional encryption processes secure the transmission process.

Scene A

Shows the vehicle as it crosses the road sensors during the red phase.



Face Camera Image

Records the driver's image from the front of the vehicle.

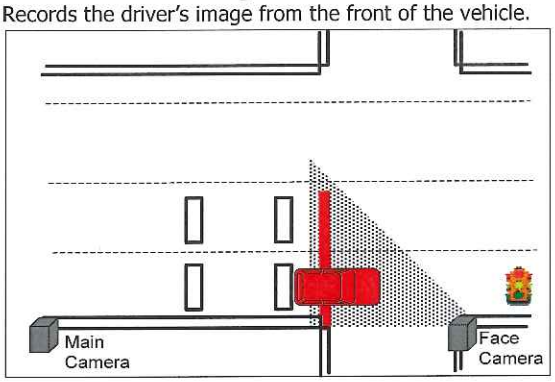
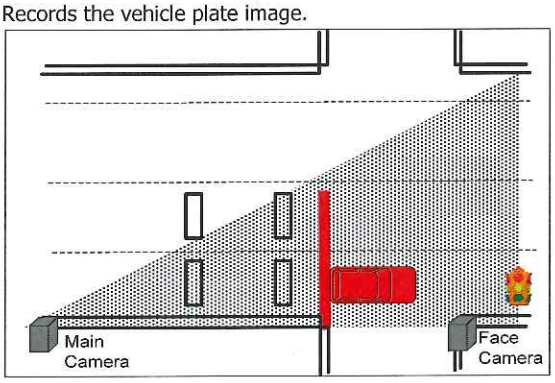


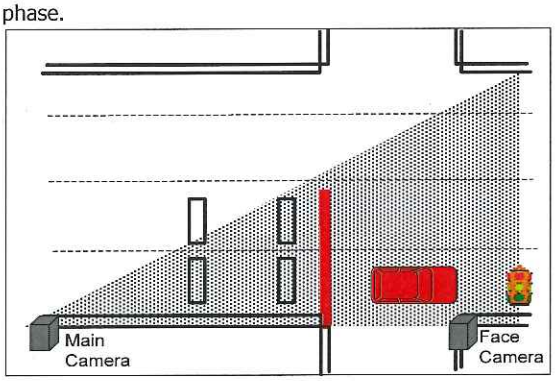
Plate Camera Image

Records the vehicle plate image.



Scene B

Shows the vehicle beyond the stop-bar during the red phase.



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