



TOWN OF
QUEEN CREEK
ARIZONA

Intelligent Transportation Systems (ITS)

Wednesday, Dec. 1, 2010

Bill Birdwell

Traffic Engineering Supervisor – Public Works Dept





Intelligent Transportation Systems (ITS)

- Use of wired or wireless communications-based information and electronic technologies to relieve congestion, improve safety, and assist in incident management and emergency response.
- Devices are integrated into monitoring software in a Traffic Management Center (TMC).



Background – Phase I

- Late 2006 staff applied and received \$550,221.00 to connect 11 traffic signals and 6 Closed Circuit Television (CCTV) cameras, and
- Establish a TMC
 - Operational May, 2010 (*2nd floor of DSB*)



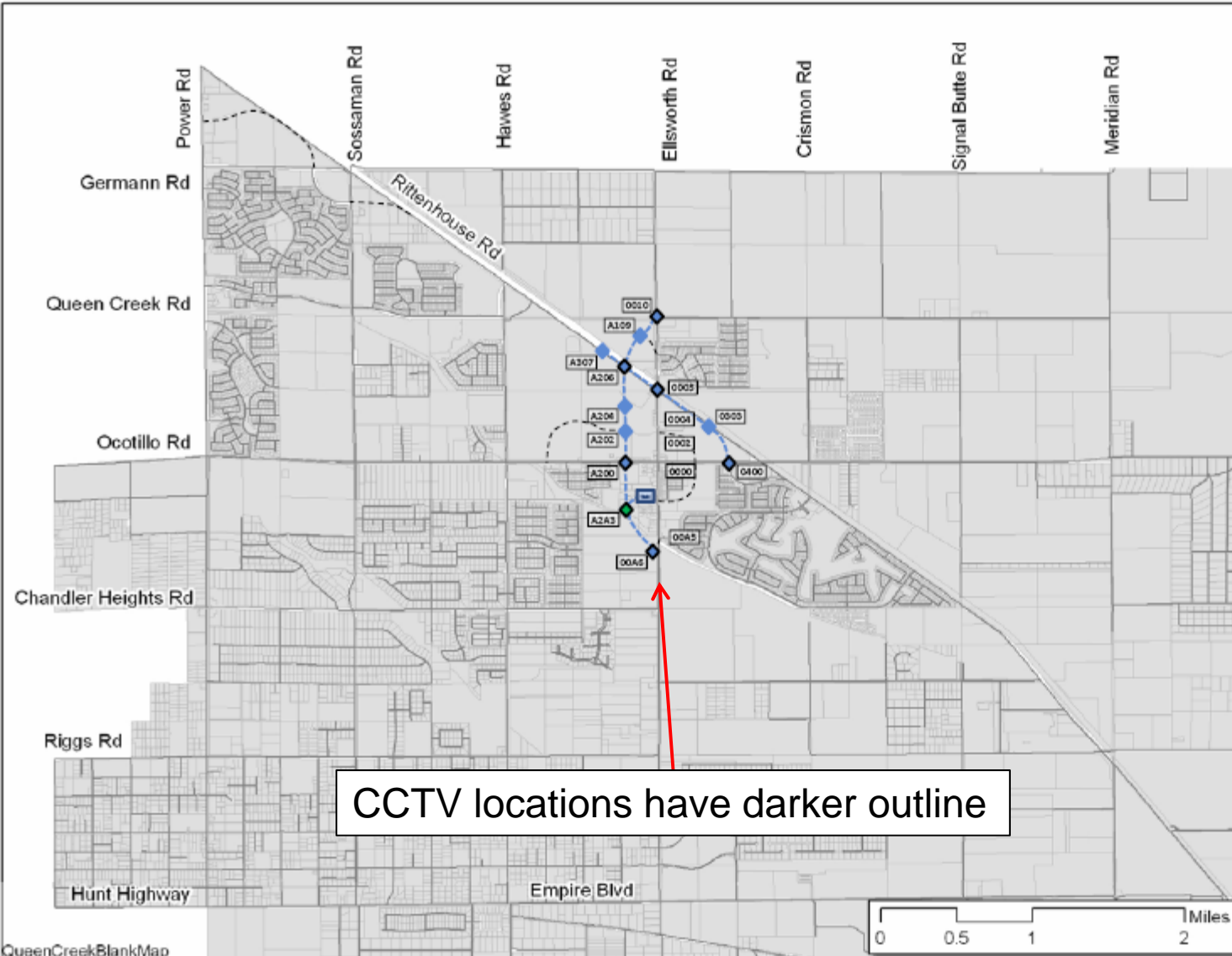
Phase I Intersections

Town of Queen Creek

FIGURE 1

Intelligent Transportation System
Phase 1 (Implemented Spring 2010)

Revised November, 2010



CCTV locations have darker outline

Traffic Signals on ITS System

- Phase I (QNC08-809) Existing
- Signal Location Number

CCTV Camera Locations

- Black outline indicates CCTV locations

Fiber Optic Communication Links

- Phase I

Planned Traffic Signal Locations Subject to Change

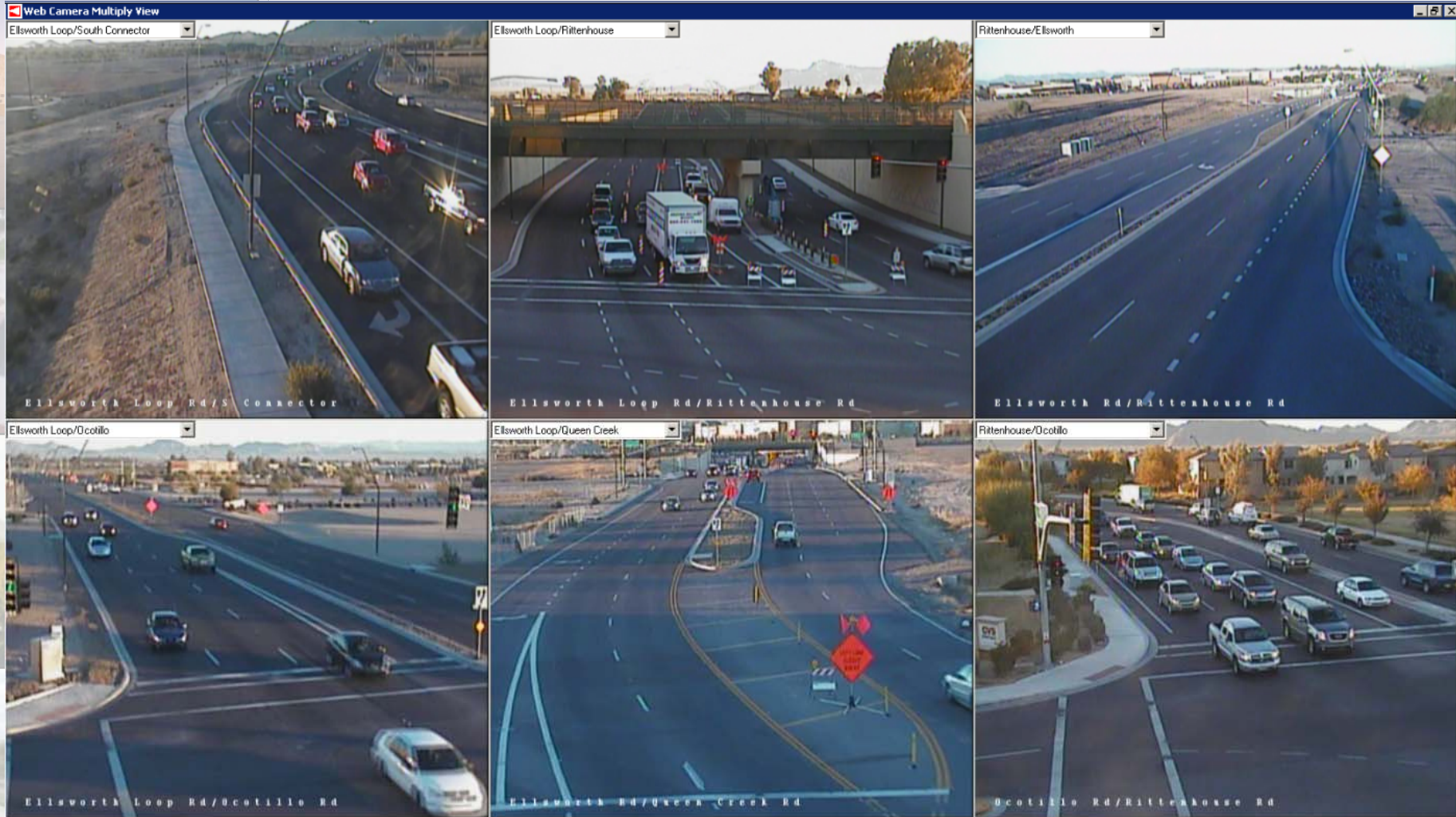


Phase I – System Software

- Kimley-Horn Integrated Transportation System (**KITS**) system monitoring software was purchased using State contracts from Kimley-Horn and Associates
- **Traffic Management Center** established to monitor the system



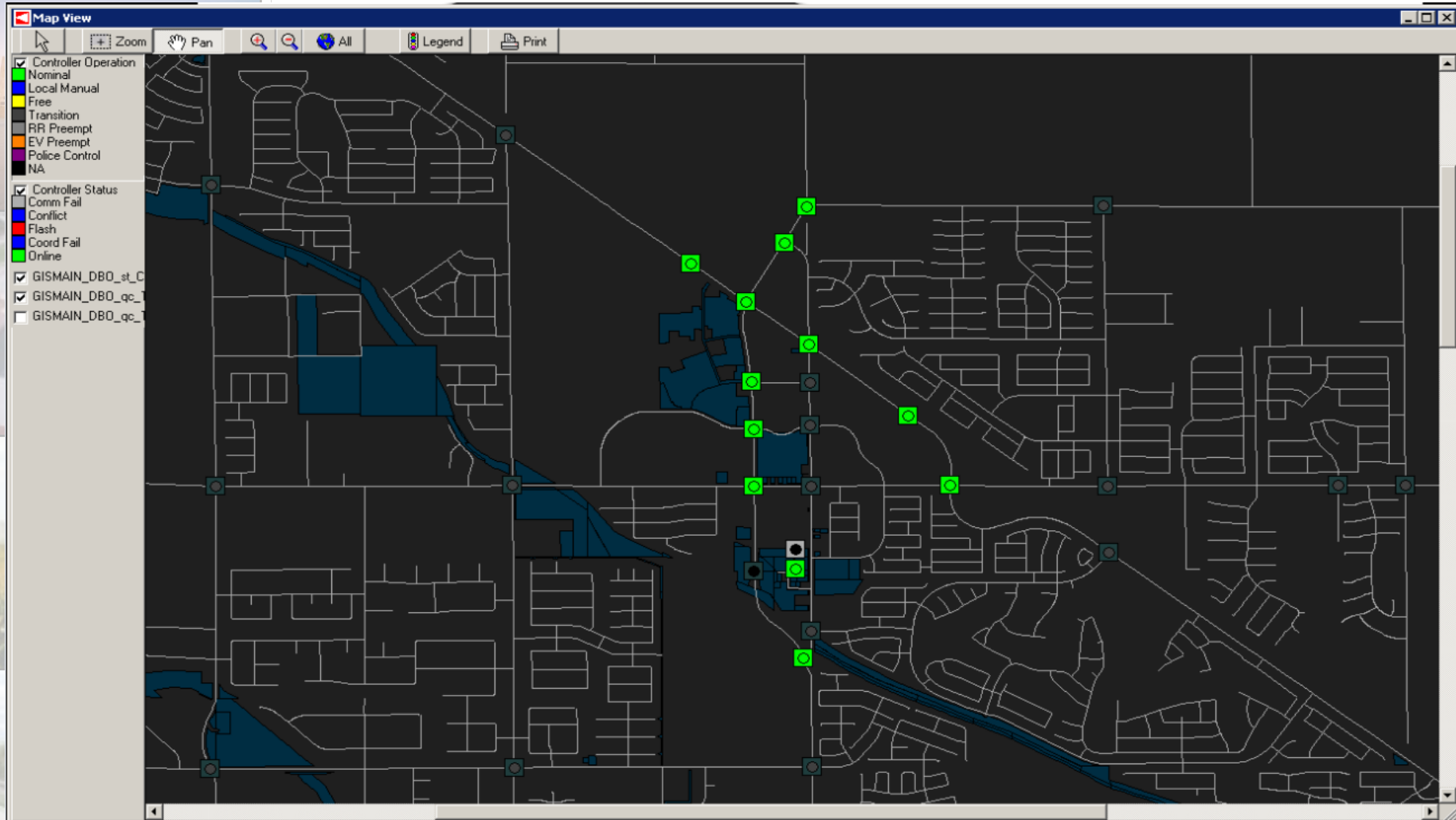
Monitoring Flexibility



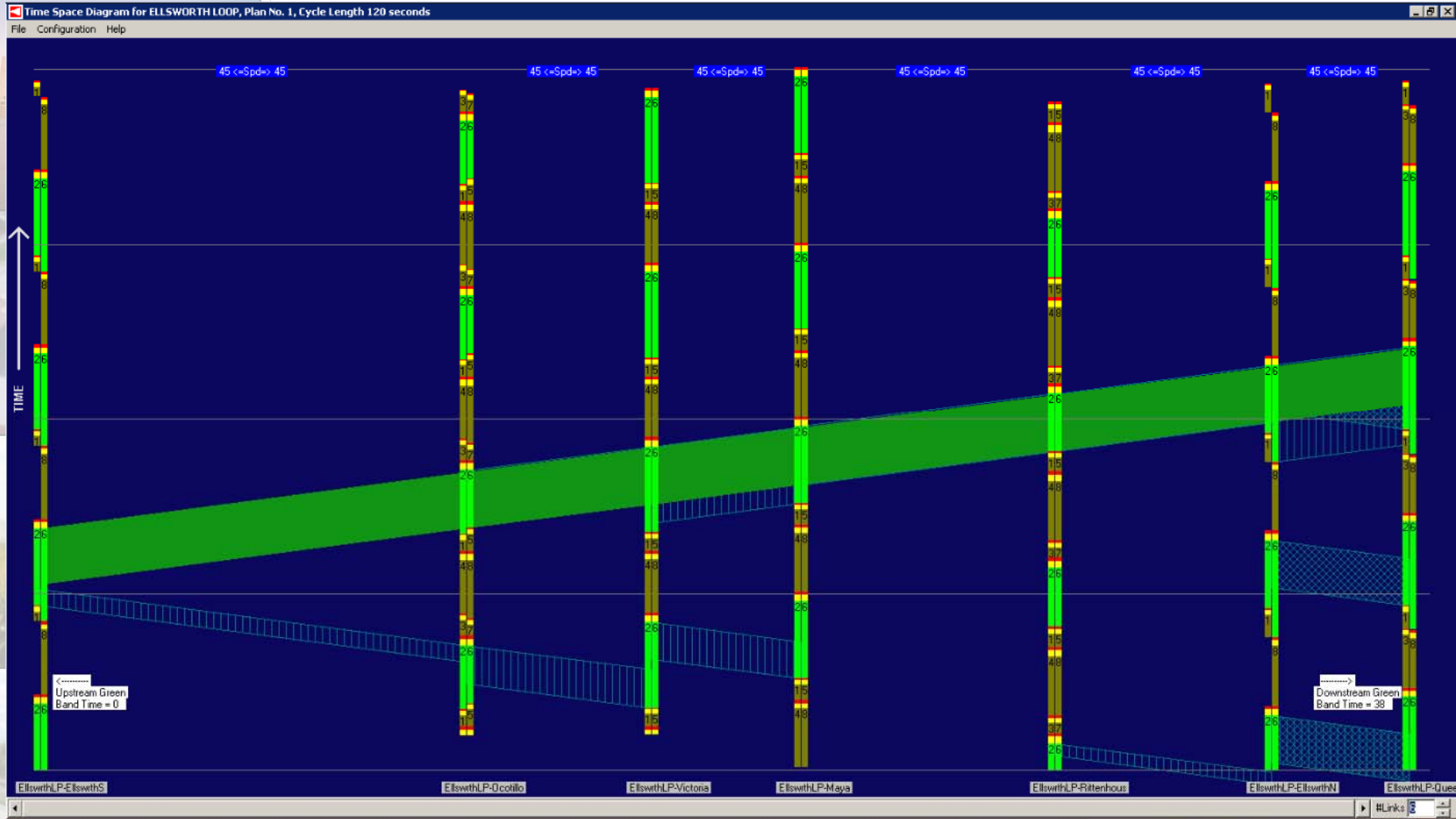
CCTV Monitoring and Incident Management



Monitoring Flexibility

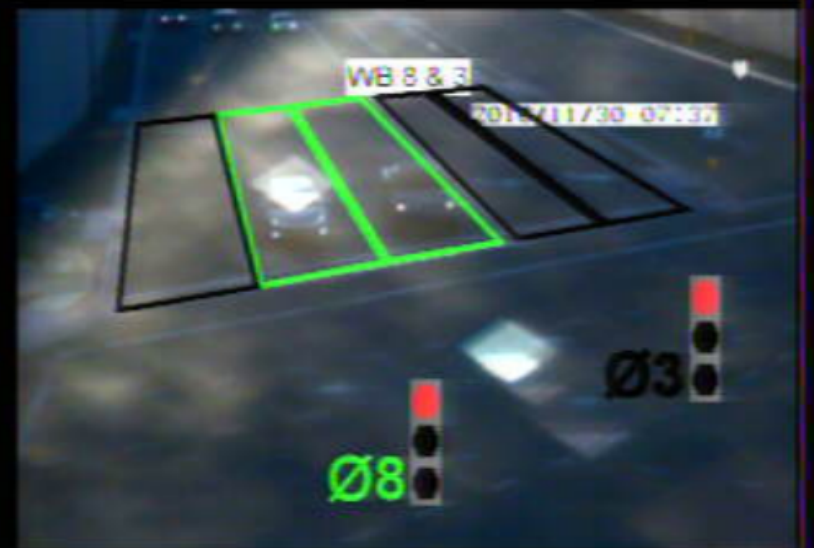
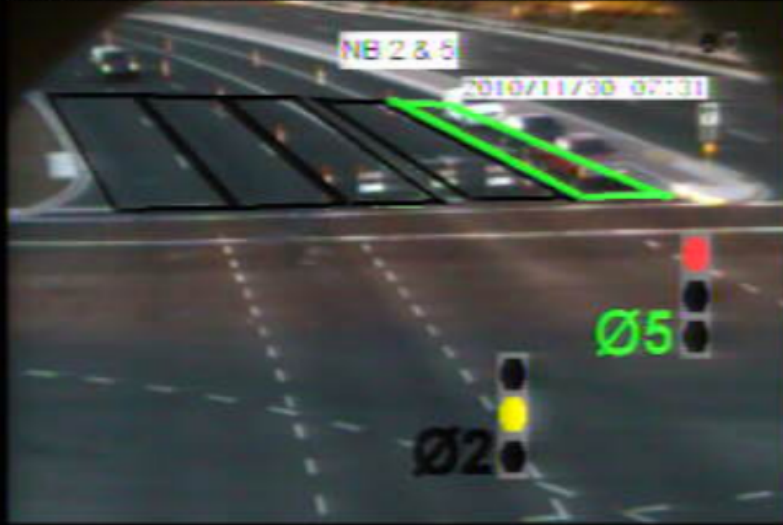


Monitoring Flexibility



Monitoring Flexibility

Ellsworth Loop Rd/Rittenhouse Rd 11/30/2010 07:26:49



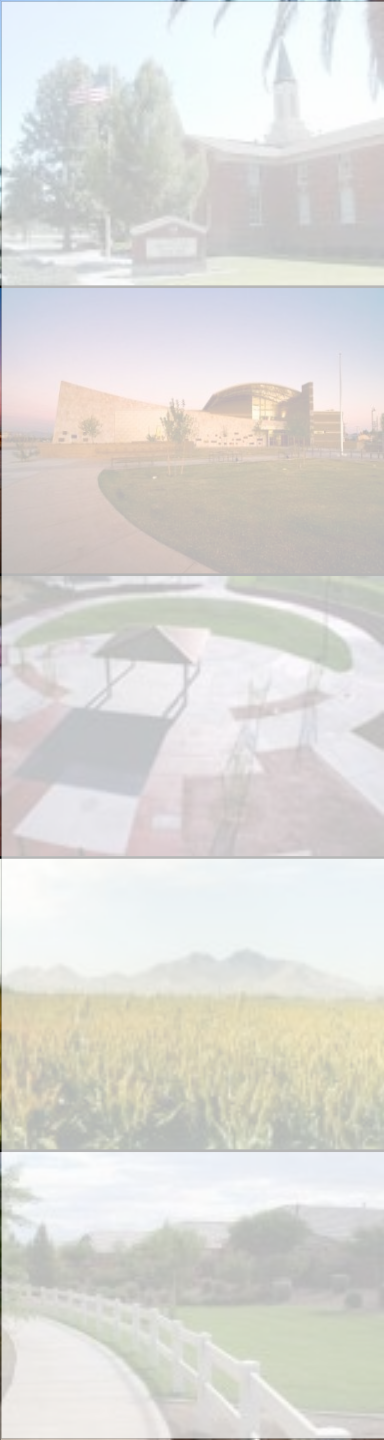
Phase II

Cost:

- \$519,000 – including \$29,618 in matching funds

Aspects

- 20 additional traffic signals connected to the system
- 13 additional CCTV connected to the system



Phase II System Map

Phase II in Red

Phase I in Blue

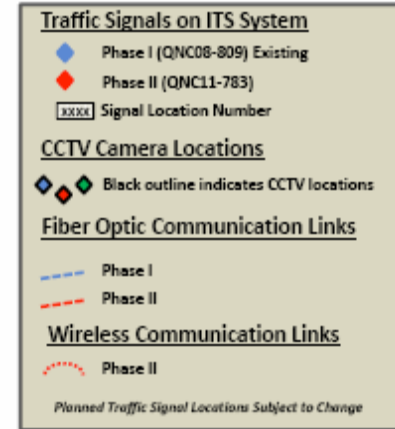
CCTV locations have darker outline

Town of Queen Creek

FIGURE 2

Intelligent Transportation System
Phases 1 and 2

Revised November, 2010





Phase II – System Capabilities

- Total of 32 intersections (*Town connecting 1 additional at Aldecoa and Ellsworth Loop roads*)
- Adding intersections to the existing system allows for greater flexibility of system-wide traffic signal timing; and,
- Added ability to monitor and assist with incident/emergency response



Future Phases

- Future phases of the ITS Program will connect the remaining traffic signals to the system;
- Possibly provide connection with the Town of Gilbert;
- Possibly provide connection with the Regional Community Network of Traffic Management Centers in the region for information and data sharing.



Questions