
VDOT

Northern Region Operations

Smart Traffic Center

Baltimore-Washington Regional Traffic Signal Forum

VDOT Arterial-Freeway Integation

March 14, 2007

Arterial-Freeway Integration

- Shift to System Operations
- Focus on Incident Management
- Recognition of corridor management
- Continued jurisdictional coordination
- Real-time changes to system capacity
- Traveler Information for all users

System Operations

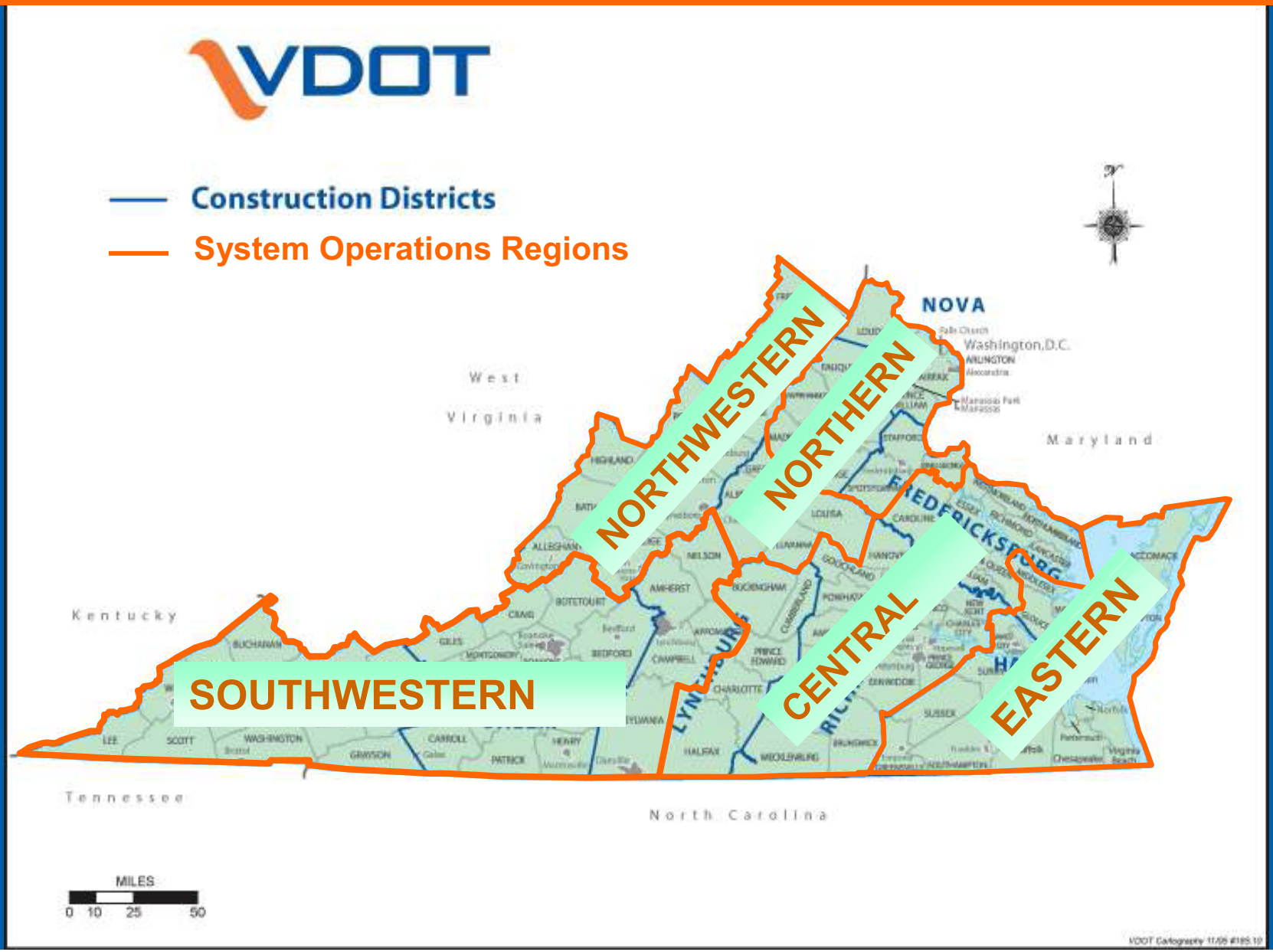
System Operations

- System Operations is now a core function alongside construction and maintenance
- The focus – on moving people and goods safely, efficiently and in predictable time frames – has moved to the highest levels of VDOT and VA government
- Integrated approach to traffic ops and management targets needs and resources.
- Consistent goals, measures, and methods.

System Operations

- Turn business model on its side
- Business Then: Sections operated as separate entities, duplicating efforts.
- Business Now: Regions with business functions under Operations Umbrella
  - Traffic Engineering
  - Systems Planning
  - Systems Engineering
  - Construction
  - Maintenance
  - Operations

System Operations

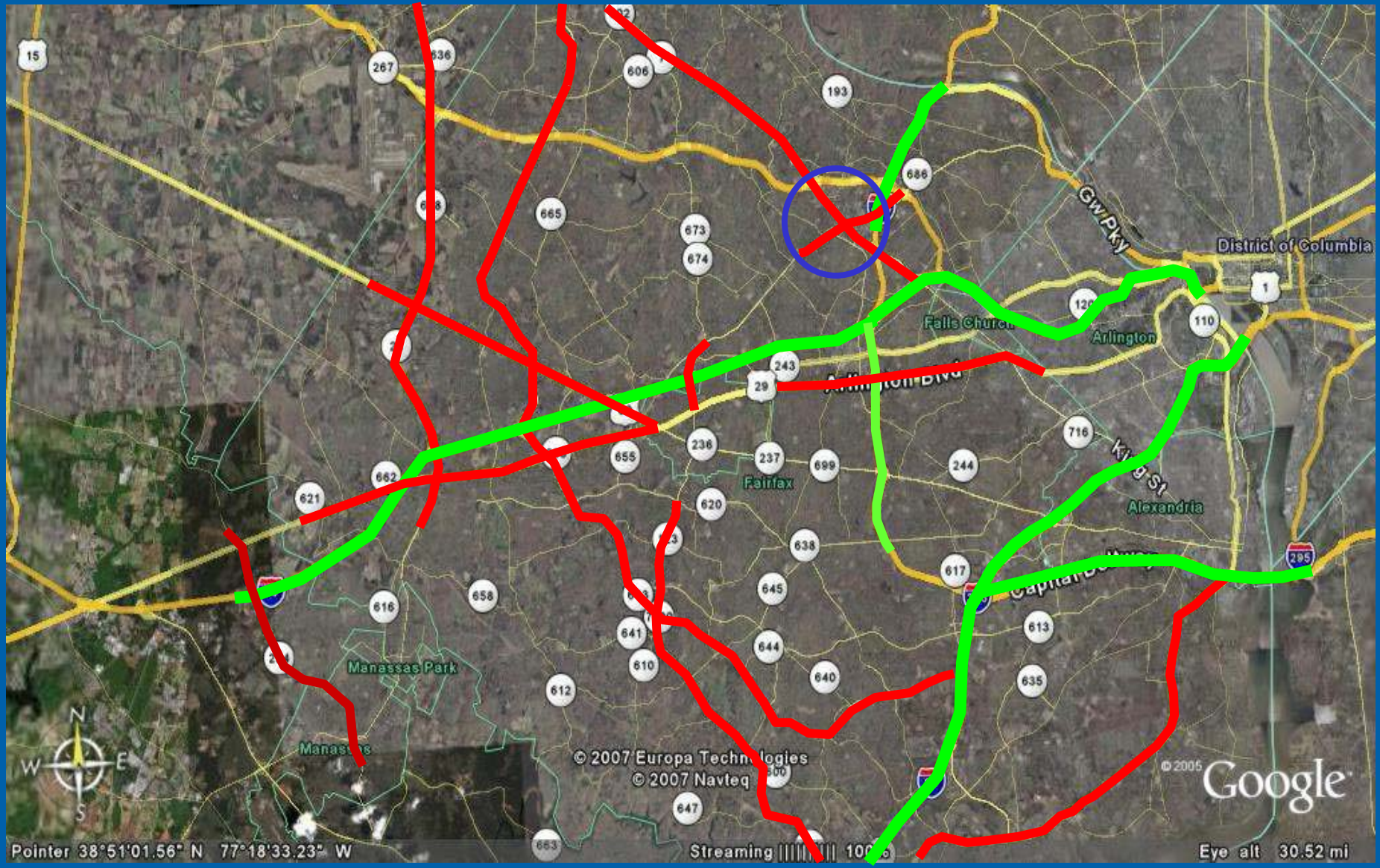


Incident Management

Incident Management

- Smart Traffic Center
  - Co-located freeway and arterial central systems.
  - Greater level of system monitoring
- Safety Service Patrol coverage
  - Incorporated in 1972
  - 365/24/7 in Northern Virginia and Hampton Roads
  - Coverage of Interstates and Dulles Toll Road
  - Recognizing the benefit of incident management for all parts of network, including arterials.
- CCTV Coverage
  - Coverage of major arterials in Northern Virginia
  - Phase 1: Tyson's Corner, Routes 7 & 123.

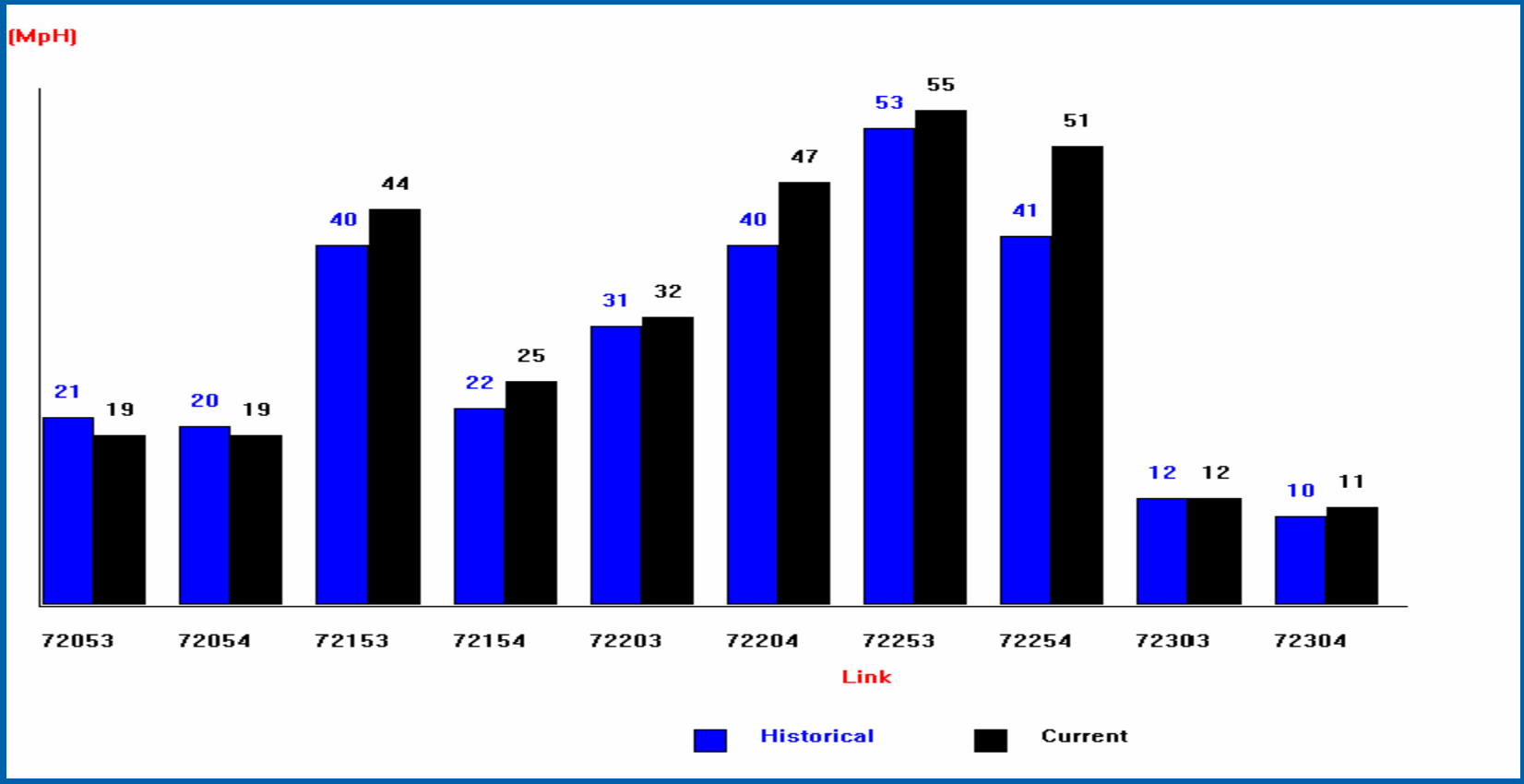
CCTV Coverage



Performance Monitoring

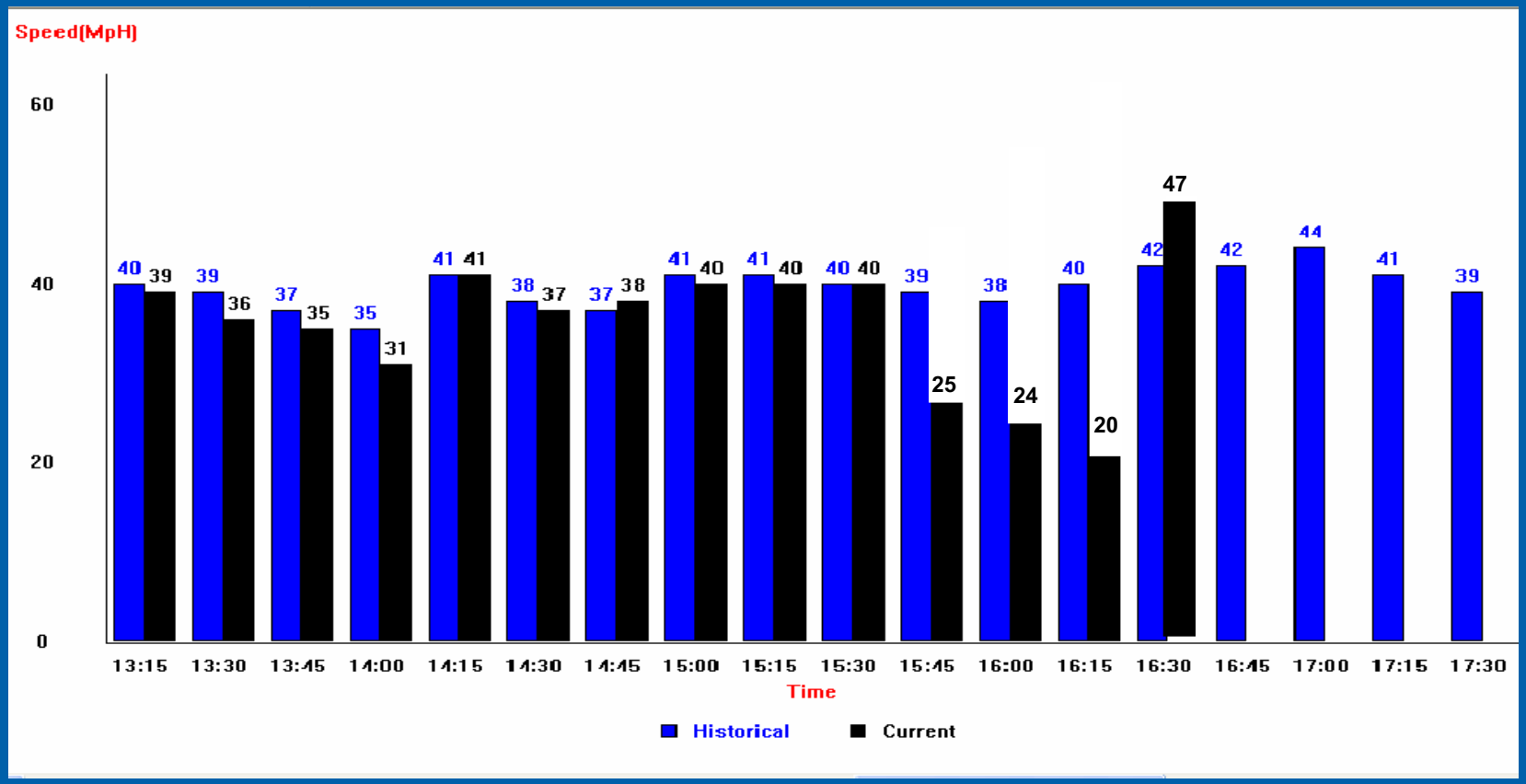
Performance Monitoring

- Arterial performance monitoring by link.



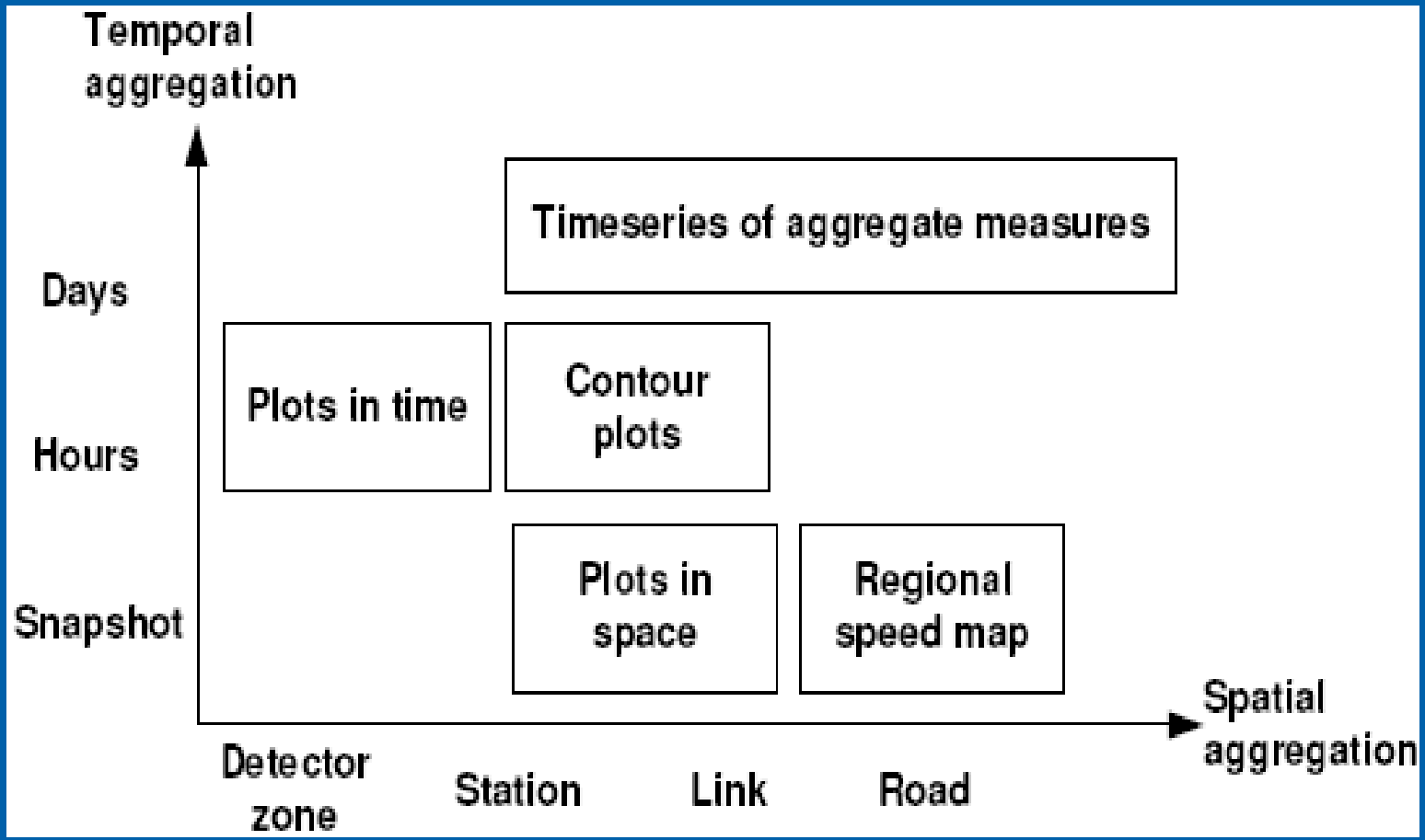
Performance Monitoring

- Arterial peformance monitoring by location



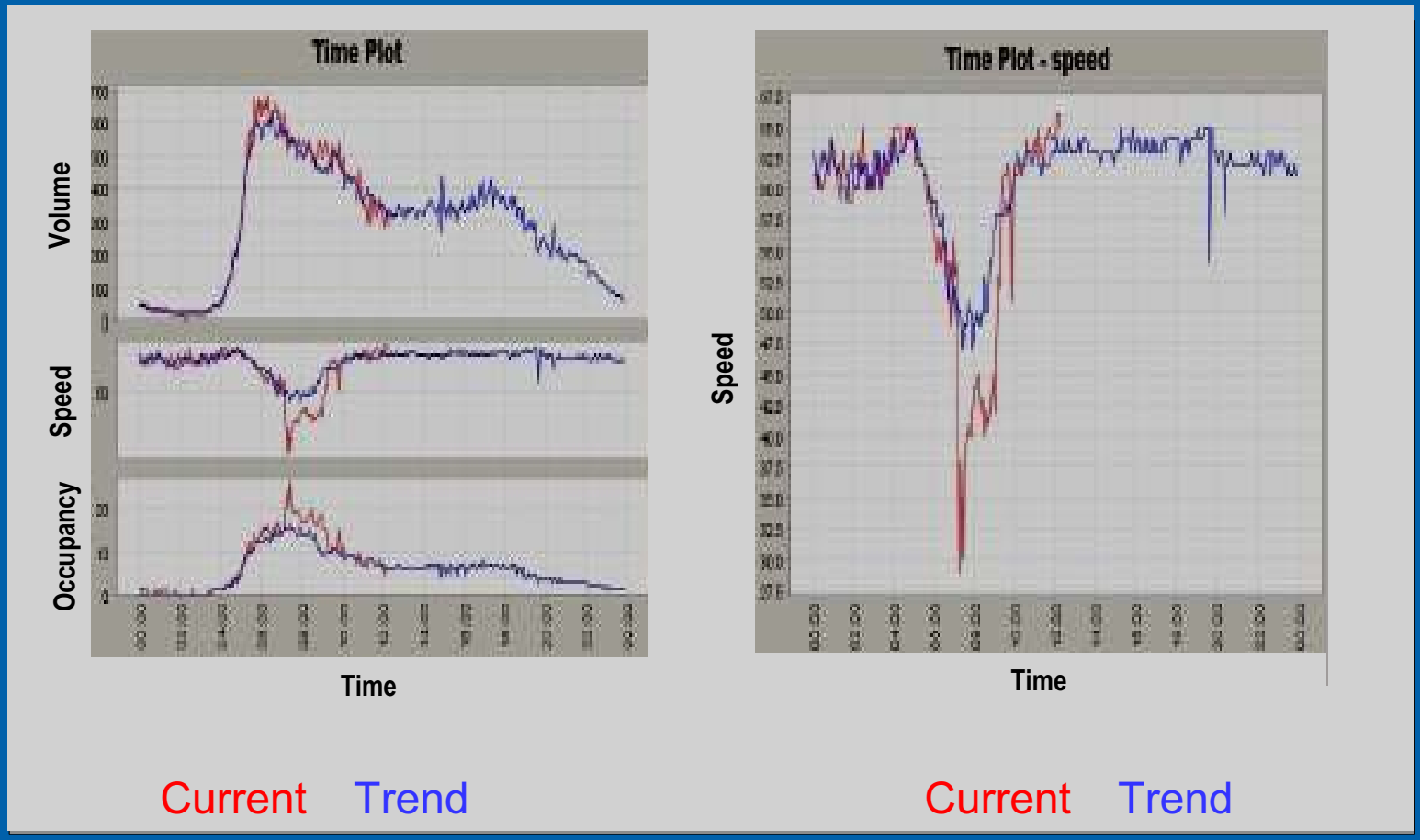
Performance Monitoring

- Freeway performance, types of aggregation.



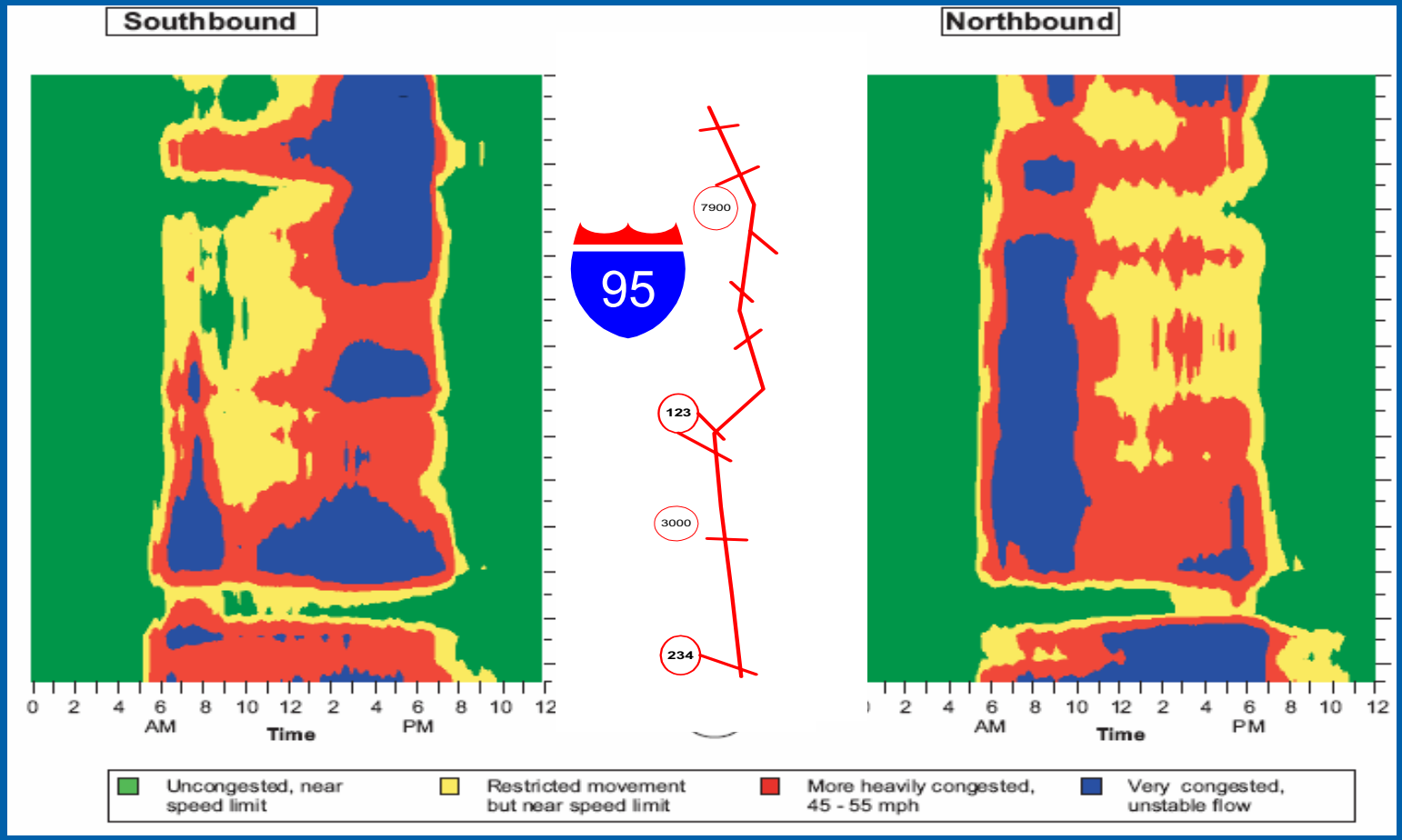
Performance Monitoring

- Freeway performance, concurrent monitoring.



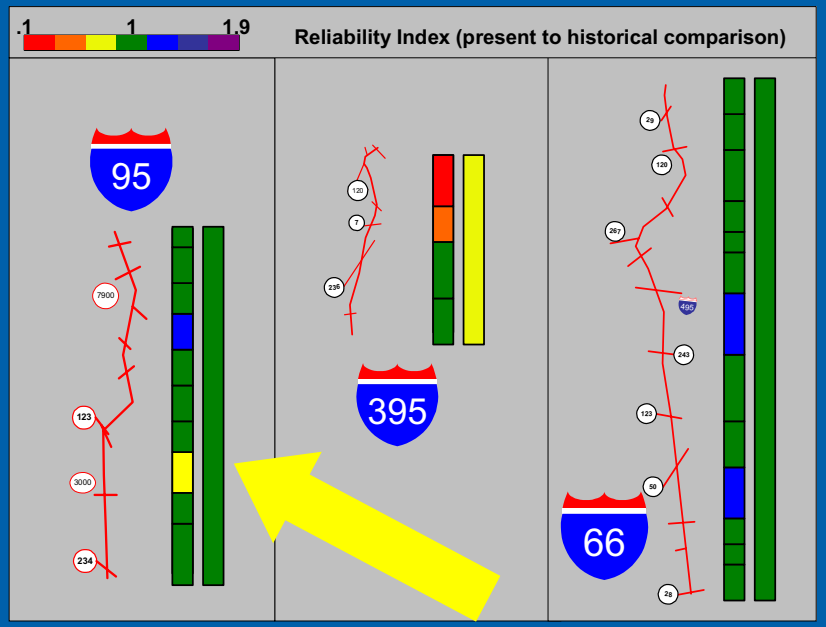
Performance Monitoring

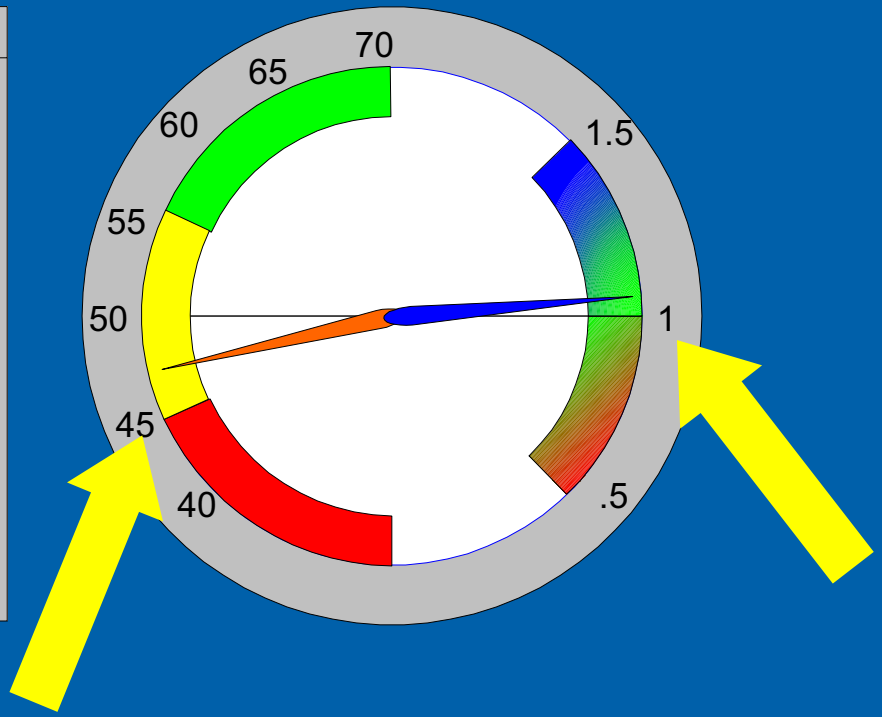
- Freeway performance monitoring, time & space.



Performance Monitoring

- Freeway performance monitoring, reliability





System Usage

System Usage

- Capacity changes
  - Real-time lane control use (I-66).
  - Reversible lane
  - Freeway-arterial monitoring. Modifying arterial timings to prevent spillbacks.
  - Continued incident management and detour optimization
- Traveler Information
  - Traveler information is paramount for drivers on arterials.
  - Deployment of portable DMS, with cellular communication.
  - Identification of specific areas and reasons for deployment.
    - High accident area.
    - Route choice decision point