

Maryland Department of Transportation State Highway Administration



Championing Traffic Incident Management in the National Capital Region

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CHART Core Functions

- CHART is the Coordinated Highways Action Response Team.
- CHART is MDOT-SHA's real-world application of Transportation Systems Management and Operations.
- CHART is focused on the safety and efficient movement of people and goods on Maryland's highways.



CHART Operations Focus Areas

- Incident Management
- Traffic and Roadway Monitoring
- Traveler Information
- Severe Weather and Emergency Operations
- Traffic Management



Organization

Maryland Department of Transportation

- Maryland Aviation Administration
- Mass Transit Administration
- Maryland Port Administration
- Motor Vehicle Administration
- State Highway Administration

State Highway Administration

Planning and Engineering

Operations

Administration

7 District Offices

Office of Maintenance

Office of Construction

Office of Materials Technology

Office of Traffic & Safety

Office of CHART & ITS Development

**CHART Organization &
Work Flow Diagram**

June 25, 2015

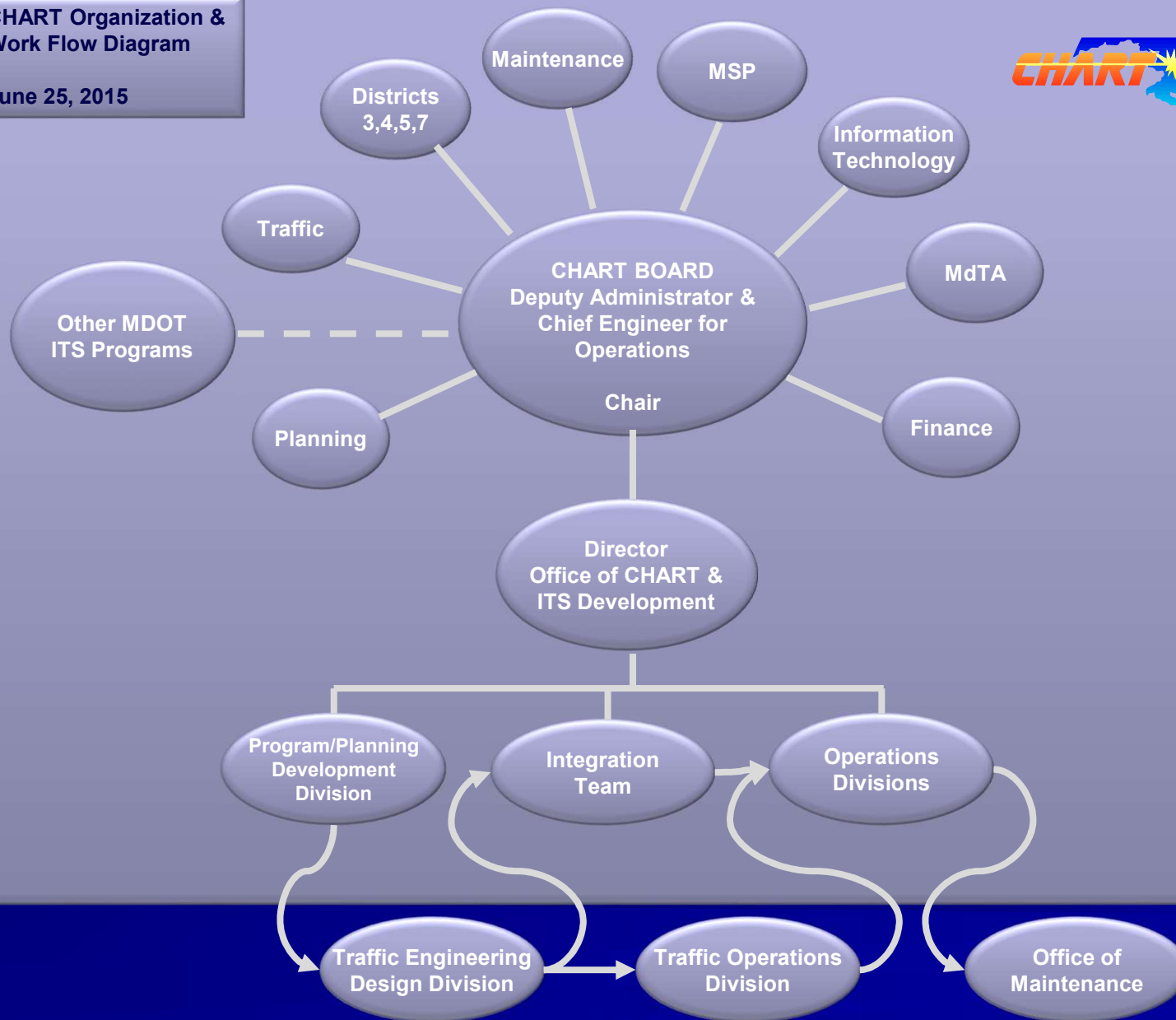


CHART TMC Operations

The Statewide Operations Center

- 24/7/365
- 3 – TOC's M-F
 - NCR
 - College Park Bk
 - Baltimore
 - Golden Ring Bk
 - Western
 - Frederick Bk
- Maryland State Police staffing (peak rush hours/emergency only)



Opened August 30, 1995



Incident Management

- 24 Hours / 7 Days per Week Operation
- “Clear the Road Policy”
- Close Coordination with State Police
- Emergency Traffic Patrols (ETP’s)
- Emergency Response Units (ERU’s)
- Approximately 43 units on the Road

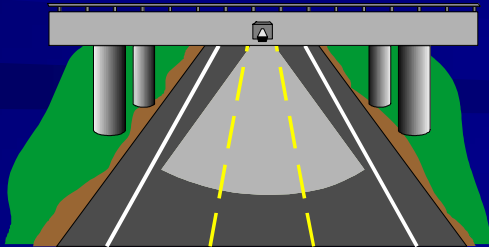
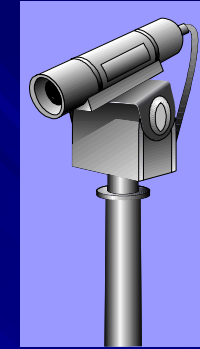


CHART Incident Management Performance Measures & Recent Results

- Annual User Cost Savings - \$1.356 Billion
- Number of Patrol Hours Logged - Over 97,000 Hours
- Reduction in Delay - 39.2 Million Vehicle-Hours
- Average Incident Duration - 23.54 minutes
- Total Number of Responses (Incidents & Assists) - Over 77,000
- 2014 – a CHART unit assisted a motorist every *14min*, handled an incident every *22min*
- 2015 – a CHART unit assisted a motorist every *15min*, handled an incident every *19min*

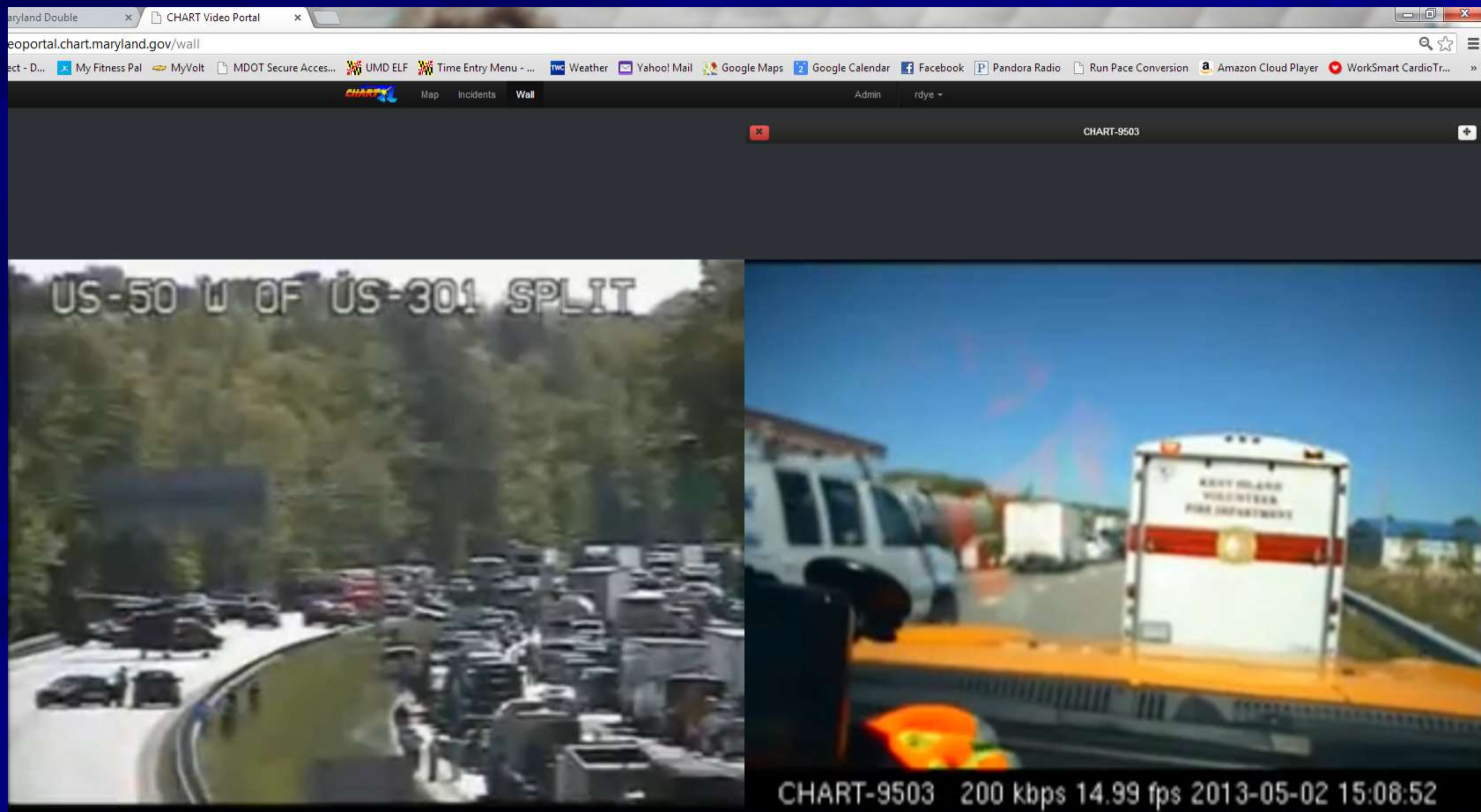
Traffic and Roadway Monitoring

- Cellular Telephone - #77
- Maryland State Police Reports
- 300+ Speed Detectors including PPTA
- 180+ Closed-Circuit Television Cameras (owned and controlled by CHART)
- 800+ Closed-Circuit Television Cameras (owned by, partially owned by, or viewable by CHART)
- Traffic Probe Data



Dash Mounted CCTV - 2011

- We found the things you needed to see were not where our Emergency Patrol was pointed!



New generation CCTV MV-2101 resolved the issues

- Approximately \$17K per camera
- Available on State Contract
- Full Pan – Tilt – Zoom camera controlled by central software at TOC/TMC
- Video rides “secure” APN across AT&T 3G Network



The public receives a “real-time” map showing the incidents and streaming video from nearby cameras

The screenshot displays the CHART on the Web website in a Windows Internet Explorer browser. The browser's address bar shows the URL: `ViewName=Select&Cmd=switchtheme&tab=Traffic&DoPanTo=False&Direction=&PanFactor=&DoZoomScaleFactor=&x=&y=&t`. The website header identifies the user as being in the "DEPARTMENT OF TRANSPORTATION COORDINATED HIGHWAYS ACTION RESPONSE TEAM".

The main content area features a navigation menu with tabs for Traffic, Road Work, Hauling Restrictions, Roadway Weather, Video/Camera, and Info Devices. A central map of the Baltimore region shows a red diamond icon indicating an incident at the intersection of I-95 North and MD-100. A pop-up window provides details: "Incident @ I-95 NORTH AT MD 100 [Collision, Personal Injury]", "Direction: North", "Vehicle Involved: 1 vehicle involved.", and "Lanes Closed: 4 of 4 North traffic lanes closed." A legend on the right side of the map defines symbols for Road Speed Sensors (0-30 mph, 30-50 mph, >50 mph, No Report), Traffic Events (Incident, Action Event, Congestion, Disabled Vehicle, Special Event), and Closures (Active Closure).

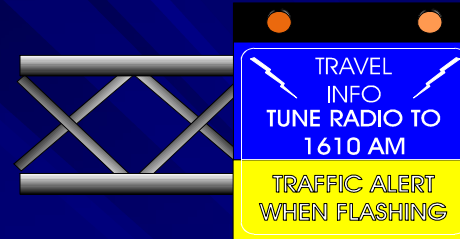
In the top-left corner, a live video feed from a camera titled "I-95 NORTH OF MD-100" shows a multi-lane highway with several vehicles, including a large white semi-truck in the foreground. The video player includes standard playback controls.

The left sidebar contains a "Local Traveler Information" section with links to Reading Room, Contacts and Directions, Links, Feedback, Interactive Mapping, Incident Reports, Route Restrictions/Lane Closures, Live Traffic Cameras, Local Weather Station Images, Local Weather Station Data, Speed Sensor Data, and Highway Message Signs. Below this is a "CHART System" section with links to CHART Overview, CHART Subsystems, Traffic Monitoring, Incident Management, Traffic Management, Traveler Information, and Glossary of ITS Terms. A "Local Weather Conditions" section includes links for Current Conditions, SPC Severe Weather Reports, Tropical Weather, and Satellite Images.

A disclaimer at the bottom of the page states: "Disclaimer: CHART highway monitoring devices may be off-line at times due to hardware failures, communication problems, or preventative maintenance. We will restore them to an operational mode available via this website as soon as possible. Some devices may be off-line for extended periods of time. All field equipment repairs are scheduled in priority that meets the operational needs of the CHART program."

The Windows taskbar at the bottom shows the Start button, several open applications (Microsoft Office, ITSA, Internet Explorer, Adobe Reader), and the system tray with the time 3:28 PM and 100% zoom level.

Traveler Information



- 85+ Dynamic Message Signs
- 35+ Traveler's Advisory Radio Stations
- Internet: <http://traffic.maryland.gov>
- Travel Times On DMS
- 511 Traveler Information Service



Getting ready for what is next

- I-270 Corridor Project
- US 1 Pilot Corridor
- Strategic TSM&O Implementation Plan

Regional Integrated Transportation Information System (RITIS) A Real-Time and Archived Repository of Highway Conditions and Events

