GEOSPATIAL TRANSPORTATION INFORMATION SECTION: *WHERE WE ARE?*

Geospatial Transportation Information Section
Program Planning & Administration Division
Division of Highways
West Virginia Department of Transportation
Bldg. 5, Rm. A-816
1900 Kanawha Blvd., E
Charleston, WV 25305

History

Historically the West Virginia Department of Transportation (WVDOT) has been utilizing geospatial (GIS, Remote Sensing, & GPS) technology for planning, analysis, and mapping purposes ever since the technology became available.

In 2005 the WVDOT GIS Section was created to meet the growing needs for geospatial data and services in transportation.

In 2007 the GIS Section was reorganized as the GIS Unit and merged with the Highway Data Services (HDS) Unit, a program responsible for processing roadway additions, changes, or abandonment requests from the Districts, and the update and maintenance of the Roadway Inventory Log. The two units together formed the current Geospatial Transportation Information (GTI) Section.

Program Planning & Administration Division (CP)

Geospatial Transportation Information Section (GTI)

GIS Unit

- -Transportation GIS Data
- -Geospatial Services
- -Geospatial Applications

Highway Data Services (HDS) Unit

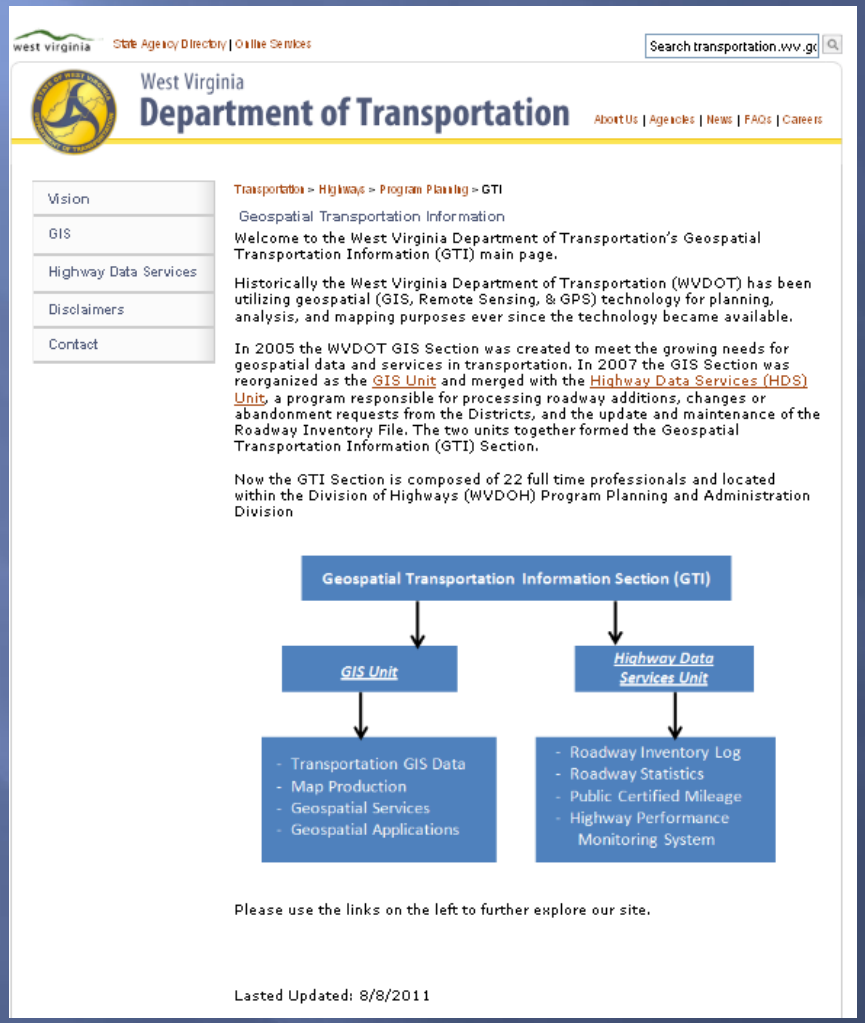
- -Roadway Inventory Log
- -Roadway Statistics
- -Public Certified Mileage
- -Highway Performance Monitoring System

GTI'S OFFERING

- Public
  - GTI Portal
  - GTIHelpDesk@wv.gov
- WVDOT
  - GTI Portal
  - Continuously Operating Reference Stations (CORS)
  - Fleet Management
  - GIS Portal
  - Videolog Viewer
  - Straight Line Diagram Viewer
  - WVDOH District GIS Coordinator Network
  - GIS/GPS Training
  - Other Services (Transportation GIS User Group, etc.)

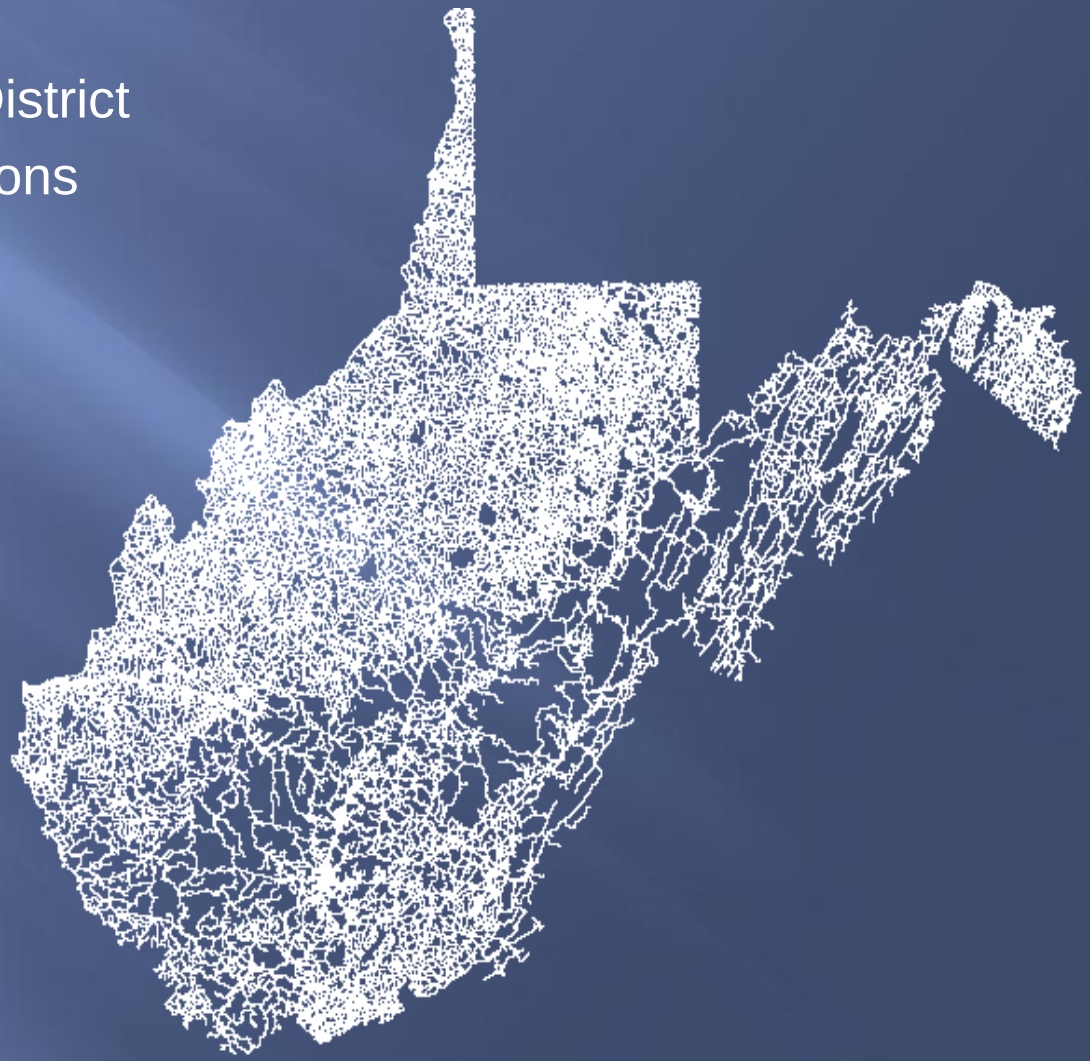
GTI PORTAL

http://www.transportation.wv.gov/highways/programplanning/gti/Pages/default.aspx



DATA CATALOG

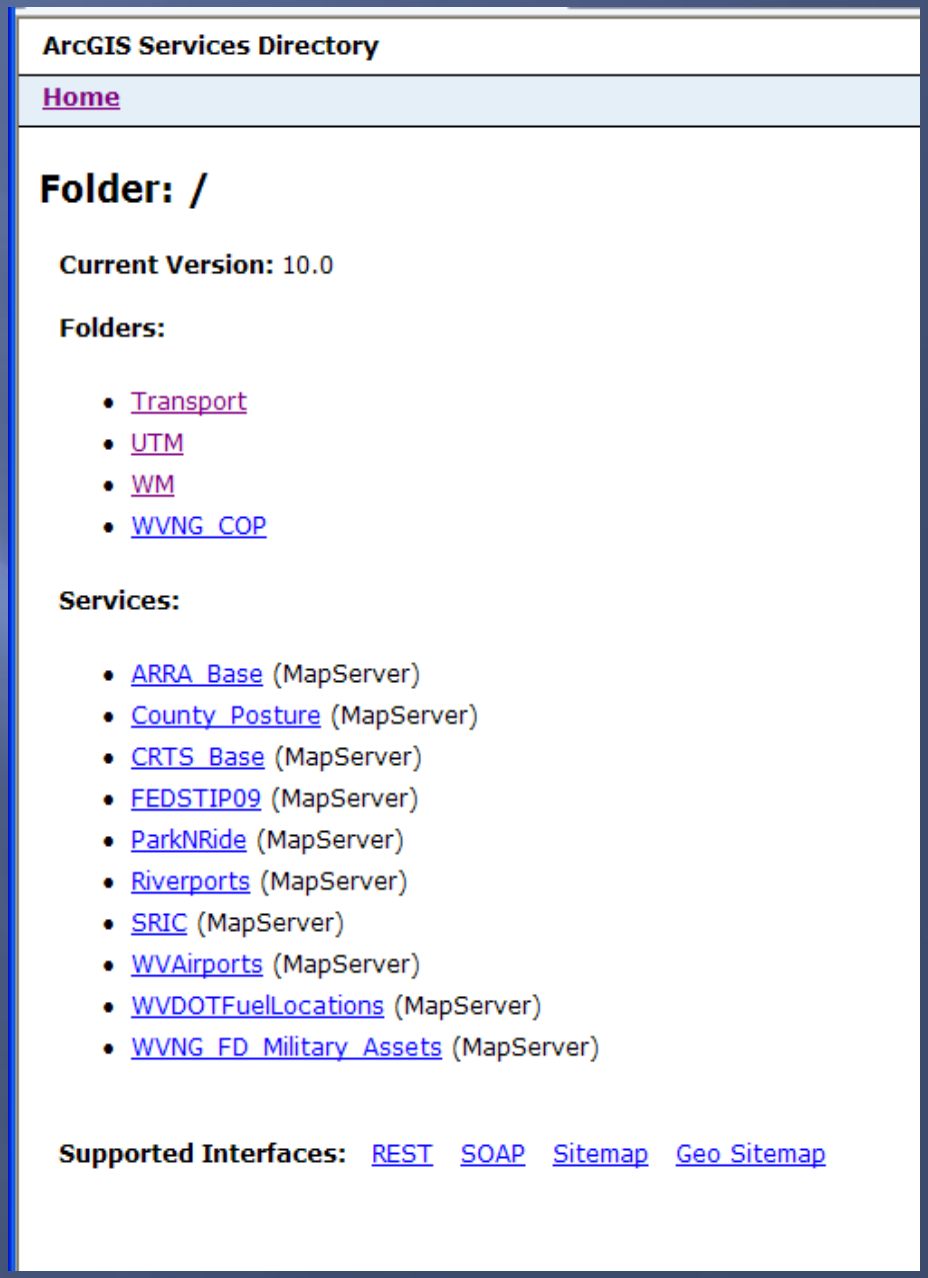
- Road by Sign/County/District
- WVDOT Fueling Locations
- WVDOT Facilities
- Airports
- Ports
- Rest Areas
- Park & Rides
- Etc.



http://www.transportation.wv.gov/highways/programplanning/gti/GIS/Pages/DataCatalog.aspx

GIS SERVICES

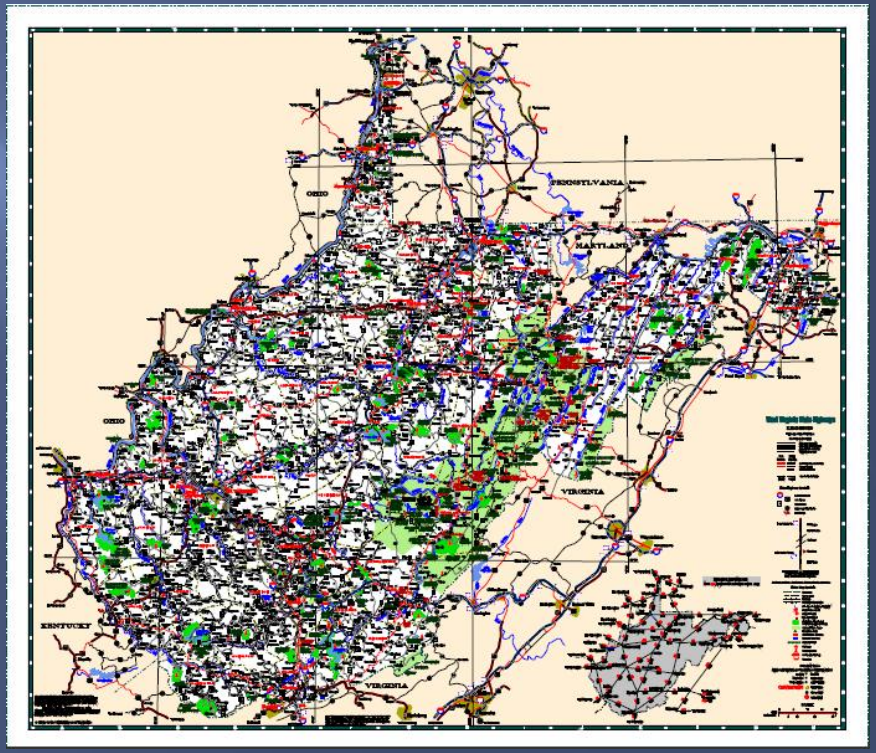
- ESRI ArcGIS Server
- REST & SOAP APIs
- UTM & Web Mercator
- Future GeoData Services
- Future Image Services
- Future Data Exchange Network



http://www.transportation.wv.gov/highways/programplanning/gti/GIS/Pages/WebMapServices.aspx

MAPS

- State General Highway Maps
- State Functional Classification Map
- General Highway County Maps (55)
- State Highway Base Map
- City Maps (205)
- Urban Area Maps (26)



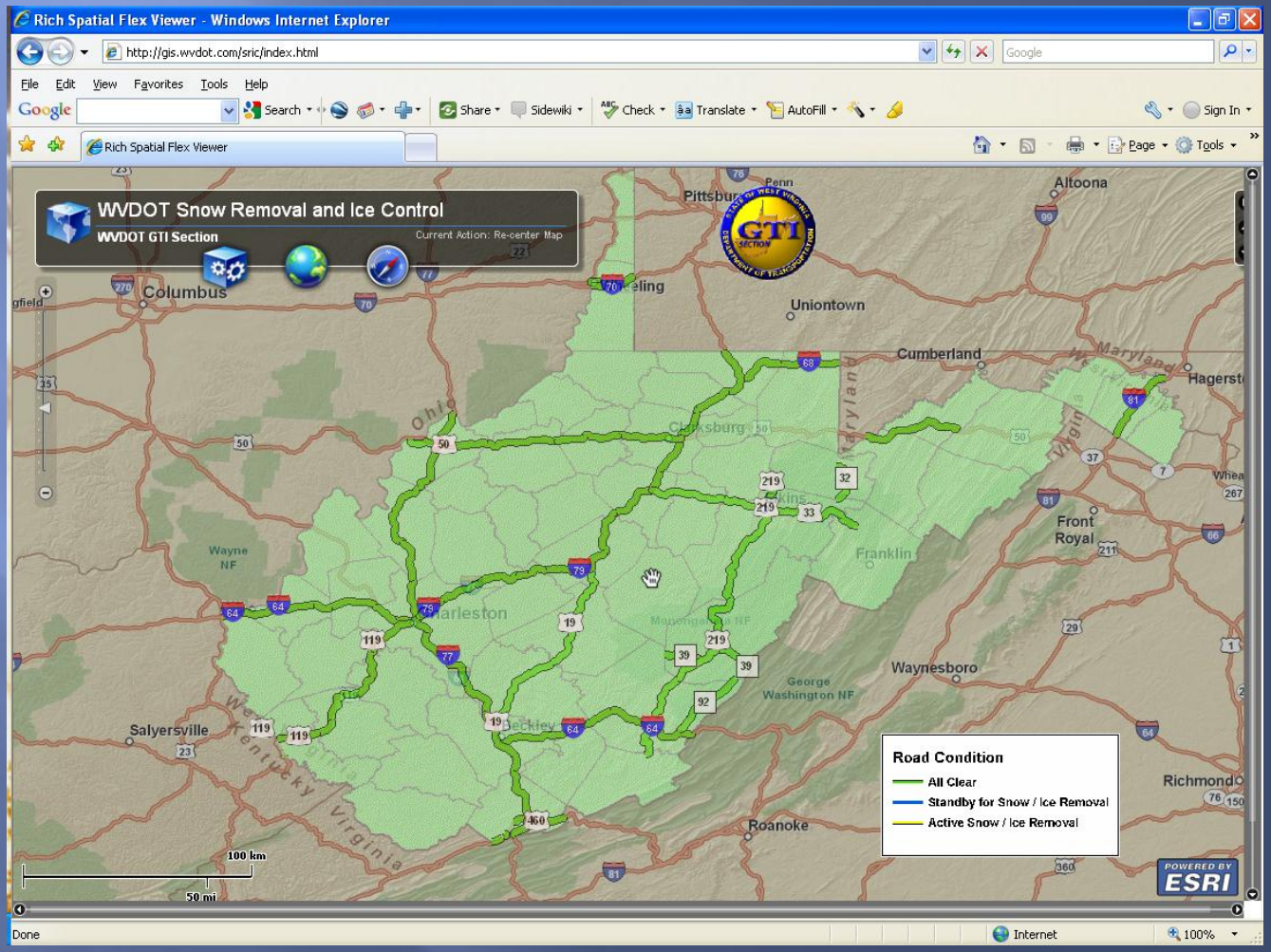
http://www.transportation.wv.gov/highways/programplanning/gti/GIS/MAPS/Pages/default.aspx

WEB MAPPING APPLICATIONS

- WVDOT Facility Locations
- WVDOT Statewide Transportation Improvement Program
- WVDOT River Port Locations
- WVDOT Airport Locations
- WVDOT Snow Removal & Ice Control (SRIC)
- WV American Recovery and Reinvestment (ARRA) Reporting
- WVDOT Coal Resource Transportation System (CRTS)

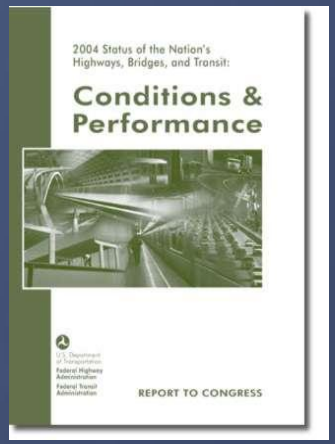
http://www.transportation.wv.gov/highways/programplanning/gti/GIS/Pages/MappingApplications.aspx

WVDOT SNOW REMOVAL AND ICE CONTROL



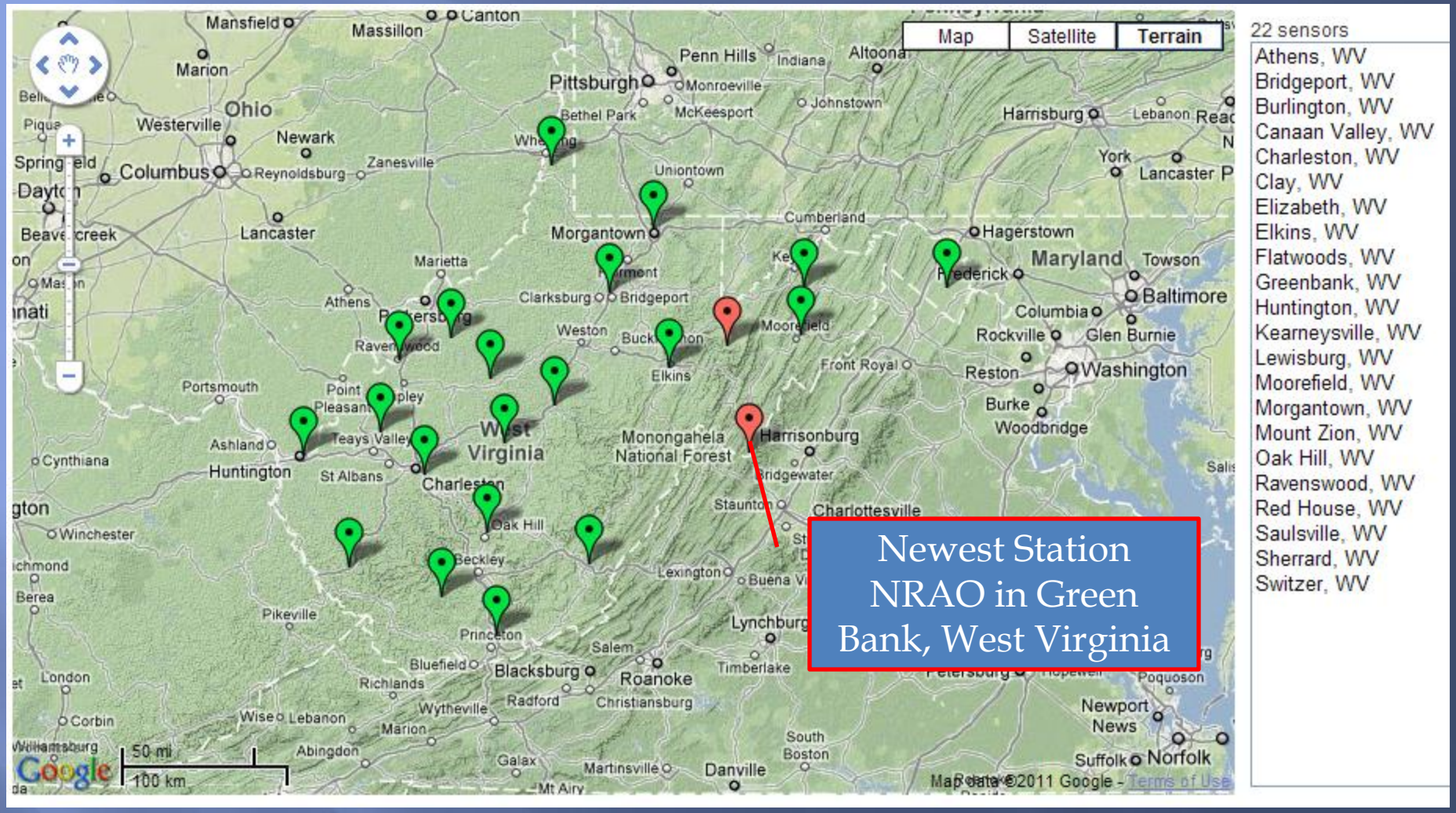
HDS UNIT WEB RESOURCES

- Procedures & Guidelines
  - Additions & Changes
  - Roadway Abandonment
- Data Resources
  - Annual Roadway Inventory Statistics 2008-2010
  - West Virginia Federal Aid Roads 2008-2010
- District Status Reports
  - Pending District Addition/Change Request Status Report
  - Pending District Abandonment Request Status Report
  - Current Reserved Route Listing
- Annual Highway Performance Monitoring System (HPMS) Data Profile



http://www.transportation.wv.gov/highways/programplanning/gti/Highway_Data_Services/Pages/default.aspx

WVDOT CORS & VRS



2011
22 WV STATIONS INSTALLED

35 STATIONS TRANSMITTING TO NETWORK
169 Subscriptions
109 Organizations
187 Users

WVCORS NETWORK

Cooperative Effort

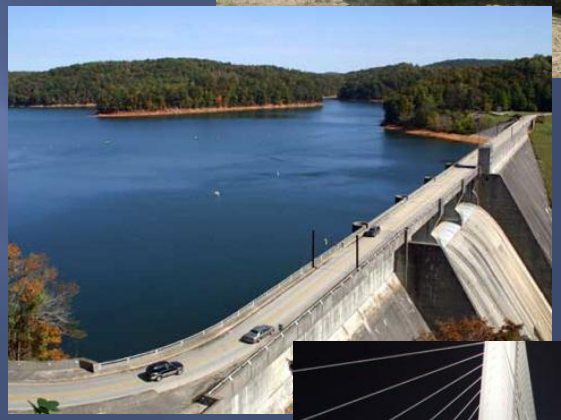
Site Owners Include
USCOE
NRAO
WVDNR
WVDEP
WVRJA
WVU, MU, FSU, SCTC, EWVTC, Marshall, Braxton, and Wirt County Schools

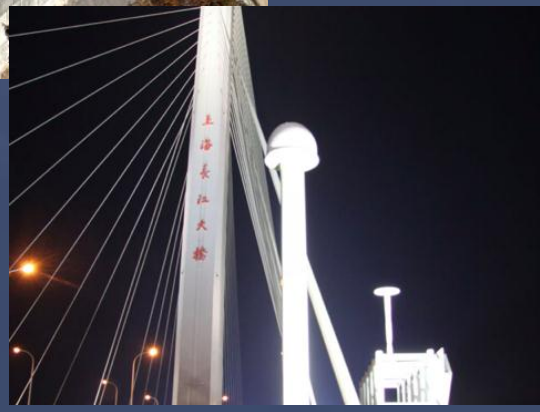
Partnerships – Surrounging State

Ohio
Kentucky
Pennsylvania
Virginia

INFRASTRUCTURE ENABLED APPLICATIONS

- Precision Agriculture
- Bridge and Damn Deformation monitoring
- Scientific/engineering research
- Surveying
- Mine rescue
- Construction
- Machine control
- Marine navigation and positioning
- Mapping and GIS





WVDOT FLEET MANAGEMENT

WVDOT GeoManager
GPS Fleet Management

Benefits

- Fleet Productivity
- Fuel Reduction
- Driver Safety
- Environmental Impact
- Asset Utilization
- Diagnostics & Messaging
- NMEA GPS Data Feed
- NMEA WiFi Data Feed

Current Web Site
http://telvistar.com

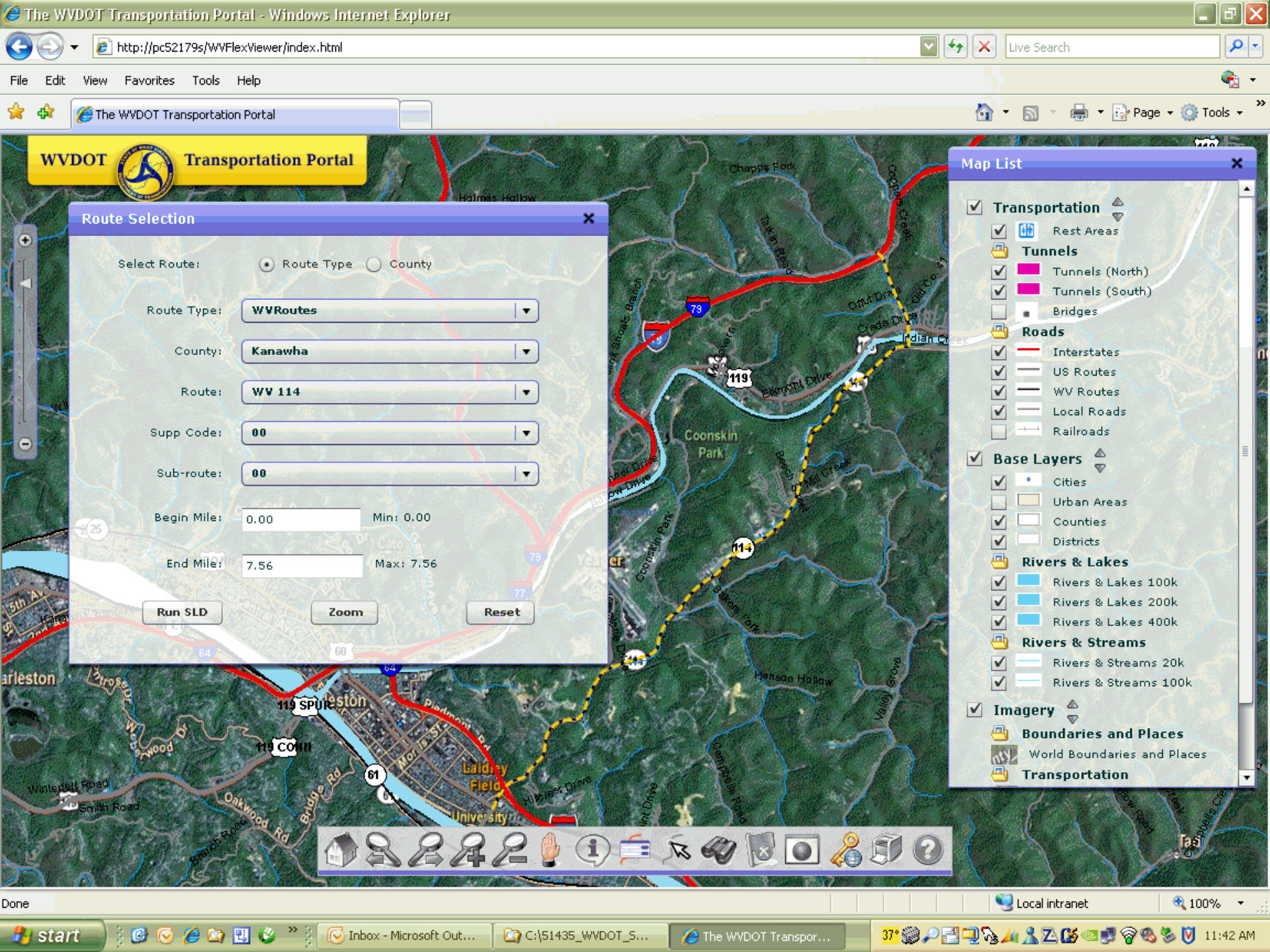
NEW LOOK

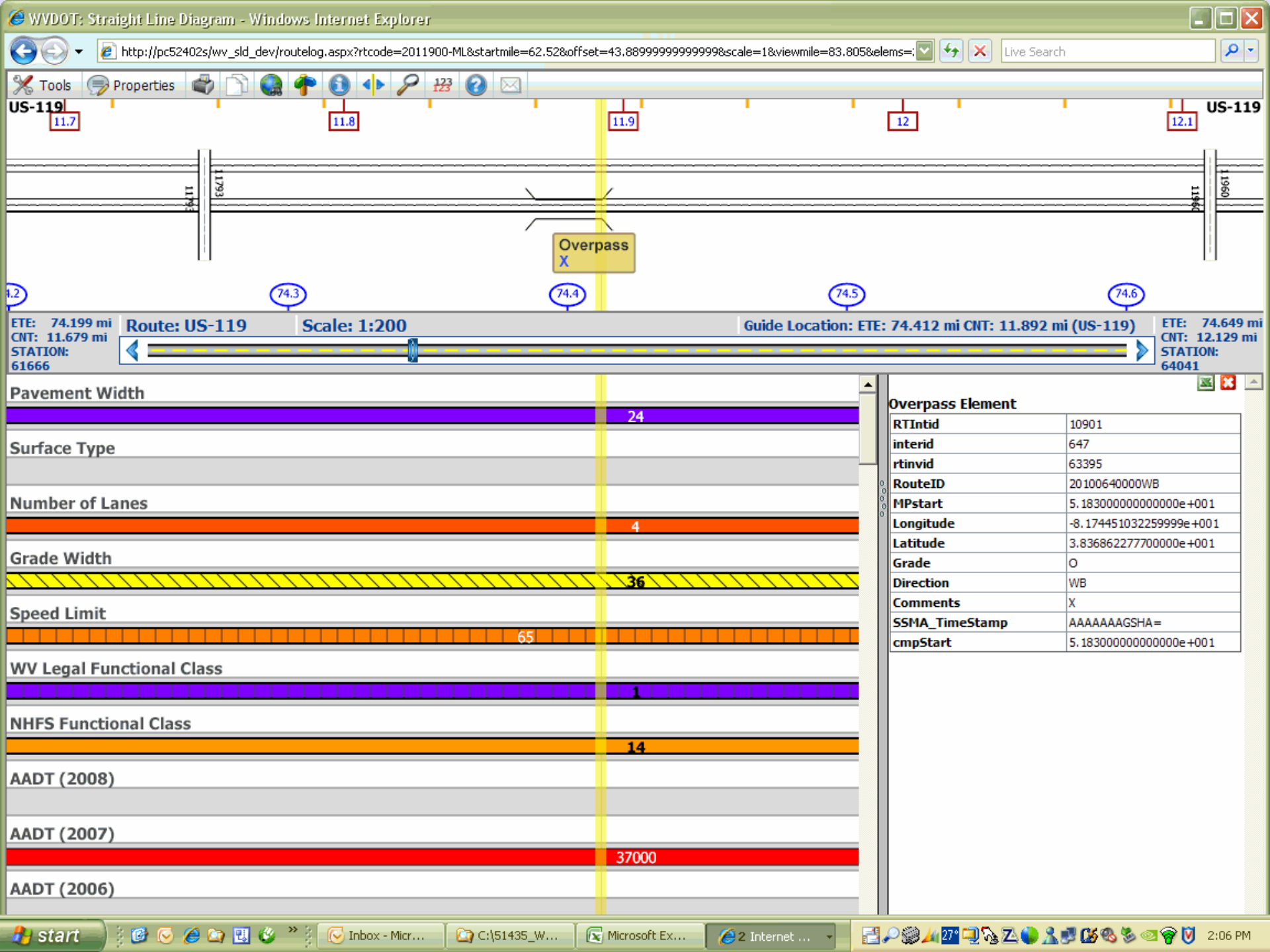
Features

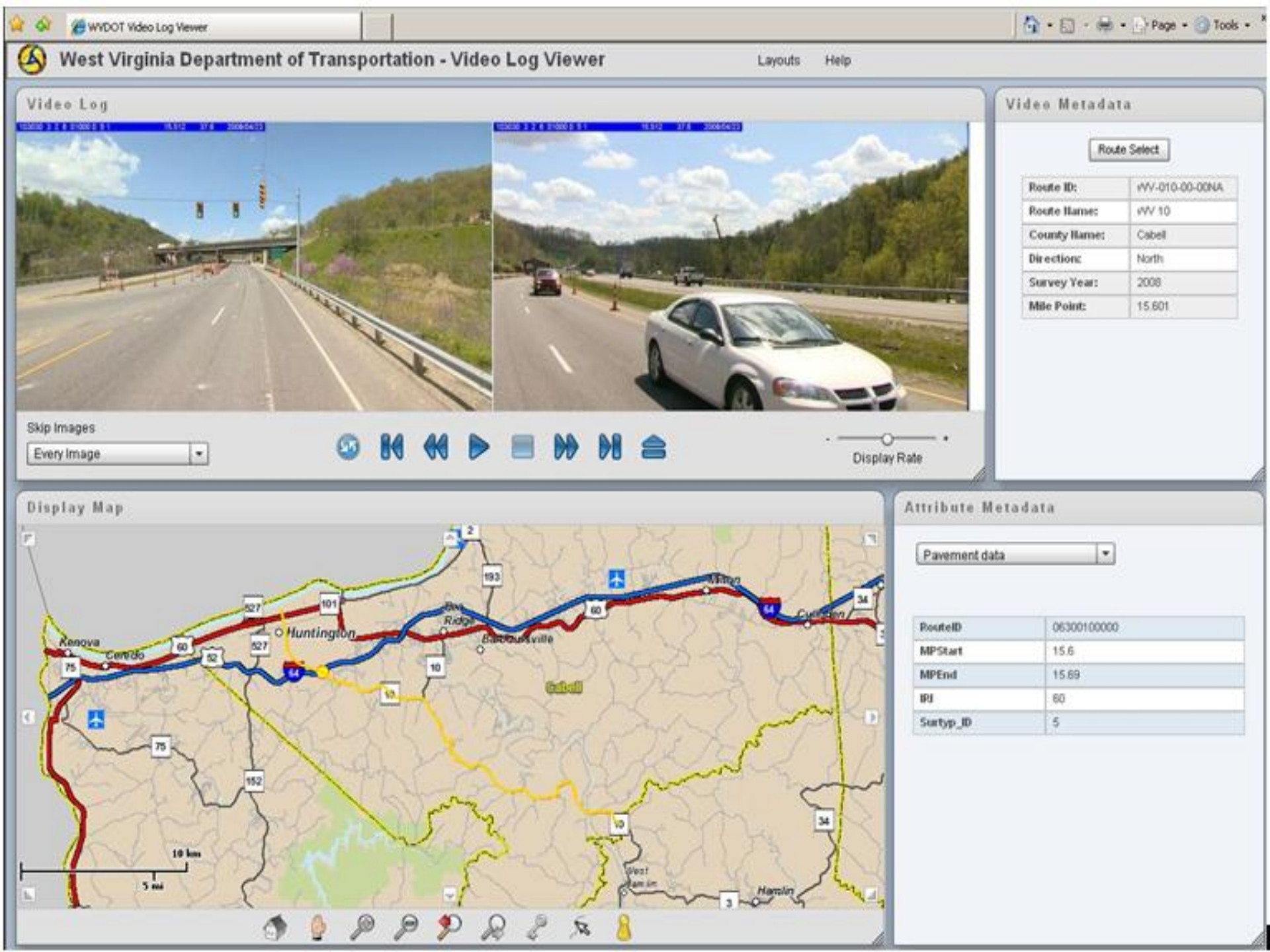
- Real-time location
- Map View - View the real-time status and locations
- Exception alerting - Includes speeding, idle time, battery
- Configurable Dashboards
- Vehicle Diagnostics - Fuel, carbon, odometer and fault codes
- Landmarks (GeoFence) - 20 unique types
- Vehicle Maintenance Schedule Notifications
- PTO and Temperature Sensor Connection
- Data integration to existing systems

- On-line self paced user training

GIS PORTAL, VIDEOLOG VIEWER, & STRAIGHT LINE DIAGRAM VIEWER


The WVDOT Transportation Portal - Windows Internet Explorer
http://pc52179s/WVFlexViewer/index.html
Live Search
File Edit View Favorites Tools Help
The WVDOT Transportation Portal
Page Tools
WVDOT Transportation Portal
Route Selection
Select Route:
Route Type
County
Route Type:
WVRoutes
County:
Kanawha
Route:
WV 114
Supp Code:
00
Sub-route:
00
Begin Mile:
0.00
Min: 0.00
End Mile:
7.56
Max: 7.56
Run SLD
Zoom
Reset
Map List
Transportation
Rest Areas
Tunnels
Tunnels (North)
Tunnels (South)
Bridges
Roads
Interstates
US Routes
WV Routes
Local Roads
Railroads
Base Layers
Cities
Urban Areas
Counties
Districts
Rivers & Lakes
Rivers & Lakes 100k
Rivers & Lakes 200k
Rivers & Lakes 400k
Rivers & Streams
Rivers & Streams 20k
Rivers & Streams 100k
Imagery
Boundaries and Places
World Boundaries and Places
Transportation
Coonskin Park
Laidley Field
University
Done
Local intranet
100%
start
Inbox - Microsoft Out...
C:\51435_WVDOT_S...
The WVDOT Transpor...
11:42 AM


WVDOT: Straight Line Diagram - Windows Internet Explorer
http://pc52402s/wv_sld_dev/routelog.aspx?rtcode=2011900-ML&startmile=62.52&offset=43.889999999999998&scale=1&viewmile=83.805&elems=
Live Search
Tools
Properties
US-119
11.7
11.8
11.9
12
12.1
US-119
11793
11960
Overpass
X
74.2
74.3
74.4
74.5
74.6
ETE: 74.199 mi
CNT: 11.679 mi
STATION: 61666
Route: US-119
Scale: 1:200
Guide Location: ETE: 74.412 mi CNT: 11.892 mi (US-119)
ETE: 74.649 mi
CNT: 12.129 mi
STATION: 64041
Pavement Width
24
Surface Type
Number of Lanes
4
Grade Width
36
Speed Limit
65
WV Legal Functional Class
1
NHFS Functional Class
14
AADT (2008)
AADT (2007)
37000
AADT (2006)
Overpass Element
RTIntid 10901
interid 647
rtinvid 63395
RouteID 20100640000WB
MPstart 5.183000000000000e+001
Longitude -8.174451032259999e+001
Latitude 3.836862277000000e+001
Grade O
Direction WB
Comments X
SSMA_TimeStamp AAAAAAAGSHA=
cmpStart 5.183000000000000e+001
start
Inbox - Micr...
C:\51435_W...
Microsoft Ex...
2 Internet ...
2:06 PM


WVDOT Video Log Viewer
Page
Tools
West Virginia Department of Transportation - Video Log Viewer
Layouts
Help
Video Log
Skip Images
Every Image
Display Rate
Video Metadata
Route Select
Route ID: rWV-010-00-00NA
Route Name: rWV 10
County Name: Cabell
Direction: North
Survey Year: 2008
Mile Point: 15.601
Display Map
Huntington
Kenova
Cerrado
Barboursville
Cabell
Hamlin
10 km
5 mi
Attribute Metadata
Pavement data
RouteID 0630010000
MPStart 15.6
MPEnd 15.69
IRI 60
Surtyp_ID 5

CURRENT & FUTURE MAJOR PROJECTS

- ERP/Asset Management
- CORS
- HPMS Portal
- Fleet Management
- WV National Guard (WVNG) Flood Emergency Management
- Enterprise GIS Framework Enhancement
  - Transportation GIS Data Model
  - Statewide Road Centerline Dataset
- GIS Portal & Straight Line Diagram Viewer
- Video Log Viewer
- Highway Map Production
- Web Mapping Applications

- Transportation GIS Data Collection

QUESTIONS?

- CORS
- GTI PORTAL
- FLEET MANAGEMENT
- SLD
- VIDEOLOG VIEWER
- OTHERS

CONTACTS

Hussein Elkhansa	Section Head	**Hussein.S.Elkhansa@wv.gov**	**(304) 558-9657**
Janet Lemon	HDS Unit Leader	Janet.L.Lemon@wv.gov	(304) 558-9599
Yueming Wu	GIS Unit Leader	Yueming.Wu@wv.gov	(304) 558-7437
Marshall Burgess	Database Administrator	Marshall.L.Burgess@wv.gov	(304) 558-9528
Larry Douglas	Project Manager	Lawrence.A.Douglas@wv.gov	(304) 558-7402
Kyle Weatherholt	District GIS Coordinator	Kyle.S.Weatherholt@wv.gov	(304) 558-7434 or 528-5936
Michelle Frame	GIS Training Liaison	Michelle.L.Frame@wv.gov	(304) 558-9588

For those of you still awake, thanks for listening and have a great day.

Quote for the Day.....

"Thanks to the Interstate Highway System, it is now possible to travel across the country from coast to coast without seeing anything." - Charles Kuralt