Back on Track:
Giving a State Rail Agency’s GIS Data the Green Signal
Introducing…

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Agencies under the Transportation Secretariat
The Virginia Department of Rail and Public Transportation focuses on moving people and goods by:

- Rail
  - Passenger Rail (State-Supported Amtrak)
  - Freight Rail (CSX and Norfolk Southern)
- Public transportation
- Commuter services

DRPT provides support for projects and programs:

- Feasibility and environmental impacts review
- Statewide rail and public transportation studies
- Major capital improvement projects and new services
- Leadership, advocacy, technical assistance, and funding
Virginia has 3,037 miles of rail lines
Passenger Routes in Virginia

Amtrak VA-Sponsored Trains served 839,446 riders in FY 2018
Why this project and why now?

- A comprehensive, statewide rail dataset did not previously exist.
  - Existing DRPT GIS data were piecemeal
  - Data variations by agency source (i.e., FRA, BTS, VGIN)
- Increased use of web mapping technology for:
  - Public consumption
  - Agency transparency and major project coordination
  - Interagency coordination
- Update to Virginia State Rail Map
DRPT’s data were all tied up...
Project Approach…

- **Identify** the major data layers
- **Define** the data types
- **Compile** publically available data from major agencies
- **Review** data for spatial/tabular consistencies
- **Create** a database with logical nomenclature and QA enhancements for quality control

...NOT LIKE THIS
Prior data issues... Spatial Completeness
Prior data issues...

Spatial Accuracy
Prior data issues…

Topology
Rail infrastructure layers

- General_Rail
  - Bridges_VA_MostCurrent
  - Crossings_VA_MostCurrent
  - Mileposts_VA_MostCurrent
  - Rail_VA_MostCurrent
  - Switches_VA_MostCurrent
  - Tunnel_VA_MostCurrent_Point
  - Tunnels_VA_MostCurrent
  - Yards_VA_MostCurrent

- Other
  - AdminBoundaries_VA_MostCurrent
  - PortFacilities_VA_MostCurrent
  - RailFreightFacil_VA_MostCurrent
  - TIDEStations_VA_MostCurrent_HRT

- Passenger_Rail
  - AmtrakStations_VA_MostCurrent
  - PassInfra_VA_MostCurrent_Point
  - PassInfra_VA_MostCurrent_Polygon
  - VREStations_VA_MostCurrent
“Interactive” deliverables

- File Geodatabase (fGDB)
- Style File
- MXD Templates
GIS Rail spatial data categorization project
Training & Workshop
September 19, 2018
DRPT’s Rail Infrastructure webmap is now available to the public!

Station Needs Assessment/Amtrak Sign Study

- Statewide assessment of Amtrak stations (20+) for state-of-good-repair improvements
- Also completing a General Assembly-mandated Amtrak Signage Study

All being aided by DRPT’s Rail GIS Database!
New State Rail Map
Room for improvement...

RECEIVED AN RFP TODAY

SO I GUESS YOU COULD SAY IT’S GETTING PRETTY SERIOUS
Potential Database enhancements

- Past & current DRPT projects and planning studies
- Enhancing the rail line for routing and locational analysis (Linear Referencing System)
- Additional attribute data:
  - Yards (ownership/business)
  - Spurs (ownership/business)
  - Mileposts (prefix)
  - Bridges (add to data)
  - Switches, interlockings, track infrastructure (link with completed project data)
- Rails to Trails and mapping of all abandoned corridors
- VA Economic Development Program’s rail-served economic development sites
- Integrate with Transit network maps and GTFS schedule information
Questions?

........ or not!