Developing a Roadway Inventory:

Collection, Validation and Maintenance

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Roadway Inventory Requirements

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Why Collect & Maintain

State & Federal Requirements

- Code of Federal Regulations, Title 23
- MAP-21 - Moving Ahead for Progress in the 21st Century Act

- Provide the ARNOLD to FHWA for Nationwide Connectivity (All Roads Network of Linear Referenced Data)
- HPMS Reporting to FHWA includes select roadway attribute data on ALL Public Roads
- MIRE Fundamental Data Elements to Improve Safety of Travel (Model Inventory of Roadway Elements)
- Traffic Count Data to Improve Mobility and Safety of Travel
- Data Driven Decision Making – Data Analytics

Roadway Inventory Collections

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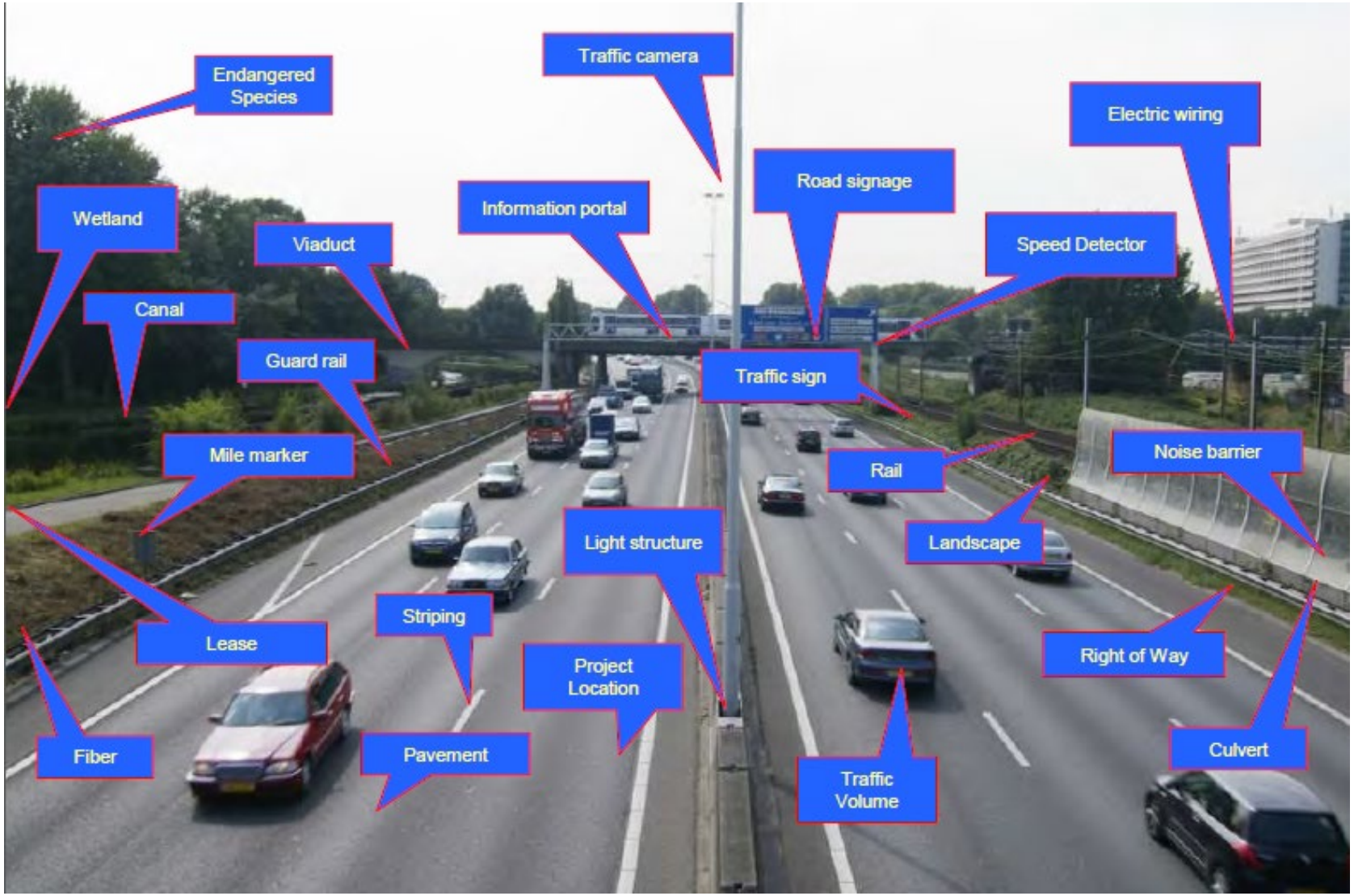
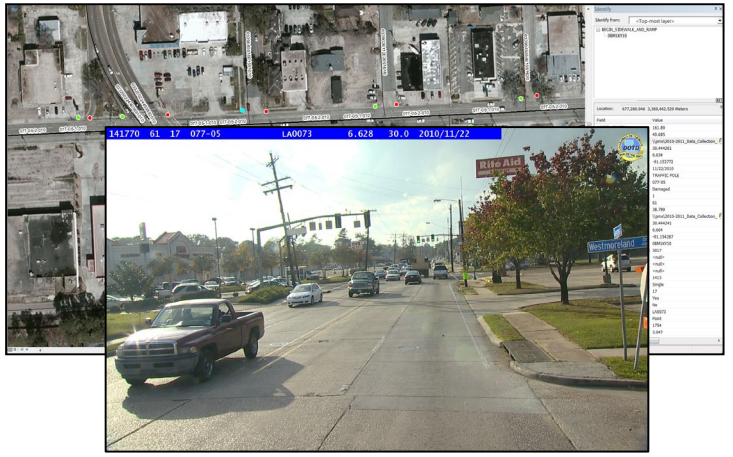
What Roadway Characteristics are Inventory Data?



What Do We Collect & Maintain

Sidewalks



Speed Limit Signs

Intersections

GOOD NEWS!
Roadway Characteristics Collected

1. Surface Types
2. Lane Widths
3. Number of Lanes
4. Median Types
5. Median Widths
6. Shoulder Types
7. Shoulder Widths
8. Turn Lane Locations
9. Curb Locations
10. Sidewalks and Ramps
11. Bridge Locations
12. Railroad Crossings
13. Intersections
14. Grades
15. Horizontal Curves
16. Vertical Curves
17. Sight Distance
18. Terrain Type
19. Speed Limit Signs
20. Roadside Cultural Features

The roadway assets listed above were collected in 2015 and loaded within the Transportation Features for all roadways that have been identified as “public roadways” based on FHWA definition in 2018. So we need your assistance!

Access, QC and Validate the Data DOTD Has Collected

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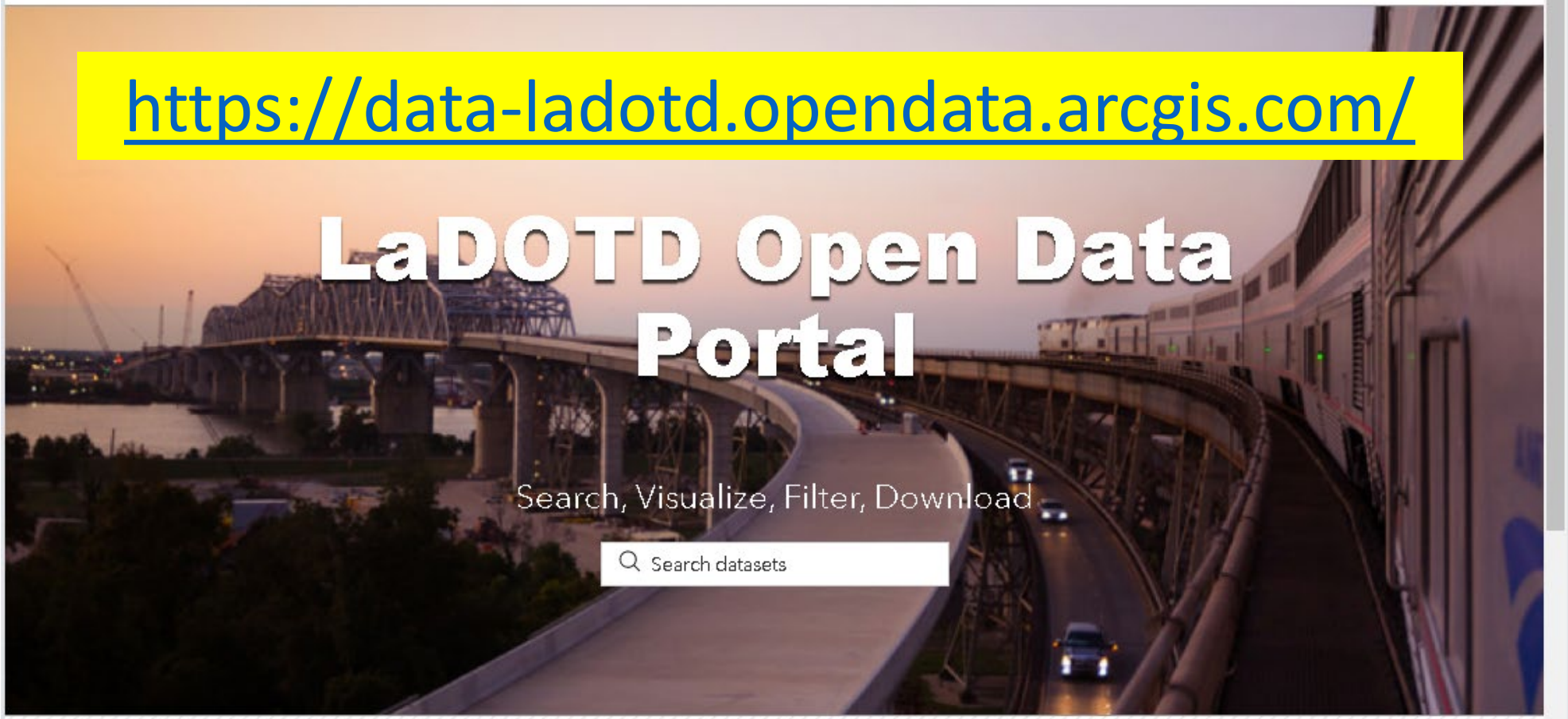
LADOTD OPEN DATA PORTAL

https://data-ladotd.opendata.arcgis.com/



Explore Data by Categories

Louisiana Department of Transpo

data-ladotd.opendata.arcgis.com

Apps | Bookmarks | GovernmentJobs |... | LAGOV | New Tab | Hightail Spaces DO... | DOTD Planning FTP | Google Maps | Leica Geosystems

LADOTD OPEN DATA PORTAL

Explore Data by Categories

Welcome to the LaDOTD Open Data Portal. The purpose of this site is to make data from LaDOTD systems and other authoritative sources widely available through an ever-growing suite of maps, applications, dashboards, and data services.

Transportation

Elevation

Land Cover

Boundaries

PLS

Hydrography

Structures

Other

BETTER NEWS!

Roadway Characteristic Maintenance

- ❑ Louisiana Roadways

These roadway characteristics are ready for **Quality Control (QC)** to be performed and **Maintenance** to begin by Local Government.

BUT

We want to assist by providing the TOOLS!

- ❑ Number of Travel Lanes
- ❑ Lane Width
- ❑ Surface Type
- ❑ Medians
- ❑ Intersection Control Type
- ❑ Curbs
- ❑ Shoulders
- ❑ Sidewalks
- ❑ Turn Lanes
- ❑ Posted Speed Limit
- ❑ Rail Crossings

Maintenance of the Roadway Data for State & Federal Reporting through DOTD

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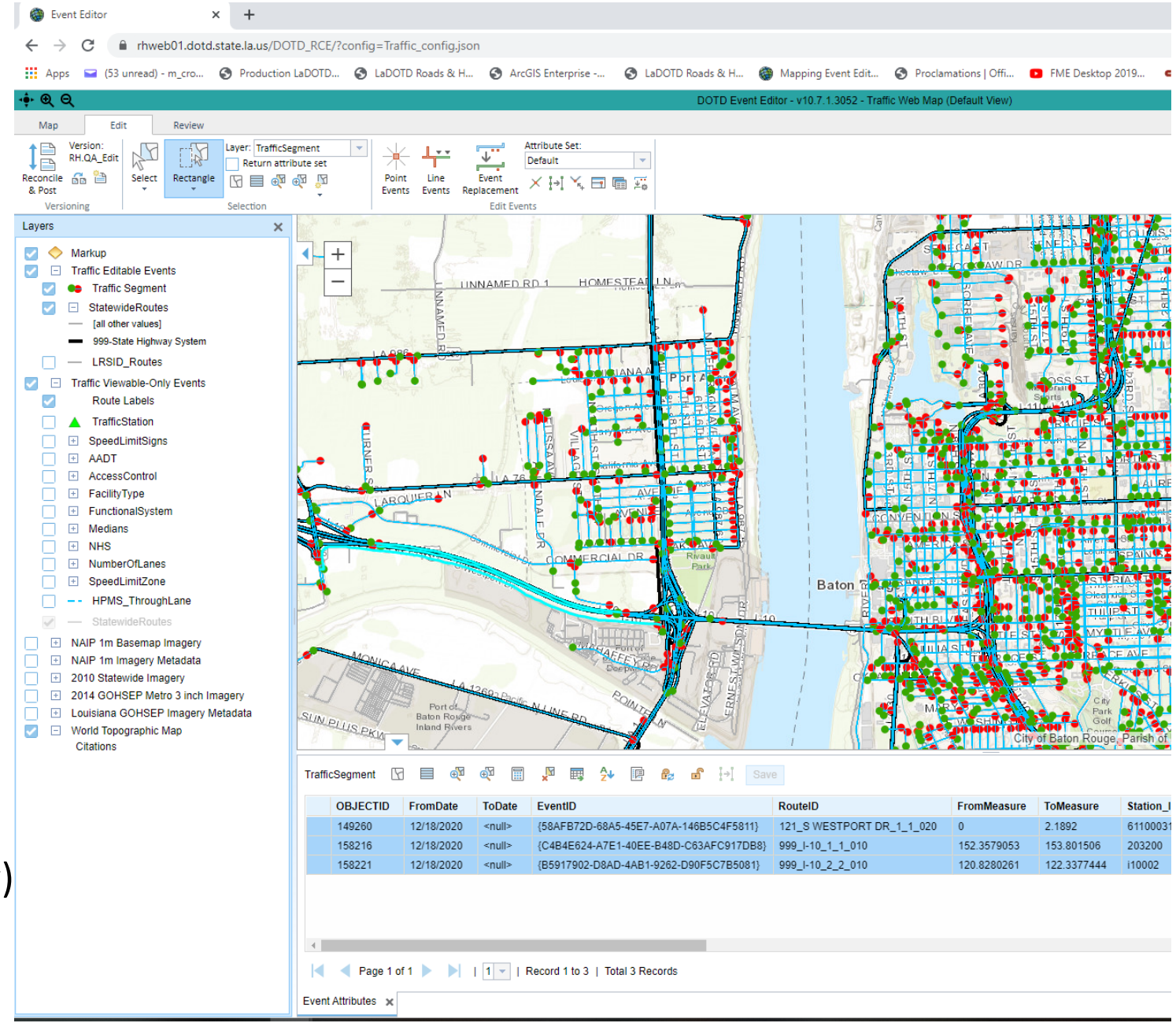
Maintenance Method #1
Event Editor

What is Event Editor?

- Event Editor (EE), aka Roadway Characteristics Editor (RCE)
- Event Editor is a web-based solution that can:
  - Distribute the workload
  - Visualize event data
  - Support linear-referenced event data editing
  - Manage event history (temporality)
  - Run quality-control checks
- Provides flexibility of entering data
  - Create events quickly using map view
  - Fix values in “attribute table” (grid view)
  - Use referents (other events) to locate events

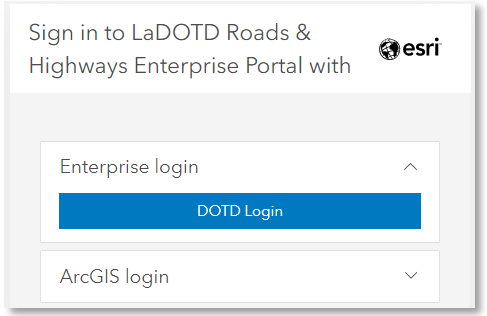


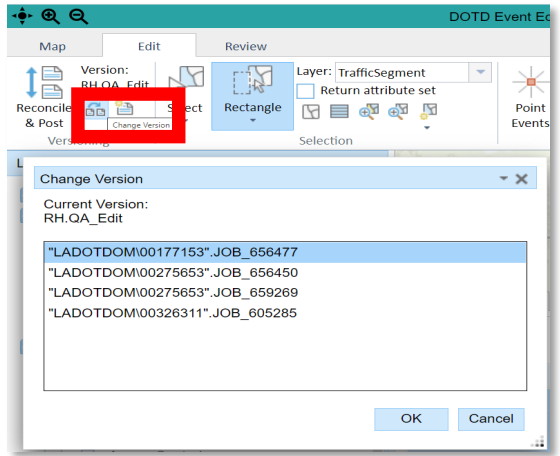
Maintenance Method #1 Event Editor

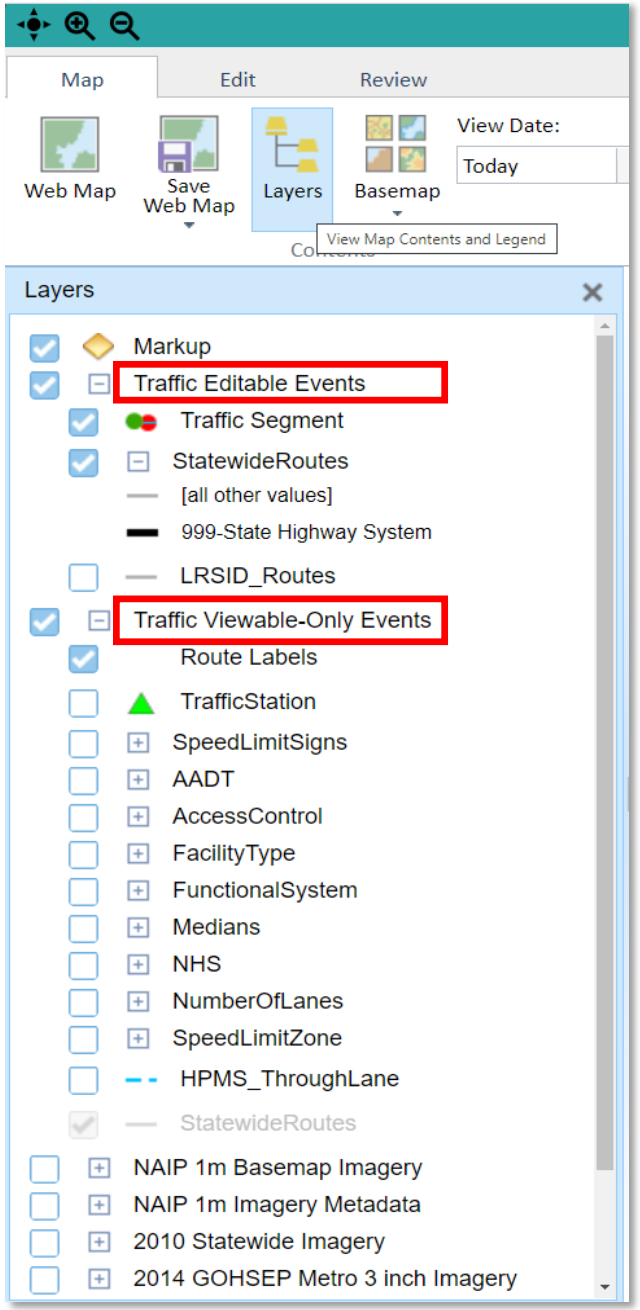
- Launch Event Editor (EE) using a Web Browser (Chrome is recommended)
- Sign in using credentials
- Verify versions and editing tools
- Verify necessary data is in the editor
  - Editable Layers
  - Read Only Layers
  - Imagery Layers
  - Redline Tool to Identify new Event Features

EXAMPLE: Event Editor Web link:

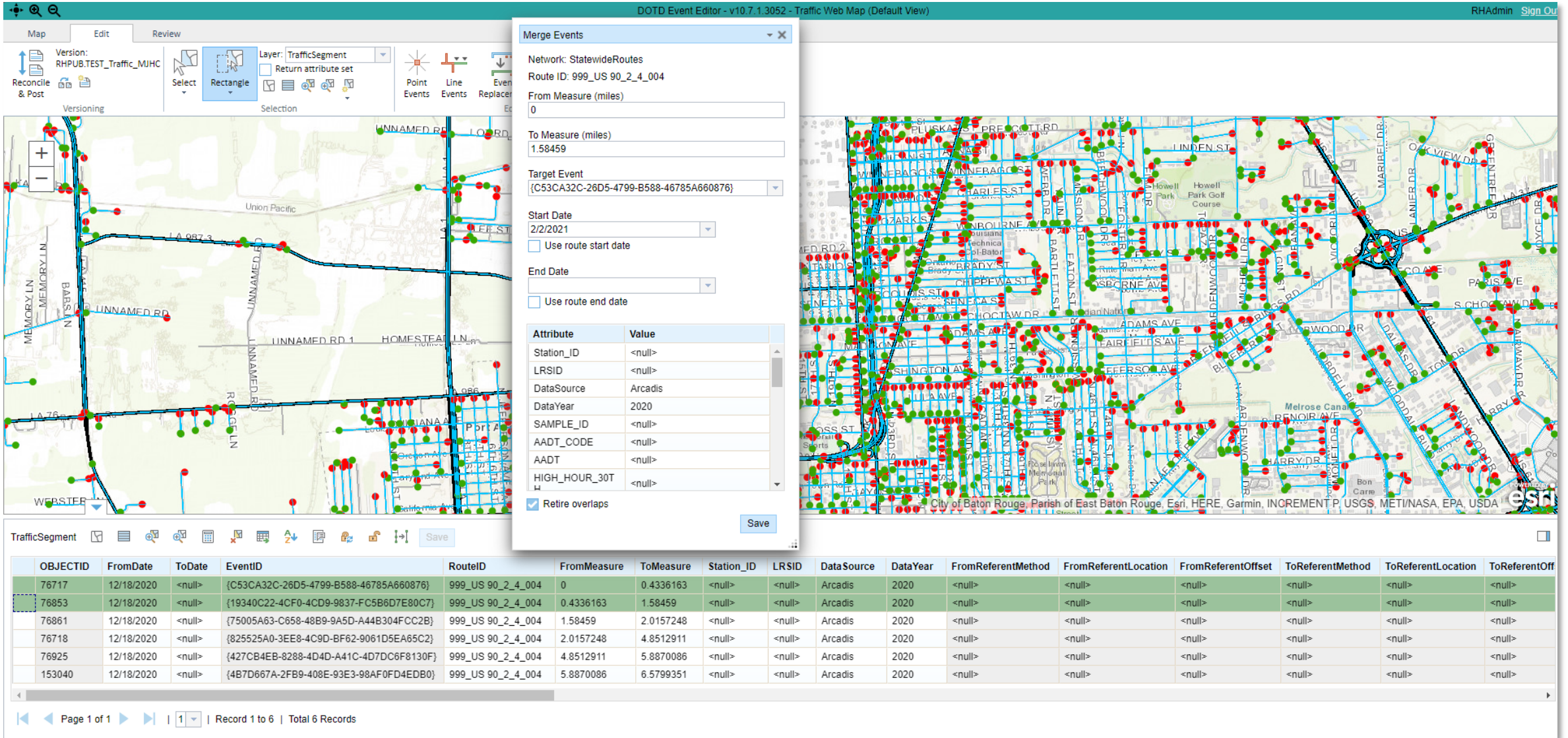
https://rhweb01.dotd.state.la.us/DOTD_RCE/?config=Traffic_config.json







Maintenance Method #1
Event Editor



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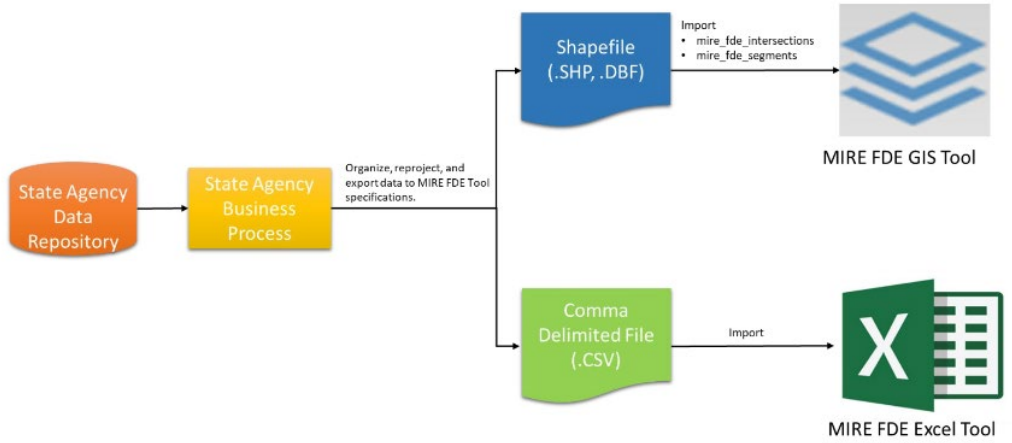
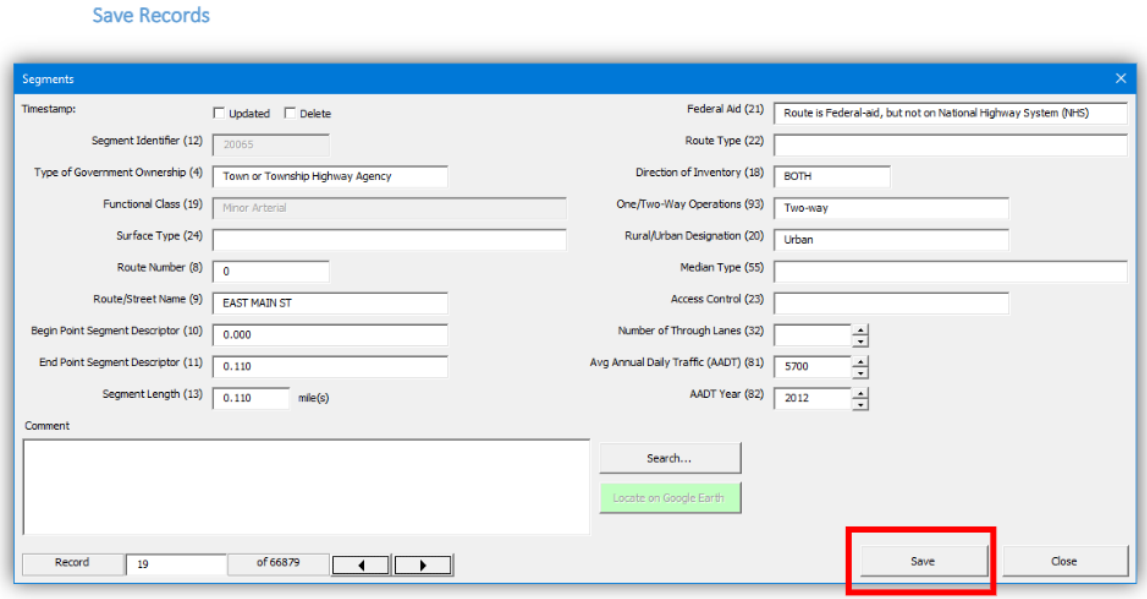
Page 1 of 1 | Record 1 to 6 | Total 6 Records

Maintenance Method #2
MIRE FDE TOOL

What is MIRE FDE Tool?

- MIRE FDE, aka Fundamental Data Element
- MIRE FDE is a Shapefile or an **Excel** solution that can:
  - Distribute copies of data
  - Visualize event data with Shapefile or Tabular Spreadsheet
- Segment Entry Form
  - Uses Google Earth to locate the line segment
  - Enter values in “attribute table”
  - Save the entries





Clicking the Save button will save all changes made to the Excel worksheet.

Maintenance Method #2
MIRE FDE TOOL

What is MIRE FDE Tool?

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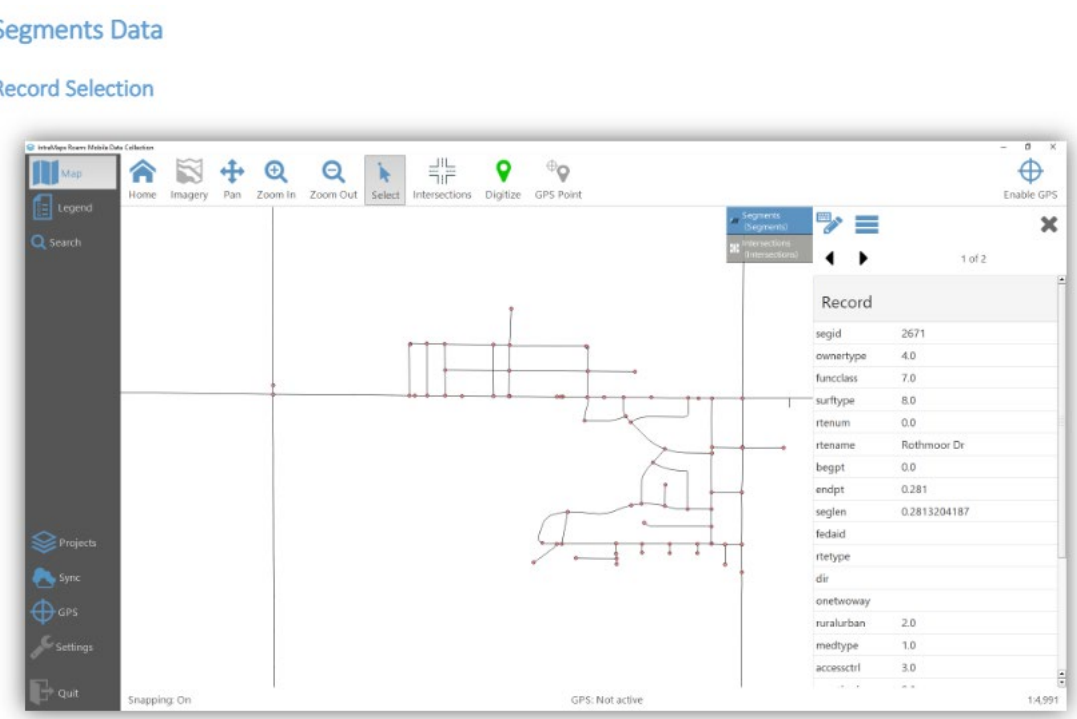
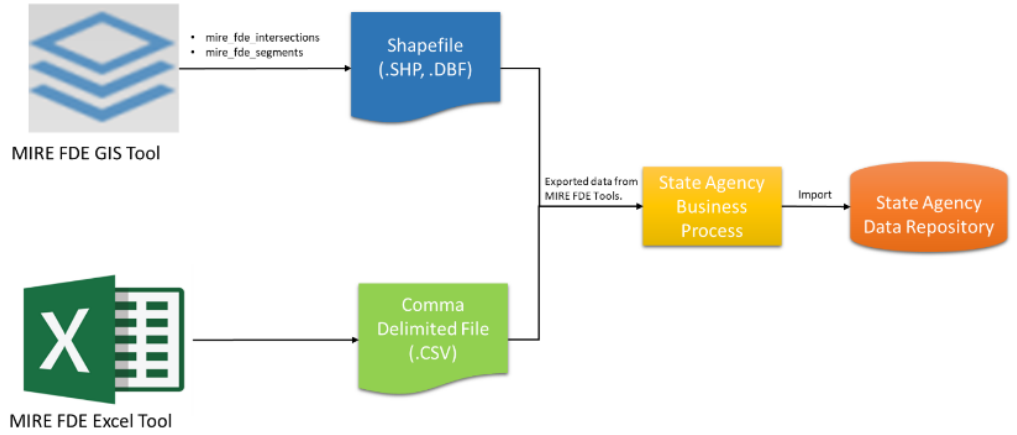
Upload the completed Shapefile or Excel table

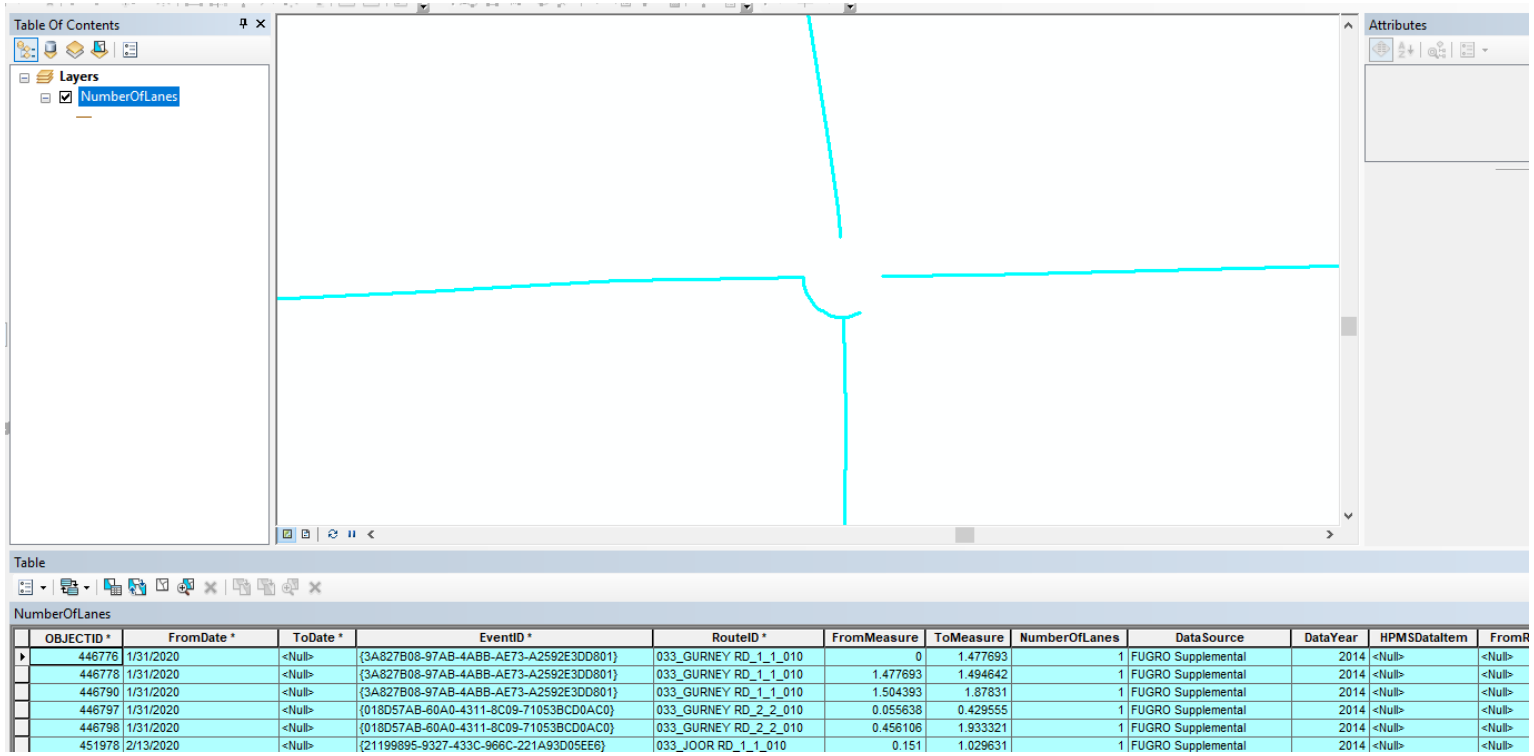




Maintenance Method #3
ArcGIS Pro & File Geodatabases

Disconnected Editing

- Use ArcGIS Pro to perform maintenance
- Download a copy of the data
- Perform edits
- Upload the latest version once a month and use change detection to replace old information with new information
- Provide Redline changes to Roadways so DOTD can maintain the changes to them



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446790	1/31/2020	<Null>	{3A827B08-97AB-4ABB-AE73-A2592E3DD801}	033_GURNEY RD_1_1_010	1.504393	1.87831	1	FUGRO Supplemental	2014	<Null>	<Null>
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451978	2/13/2020	<Null>	{21199895-9327-433C-966C-221A93D05EE6}	033_JOOR RD_1_1_010	0.151	1.029631	1	FUGRO Supplemental	2014	<Null>	<Null>

Maintenance Program

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Maintenance Program Approach

303 Municipalities
64 Parishes
8 Regional Planning Districts

- Do you have a working relationship with your specific Regional Planning District?
- Do you have a working relationship with your Parish and Municipal Roadway Maintenance Departments?
- Do you have a working relationship with your local 911 Dispatchers?

- 1 – Regional Planning Commission
- 2 – Capital Region Planning Commission
- 3 – South Central Planning & Development Commission
- 4 – Acadiana Planning Commission
- 5 – Imperial Calcasieu Regional Planning & Development District
- 6 – Kisatchie-Delta Regional Planning & Development District
- 7 – The Coordinating & Development Corporation
- 8 – North Delta Regional Planning & Development District

Bring the Key Players to the Table

- Reach out to Regional Planning Districts
- Coordinate Data Exchange Cycles Between State – Regional – Parish – Municipal Agencies
- Organize Centralized Data Hub
- Establish Systematic Approach to Receive Periodic Updates via Web Interfaces or Other Methods

- DOTD has Integrated Statewide Roadway Collection of Data into One Enterprise System
- DOTD has Established Statewide Data Distribution through Online Web Applications & Rest Services

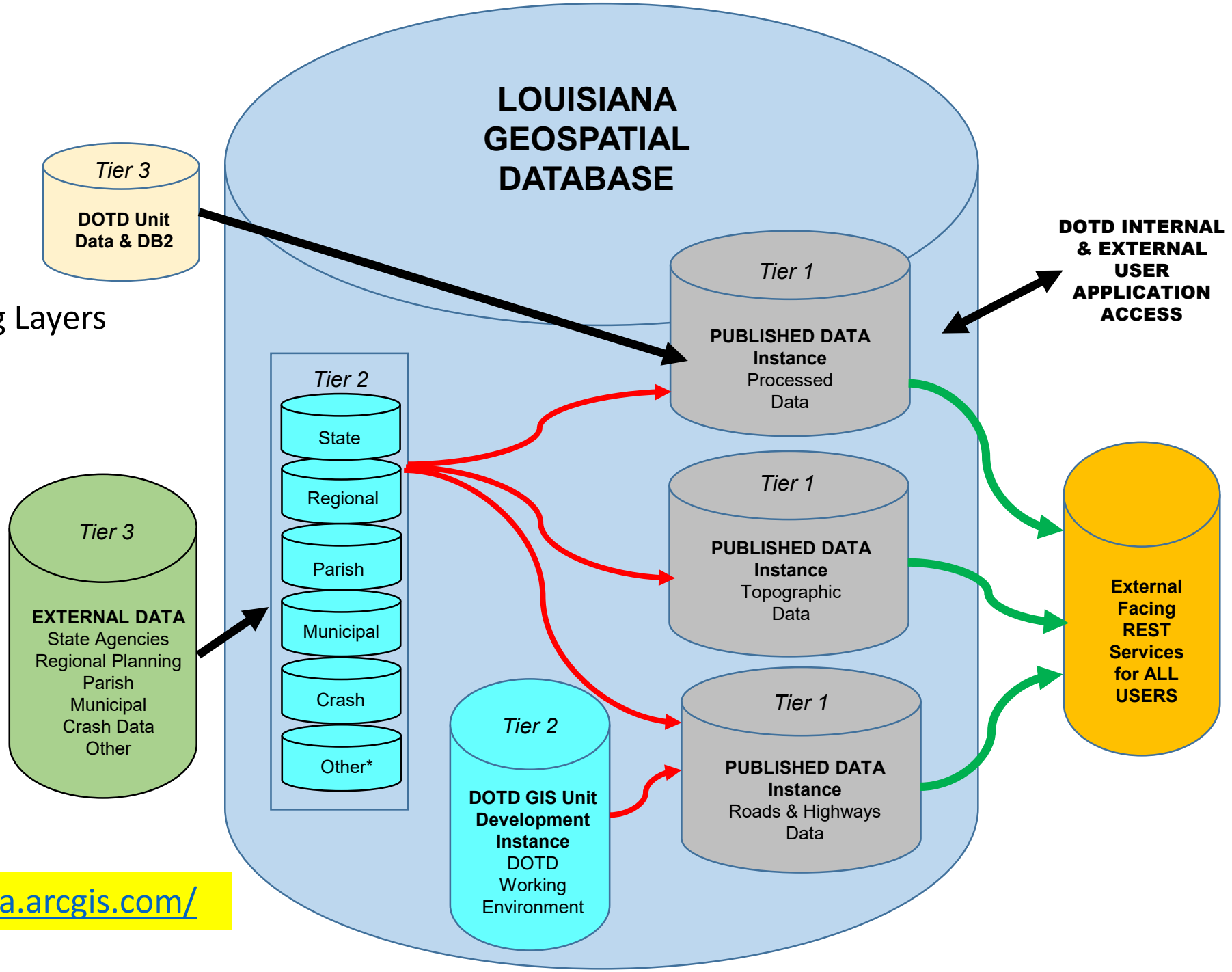
Provide Topographic Mapping Layers

Challenges:
There are 8+ “Layers”

The 8 “Layers” are made up of dozens of feature

Develop methods to get necessary local participation

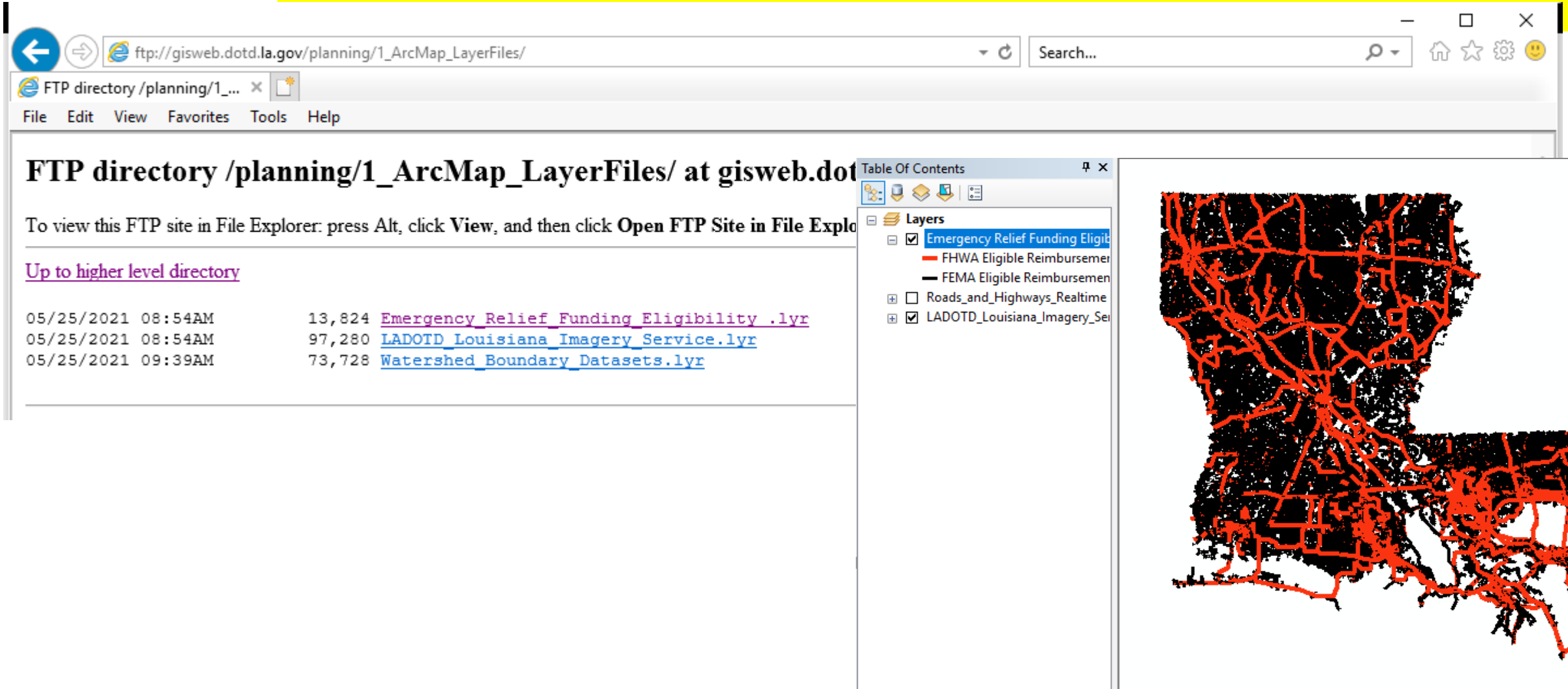
Use modern infrastructure for data exchange



https://data-ladotd.opendata.arcgis.com/

Data Access – Layer Files

ftp://gisweb.dotd.la.gov/planning/1_ArcMap_LayerFiles/



QUESTIONS

SUGGESTIONS

DISCUSSION

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