

Florida Department of Transportation Research

Roadway Data Representation and Application Development

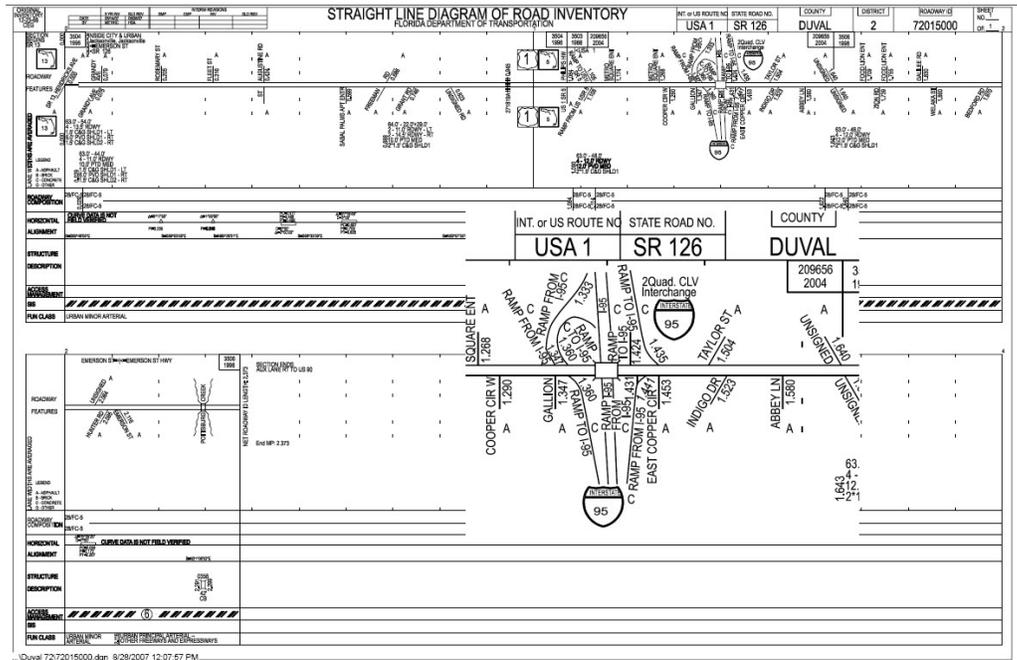
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For the past 25 years, Florida Department of Transportation planners, engineers, and technicians have relied on the straight-line diagram (SLD) to help analyze roadway data. The SLD applies technical information about a selected roadway segment and displays the features and characteristics in a straight line. Historically, SLDs were extremely tedious and time-consuming to produce. Up until the late 1980s, they were drawn by hand, taking a week or more to make one diagram. After that, FDOT began using the stand-alone application named AutoSLD to generate SLDs.

To keep pace with improvements in technology, researchers from the University of South Florida recently completed a major upgrade to the AutoSLD software. The upgraded software reduces the amount of time needed to produce a SLD while providing an enhanced product. The new software allows technicians to complete a diagram in a few hours.

SLDs are generated using data from the Roadway Characteristics Inventory (RCI). With more than two million records, the RCI is FDOT's largest database. It tracks a range of highway assets, including roadway signs, signals, lighting, guardrails, barriers, pavement, shoulders, intersecting roads, and medians. Data is recorded on 75 asset features, which are described by 271 characteristics. Each roadway is indexed by an ID number with beginning and ending mile points.

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 For more information, visit <http://www.dot.state.fl.us/research-center>



The most important factor of the improved SLD application is that it can connect directly to the RCI database. In the older SLD application, the technician had to download new data and generate a new SLD each time the RCI database was updated. Other features of the improved software include a user-friendly Web interface, a wizard to allow operators to follow pre-defined steps, and a display customization function to specify output attributes.

Future enhancements to the software may include incorporating aerial photographs, geographic information system (GIS) technology, and videologs, providing an up-to-date visual record of the state's highway system.

Although the new application is designed for the SLD producer, the benefit to FDOT customers is a better looking, more informative document.