



VISSIM Parameters & Pooled Fund Study Update

LADOTD Standard Parameters for VISSIM models

FHWA's Transportation System Simulation Manual (TSSM)



VISSIM Parameters

- ▶ *VISSIM* - microscopic traffic simulation tool that looks at the behavior of individual drivers as they react to their environment
- ▶ Looking for a more detailed document to assist in preparing a VISSIM model for LADOTD projects. A list of defaults/suggested ranges for certain calibrated parameters.
- ▶ March 3 - Meeting held with LADOTD, Consultants, and FHWA to get a game plan together on what needed to be included in establishing standard parameters for Louisiana and guidance to anyone creating a VISSIM model for LADOTD.



VISSIM Parameters

- ▶ **Feedback from initial meeting:**

- ▶ Set up an IMP file on LADOTD website that already includes correct defaults
- ▶ Develop a document (protocol) that would provide guidance during the development of a VISSIM model
- ▶ Come up with a list of Global and Calibrated Parameters (set default value and suggested ranges for calibrated parameters)
- ▶ Checklist – one standardized way of presenting information to LADOTD
- ▶ Micro-simulation Guidelines – clarifying and adding language
- ▶ Set list of MOE's depending on project type
- ▶ Standardized QAQC process for all VISSIM models



VISSIM Parameters

- Information submitted to us from Wisconsin DOT after meeting
 - Currently doing a study that compares VISSIM calibrated parameters from other states
 - Breakdown of Global and Calibrated Parameters and typical ranges being used
- Progress after initial meeting with Consultants
 - Developed set of Global and Calibrated Parameters with defaults/suggested ranges
 - A few minor changes to the micro-simulation guidelines (Phase 2)
 - 50% coded model to include 50% of the total volume, routes, and presentation to DOTD



VISSIM Parameters

- ▶ Moving Forward:
 - ▶ Finalize list of Global and Calibrated Parameters with defaults/suggestion ranges
 - ▶ Create IMP file to put on our website
 - ▶ Make adjustments to Micro-simulation Guidelines
 - ▶ Create Checklist/QAQC Process
 - ▶ Eventually create a VISSIM Protocol for Louisiana to provide guidance in developing VISSIM models for the state.



FHWA Pooled Fund Study

- ▶ Transportation Systems Simulation Manual (TSSM)
 - ▶ Despite importance of simulation, there is no definitive national guidance document on its use and application. State DOT's and other agencies are asking for a national, definitive Transportation System Simulation Manual (TSSM)
 - ▶ Microscopic and Mesoscopic
 - ▶ Pooled Fund Study with 13 states so far
 - ▶ CA, CO, LA, FL, OH, MD, MA, MI, NJ, NY, VA, WA, WI
 - ▶ More states being contacted

The slide features a light green background with a dark green arrow pointing right at the top left. On the left side, there are several thin, dark, curved lines resembling grass or reeds. The title 'FHWA Pooled Fund Study' is centered in a large, black, sans-serif font.

FHWA Pooled Fund Study

- ▶ Manual's Intent:
 - ▶ Software neutral – not tied to any specific software program
 - ▶ TRB Task Force for the Manual includes several companies
 - ▶ VISSIM, Aimsun, Dynameq, and TransModeler
 - ▶ Likely get input from companies during the project
 - ▶ Potential five (5) components of the manual:
 - ▶ Concepts
 - ▶ Model Building
 - ▶ Verification/Validation
 - ▶ Results Analysis
 - ▶ Case Studies and Supplementary Material



FHWA Pooled Fund Study

- ▶ Estimated start date: September 2016
- ▶ Completion date: 24 months



Questions