

Presentation:

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Case Study: Ontario, CA I-5 Reconstruction (Danamaq)

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Thumbnail: Case study on I-15 Ontario Reconstruction in CA with Dynameq; Design-TMP-Simulation

Notes:

Den Hartog:

Item: The challenge was to perform the I-15/Ontario pavement rehabilitation under traffic in a heavy commercial corridor – with pavement chosen to be as long lasting as possible. In addition, the project involved one of the largest malls in the region, a train corridor, a connector between Interstates 60 and 10; thin and deteriorating pavement under volume (a traffic increase of 18,000 vehicles is expected by 2013 from the 2003 rate of 196,500).

Item: EB Lee of U.C./Berkeley studied the options for CALTRANS w with CA4PRS software. The original option was paving the median, widening the under crossings and not reducing lanes of traffic. Under the plan, two lanes would shift to the median; outside lanes would be rehabilitated with weaving traffic areas on weekdays. The final decision was to use Dynameq (Mit Jha) to model six of 26 total stages required for this scenario as it is a mesoscopic model, is equilibrium-based, and is good for large-scale applications.

Raza:

Item: District 8 includes San Bernardino County, the largest in the nation in square miles. Riverside County is the second fastest growing in the U.S. A sales tax level was recently held over by 80% of the vote, so limited money and time were not acceptable arguments to this population. A need existed to model for detour traffic and impacts on other projects as well. It became clear that the public would no longer tolerate detours without full advanced planning. Thus, modeling allows the best scenarios.

Q: When was network simulation construction modeling done?

A: (Dave Thomas/PB) The decision for simulations for this project was made early, based on previous late-stage modeling experience. Modeling was started before 30% plans stage and was completed before plans went out. This model was done before the EIP, since environmental impacts were involved.

Q: How much time does *not* modeling add?

A: Modeling doesn't have to be done in sequence. It can be concurrent. It's a chicken or egg process.

Q: Does the model include how it affects pavement structure?

A: The model provides additional volumes and travel times on arterials and diversion routes, but not pavement impact.