

Madhu Narayanasamy, AICP*Senior Transportation Analyst*

Mr. Narayanasamy is a transportation planner for Wilbur Smith Associates' Houston office. His project involvement includes transportation planning studies, major corridor feasibility studies, economic and financial analysis, urban planning, and urban design strategies. He has extensive experience in numerous transportation related computer software programs including HCS, Synchro/SIMTRAFFIC, SIDRA, Microstation, AutoCAD, TransCAD, ArcGIS, ArcView, VISSIM, Sketchup, and Adobe CS2. His specific project experience includes:

SH 130 and SH 45 Corridor Development Strategy, TX – The city of Pflugerville is enjoying a robust boom in residential development. However, the community has very few opportunities to build a strong commercial core that would permit a diversified tax base and improve long term self-sufficiency. Mr. Narayanasamy developed a land use suitability model to project probable development patterns and calculated the fiscal/economic impact of these development patterns based on the proposed corridor. He also prepared the transportation (streetscape and parking) guidelines of the form based code developed by WSA as development strategy for the study area.

FM 2920 Access Management Study, Houston, TX – WSA was selected to evaluate traffic operational issues for FM 2920 from west of US 290 to east of IH 45. This 32-mile corridor is diverse in its physical and operational characteristics. Between IH 45 and Tomball, it is constrained by development and is heavily utilized, while west of SH 249 it is sparsely developed. The purpose of the study is to develop an access management plan for the FM 2920 corridor which will allow for economic growth and rational development while maintaining or improving safety and mobility along the existing roadway. Mr. Narayanasamy developed the micro simulation model of this corridor between SH 249 to IH 45 (seven miles) in VISSIM to identify the accessibility, mobility, and safety issues and provide mitigation measures. The VISSIM model was also calibrated to ensure that traffic conditions in the real world are sufficiently replicated by the simulation model.

Louisiana Statewide Transportation and Infrastructure Plan Status Report and Update – Louisiana DOTD is in the process of reviewing the 2003 Louisiana Statewide Transportation Plan. The occurrences of Hurricane Katrina and Rita which created changes in both demographics and infrastructure, as well as policy changes, created the impetus for this update. Mr. Narayanasamy analyzed the transportation and environmental impact of widening I-10 from Lafayette to Baton Rouge and upgrading US 190 to a freeway facility between Opelousas to Baton Rouge using TransCAD and ArcGIS. This comparison was used by the Policy Committee to determine which project would be kept in the MegaProject listings.

Grand Parkway Segments H&I-1 EIS and Schematic, TX – The 36-mile northeast segment of the Grand Parkway (SH 99), which will be part of the proposed 170-mile outer loop and scenic highway serving the Houston region. This project is being completed for the Grand Parkway Association, a non-profit state transportation corporation authorized by TxDOT minute order in 1984. Mr. Narayanasamy identified environmental constraints, performed traffic forecasting, crash analysis, and field investigations.

IH 45/Hardy Traffic Study, TxDOT Houston District, TX – WSA was selected by TxDOT to evaluate existing and future mobility conditions on IH 45 and Hardy Toll Road corridors from just north of Beltway 8 to downtown Houston. Mr. Narayanasamy, as project engineer, assisted the formed team by analyzing existing traffic patterns, projecting traffic patterns for the future years, analyzing safety conditions and to transform the highly technical reports comprising this study into a single final document which is graphically more appealing.