

Summary of Professional Qualifications of Frederick Fontanilla Choa

Education

Bachelor of Science, Civil Engineering, California State Polytechnic University at Pomona, 1992
Master of Science, Civil Engineering, University of California, Berkeley, 1995

Professional Affiliations

Traffic Engineer, State of California (TR 1830)

Current Experience, ICF

Principal Transportation Engineer (1994 to Present)

Fred Choa, P.E., is a Principal in Fehr & Peers' Sacramento office. He is a registered Professional Traffic Engineer in California with 22 years of experience in multi-modal transportation planning and traffic engineering. Fred also serves as Fehr & Peers' National Traffic Operations Expert due to his expertise in multi-modal operations analysis and simulation. While Fred has worked throughout the western U.S., the majority of his projects are located in California. As a company-wide expert in multi-modal operations, Fred regularly works on complex projects involving a wide variety of modes and operational issues including Signal Coordination, Multi-Modal Traffic Operations, Transit Operations, Transit Signal Priority, Interchanges, Freeway Corridors, HOV lanes and HOT lanes. He has published several professional papers on issues related to traffic operations and simulation for the Institute of Transportation Engineers and the Transportation Research Board.

Fred has served as the Project Manager or the Lead Transportation Operations Analyst in the development and analysis of multi-modal transportation systems, including Light Rail Transit, Bus Rapid Transit, Pedestrians and Bicyclists and their interaction with private automobiles and heavy vehicles. In addition, projects often involved the evaluation of unique design alternatives, such as roundabouts, single point urban interchanges, and continuous flow intersections.

Previous Experience, Korve Engineering

Transportation Engineer (1993 to 1994)

After graduating from California State Polytechnic University at Pomona, Fred relocated to the San Francisco Bay Area where he joined Korve Engineering as a transportation engineer with an emphasis in multi-modal transportation studies including the TransBay Terminal Project and the I-680 HOV Lane Project.

Publications

- *A Comparison of Partial and Full Cloverleaf Interchange Operations Using the CORSIM Micro-Simulation Model*, co-authored with Ron T. Milam, ITE Conference Paper, July 1998
- *Recommended Guidelines for the Calibration and Validation of Simulation Models*, co-authored with Ron T. Milam, ITE Conference Paper, July 2000
- *HCM and CORSIM, Resolving the Differences*, co-authored with Ron T. Milam, TRB Conference Paper, July, 2001
- *CORSIM, Paramics, and VISSIM, What the Manuals never Told You*, co-authored with Ron T. Milam and David Stanek, ITE Conference Paper, July 2002
- *The Best Simulation Tool for Bus Rapid Transit (BRT) Operations*, co-authored with Ron T. Milam, TRB Conference Paper, April 2002

- *Bridging the Gap Between Travel Demand Forecasting and Design*, co-authored with Ron Milam, ITE National Conference, July 2003
- *Why HCM Fails the Weaving Test*, co-authored with Chang Park, ITE District 6 Conference, June 2004
- *Putting the "Rapid" in Bus Rapid Transit*, ITE District 6 Conference, June 2004