

Manuel A. Soto

Senior Associate



Manuel Soto is a transit planner and urban designer with more than 15 years of experience in the evaluation of urban form, land use and the transportation systems serving the corresponding mobility needs and travel demand markets. His expertise includes high-capacity alternative analysis and planning, and the design and implementation of BRT, Commuter Express, Fixed-Route, and Shuttle service for public and private systems across the United States.

EDUCATION

Master of Urban Planning, University of California, Los Angeles, CA
Urban Economics Diploma, Instituto de Economía, Pontificia Universidad Católica de Chile
Architecture, Professional Degree & License, Escuela de Arquitectura, Pontificia Universidad Católica de Chile

EXPERIENCE

Nelson\Nygaard Consulting Associates Inc.
Senior Associate, 2007–Present

Bus Operations Analysis and Short Range Transit Planning

- Currently working on a bus operations review and capacity constraints analysis for Oahu's TheBus service in Honolulu (HI). Analysis and recommendations are designed to help the system with severe capacity and overcrowding issues on board vehicles and on the street.

High Capacity Transit (HCT) system planning and alternatives analysis

- Evaluated HCT alternatives and LRT implementation options for WSDOT SR 520 Bridge Replacement Project in Seattle, including the analysis of transit operations and circulation needs, passenger transfers impacts, potential LRT alignments and markets, bridge section analysis and LRT/HOV lanes right-of-way analysis.
- Conducted and managed a service alternatives analysis of HCT systems in the SR-134 Ventura Freeway corridor in Los Angeles, linking the Metro Gold Line (light rail) in Pasadena with the Metro Red Line (subway) and Orange Line (BRT) in North Hollywood. Alternative routing analysis included efficiency and effectiveness evaluations of LRT, BRT, and express bus service.

Commuter express bus planning, design and implementation

- Planned service, designed route network and led street implementation of Microsoft Corporation's 'the Connector' a commuter express transit system for Microsoft employees in the Puget Sound Region (Seattle metropolitan area) serving more than 3,500 passengers daily on 19 regional routes. The Connector is a major contributor to reductions in freeway congestion and drive-alone mode split to Microsoft's Campus in Redmond, WA and GHG emissions reductions in the region.

Local Transit Development Plans

- Led development of an analysis framework to identify local transit markets, evaluate impacts of transit service improvements, and prioritize investments in transit service on key multimodal corridors in the City of Redmond (WA).

Campus shuttle service planning, design and implementation

- Analyzed performance, redesigned service, and supported implementation of new shuttle service connections for Seattle Children's Hospital and Regional Medical Center. Children's shuttles provide connections to remote parking, remote research facilities, and to major transit hubs in Seattle for commuters. Children's shuttles are a major strategy to reduce drive-alone to campus. The service restructuring resulted in more than \$500,000 in annual savings while increasing quality and reliability.

Ridership forecasting, GIS analysis and market research

- Assessed long distance commute needs, designed bus service options and forecasted ridership for the Victor Valley Transit Authority (CA) to evaluate potential performance of new commuter express services into the

Los Angeles metro area. Conducted market research, GIS location analyses, ridership projections, park-and-ride and on-street stop exploration, and permit negotiation with SDOT, King County, Metro, Sound Transit, and Community Transit for implementation of the Connector service.

Service performance evaluation and monitoring

- Developed performance standards, monitored performance and recommended adjustments to improve system wide service performance and guide system growth for Microsoft's Connector system.

Vehicle analysis and service operations costing

- Conducted vehicle evaluations for the Connector and Children's shuttles in relation to seating capacity, alternative fuel, ride comfort, passenger amenities, ADA accessibility, and overall cost-benefit. Developed capital and operating costs of restructuring existing service and starting up new service.

Schedule writing, vehicle blocking and runcutting

- Collected running times and developed service schedules for the Connector. Wrote schedules, vehicle blocks, cut runs, and prepared driving assignments and 'run sheets' for Children's shuttles.

PREVIOUS EXPERIENCE

Transportation Management and Design, Inc.

Senior Manager, 2003–2006; Senior Associate, 2001–2003

BRT operational design and implementation

- Worked with the Los Angeles County Metropolitan Transportation Authority (LACMTA) in the development of its Metro Rapid Bus master plan encompassing 28 bus corridors in Los Angeles carrying more than 10,000 passengers daily each. Designed service, planned operations, and worked on street implementation of the first 6 Metro Rapid Bus lines in the plan. The system has implemented more than 20 corridors to date, increased average bus speed by 30%, improved reliability, reduced travel times and attracted new riders.

BRT/HCT vehicle analysis, station design, and station siting

- Conducted cost-benefit evaluations of high capacity transit vehicles for LACMTA operations, worked in the design and branding of Metro Rapid stations, and site placement of stations.
- Conducted transit signal priority and traffic operations analysis on the Wilshire Blvd. corridor to improve service reliability and maintenance of bus headways.

Fixed-route bus service design

- Designed bus routes and restructured route networks for Metro in Los Angeles (involving more than 150 routes and more than 2,400 vehicles); the Maryland Transit Administration in Baltimore (more than 60 routes and 600 vehicles); the Valley Transportation Authority in San Jose (more than 50 routes and 350 vehicles); Long Beach Transit (more than 35 routes and 150 vehicles), Omnitrans in San Bernardino (more than 25 routes and 100 vehicles), and Torrance Transit (8 routes and 50 vehicles).

Community shuttle service planning and design

- Re-designed shuttle service for the Warner Center TMO to connect with the Metro Orange BRT Line in Los Angeles' San Fernando Valley.
- Worked for the Chicago Transit Authority in the performance evaluation and re-design of its Chicago Central Area shuttle service connecting with Metra rail commuters and providing mobility to residents and visitors of downtown Chicago.
- Shuttle service design for Los Angeles DOT Community DASH program.

Unmet travel needs assessment

- Managed a citywide travel needs assessment study for LADOT's Community DASH shuttles that involved extensive community outreach, GIS mapping, statistical analysis and developing a performance evaluation model to select and prioritize shuttle service according to expected cost-benefit and productivity indicators.

The study evaluated performance on more than 100 potential routes provided by city leaders and the community and selected 10 routes for implementation in addition to LADOT's current 27 Community DASH routes.

Comprehensive operational analysis and service restructuring

- COA work and TDP experience includes the Countywide Network Master Plan for Los Angeles Metro (working with 5 service planning sectors); the Greater Baltimore Bus Initiative, a comprehensive bus service restructuring, service implementation, and scheduling work for the Maryland MTA in Baltimore (achieving \$5 million in savings); the Comprehensive Operational Analysis for the Santa Clara VTA (achieving \$0.5 million in savings–1st Draft); and COA work for mid-size and small systems in California such as Long Beach Transit, Torrance Transit, and Omnitrans.

Service performance evaluation and monitoring

- Conducted a mid-term performance review of the Metro Rapid Bus implementation program (with 15 corridors in operation) including cost-benefit, productivity and service quality indicators on a corridor-by-corridor basis. Conducted service operations, reliability and operations management analyses on the Wilshire MRB corridor, including the design of new “Metro Rapid Express” service, and identifying strategies for reducing travel time and increasing average bus speed in the corridor.

Ridership forecasting, statistical analysis and GIS market research

- Developed ridership forecasts based on GIS mapping analysis, market research surveys, passenger surveys, and statistical analysis of socio-economic indicators for the City of Los Angeles DOT, Baltimore MTA, and Santa Clara VTA.

Passenger survey, ridecheck and timecheck data-collection management

- Managed personnel, organized and conducted on-board passenger surveys, transfer surveys, intercept surveys, ridechecks, point checks, and time-checks as part of bus restructuring work (COA and TDP) and Metro Rapid Bus planning work.

Conduct stakeholder meetings/workshops and facilitation

- Conducted stakeholders' interviews, one-on-one and open-house meetings, and public hearings. Facilitated workshops and charrettes with transit service planning and operations staff.

Department of Urban Planning, University of California, Los Angeles

Special Reader, 2000–2001

- **Teaching assistance and editing.** Assistant Teacher for Masters in Urban Planning courses on GIS mapping and analysis, statistics, and financial analysis. Assisted UCLA professor Donald Shoup with proof reading and editing of parking papers.

EDAW (formerly Cotton/Bridges and Associates)

Student Intern (July 2000–October 2000)

- **Database design and GIS analysis.** Conducted fieldwork, parking inventory, database construction, and GIS analysis for the City of Vernon in its freight-truck parking, loading zones, and automobile parking requirements study.

SUROESTE Consultores, Santiago, Chile

Urban Planning Team Manager, 1996–1999

- **Travel demand modeling and land use forecasting.** Worked on interdisciplinary transportation planning projects – for mid-size Chilean cities (Temuco, Chillán, Antofagasta, La Serena and Coquimbo), evaluating urban form, density, land use development trends and mobility needs. Forecasted land use growth to feed four-step transportation demand models to identify, evaluate and prioritize transportation infrastructure projects required to sustain urban growth.
- **Conducted stakeholder meetings/workshops and facilitation.** Conducted and facilitated meetings and workshops with local stakeholders and community leaders of mid-size cities to analyze population and

employment patterns, identify land use trends and travel demand needs, evaluate urban form and recommend new transportation infrastructure projects.

- **Bus-only lane planning and design.** Worked on preliminary engineering and urban design for the Intermediate Ring Transit Expressway, a transit-only facility that traversed 13 cities within Metropolitan Santiago. Planned and designed for intermodal connections and stations with the Metro subway network.
- **Urban Planning, zoning and specific plans.** Developed zoning plan for the City of Puente Alto, Santiago's largest suburb with more than 500,000 residents and a projected population of 1 million residents in year 2020. This included developing the land use, housing and transportation elements of the plan, and work with subconsultants on the EIS
- **GIS Mapping and Analysis.** Conducted economic impact studies, along Santiago's arterial street network, of eminent domain takings planned by the Metropolitan Area General Plan. This included extensive GIS spatial analysis, real estate market research and assessment of land values.

URBE Arquitectos, Gestión y Planificación Urbana, Santiago, Chile

Associate, 1993–1996

- **Urban Planning, zoning and specific plans.** Conducted real estate market research, developed specific plans and urban design guidelines for new residential developments in Santiago.
- **Urban Design and Master Planning.** Worked in architectural design, urban design, and master planning for lakeshore and seaside tourist resort projects.

AFFILIATION, PRESENTATIONS AND AWARDS

- American Planning Association, Member since 2006
- Implementation of Microsoft's Connector Bus Program–APTA Intermodal Operations Workshop, Salt Lake City, UT, 2009
- Seattle Children's Hospital TDM and Shuttle Service Program–Latin American Conference in Urban Transportation Planning, Buenos Aires, Argentina, 2009
- LADOT Community Shuttle Service Planning and Performance Forecasting–APTA intermodal Operations Workshop, Minneapolis, MN, 2005
- Metro Rapid Bus Mid-Term Performance Analysis–APTA Intermodal Operations Workshop, Vancouver, BC, 2004
- Metro Rapid Bus High Capacity Vehicle Efficiency Analysis–APTA Intermodal Operations Workshop, Los Angeles, CA, 2003
- UCLA Urban Planning Department Award for outstanding teaching assistantship, 2001
- UCLA Urban Planning Department Fellowship, 2000-2001