BIOGRAPHICAL SKETCH

Khaled Shammout offers more than 11 years of experience in transit service planning, architecture, transportation planning, and project management. Mr. Shammout joined TranSystems from the Central Ohio Transit Authority in 2002.

EDUCATION

M.C.R.P., (Master of City and Regional Planning), The Ohio State University, 1995 M.S., Civil Engineering (Transportation Planning), The Ohio State University, 1995 B.S., Architecture, The Ohio State University, 1990

PROFESSIONAL REGISTRATION

American Institute of Certified Planners, #19387

AFFILIATIONS

Member, American Planning Association (APA) # 153358 Member, Institute of Transportation Engineers (ITE) # 42779 Member, ITS America's Advanced Public Transportation Systems committee, 1999–Present

RELEVANT EXPERIENCE

ARCHITECTURE PROJECTS

Nashville Metropolitan Transit Authority Downtown Transit Center

In addition to managing the operational analysis task for this project, Mr. Shammout is also provided input on the new transit center site location determination, general planning issues and design requirements for intelligent transportation systems. Mr. Shammout also lead one of the design teams through the initial design phase for the planned Downtown transit center.

Kansas City Area Transit Authority (KCATA) Transit Center Feasibility Study, Kansas City, Missouri

Mr. Shammout performed a site location analysis to determine a site for a transit center and a park-and-ride sufficient for KCATA needs. He prepared a conceptual design to determine space requirements and an order of magnitude construction cost estimate.

Central Ohio Transit Authority, Linden Transit Center, Columbus, Ohio

As part of a committee working with a consultant, Mr. Shammout provided general planning and design input on location, access, zoning, accessibility, and economic impact issues for the Linden Transit Center. Linden Transit Center is one of the first projects under the Clinton-Gore Livability Initiative for



the 21st Century and is a national model for sustainable transit oriented development. In addition to transportation services, the transit center also houses a 24-hour day care center, bank, and health care center.

Central Ohio Transit Authority, Easton Transit Center, Columbus, Ohio

Mr. Shammout was involved in the transit center planning efforts providing input on general planning issues (i.e., location, access, zoning, accessibility, and economic impact) and making recommendations for site determination and site design. The transit center included a covered platform accommodating eight 40-foot buses and an indoor passenger waiting area, ticket sales office and amenities.

Central Ohio Transit Authority, Downtown Multimodal Transit Terminal, Columbus, Ohio

Mr. Shammout was involved in the transit center planning efforts providing input on site location determination, general planning issues and design requirements for intelligent transportation systems (e.g. dynamic message signs, communications requirements).

Mid-Ohio Regional Planning Commission and Ohio Department of Transportation, Transportation Management Center (CORTRAN), Columbus, Ohio

Mr. Shammout was involved, as part of an oversight committee, in the planning efforts of the CORTRAN facility. Mr. Shammout provided input on general planning issues (i.e., location, access, zoning, accessibility, and safety) and made recommendations for site determination and preliminary design of the 45,000 sq. ft. facility.

Capital District Transportation Authority, Albany, New York

Mr. Shammout provided architectural designs for transit station and bus shelters.

Interior Design for Engineering Firm Office, Columbus, Ohio.

Interior design and space planning for the renovation of 2,000 sq. ft. of office space for an engineering consulting firm in Columbus, Ohio. Work efforts included construction administration and management.

Sunrise Academy Expansion, Hilliard, Ohio.

Provided planning and design services for the expansion of an existing 9,000 sq. ft. private school. The expansion project doubled the size of the facility. The project included programming, complete design services and construction administration.

International Academy of Columbus Renovation and Expansion, Columbus, Ohio.

Provided planning and design services for the expansion of an existing 10,000 sq. ft. school. The project included programming, complete design services and construction administration for the renovation of the existing building into classrooms and administrative area and constructing 9,000 sq. ft. of additional classroom space.

Ibn Taymia's Somali Community Center, Columbus, Ohio.

Interior design and space planning for the renovation of 12,000 sq. ft. community center in Columbus, Ohio. The center included multiple classrooms, meeting rooms and a library.



Single Family House, Dublin, Ohio.

Planning and design for a 3,200 sq. ft. single family house. The project included programming, complete design services and construction administration.

TRANSIT PLANNING PROJECTS

Nashville Metropolitan Transit Authority Downtown Transit Center

Mr. Shammout assisted in the operational analysis task for this project. The results of this investigation were used by the rest of the team to complete site selection process for the new downtown transit center. In addition to investigating and analyzing the agency's service and operations, Mr. Shammout managed the two ridership count and transfer surveys.

Central Ohio Transit Authority's Multimodal Transportation Corridor Study

Mr. Shammout provided planning-related input and analysis for COTA's Multimodal Transportation Corridor Study. The study assessed the benefits, costs and impacts of various transit modes in the North Corridor area. The study aimed at improving mobility and access in the study area, reduce environmental impacts by attracting travelers to transit, and enhance economic development in the study area.

Mid-Ohio Regional Planning Commission and Central Ohio Transit Authority's Major Investment Study

Mr. Shammout was actively involved in the light rail Major Investment Study (MIS), providing input to various facets of the project, which included economic impact analysis, operating and maintenance cost analysis, and analysis of land use issues, containment of sprawl and transit supportive corridor policies.

Central Ohio Transit Authority's Short and Long Range Planning

As a member of the Planning Department at COTA, Mr. Shammout was involved in COTA's daily service planning activities. In addition, he was involved in developing COTA's biennial Short Range and Long Range plans.

Central Ohio Transit Authority's Comprehensive Operational Analysis.

Mr. Shammout provided analytical support to Comprehensive Operational Analysis and assisted in developing service routes based on demographic, economic, spatial, and employment factors.

Central Ohio Transit Authority's Public Outreach Effort

While at COTA, Mr. Shammout was involved in numerous public outreach meetings and public involvement workshops. Mr. Shammout was engaged in preparing for the meetings and participated in conducting some of the meetings. His contributions to the public involvement and outreach meetings were for the following projects:

- Multimodal Transportation Corridor Study
- Major Investment Study
- Comprehensive Operational Analysis

Central Ohio Transit Authority, On-Board Transit Survey, Columbus, Ohio



Mr. Shammout took part in COTA's on-board transit survey. The survey looked at demographic, social, economic, employment, and travel pattern of transit riders. He was involved in the analysis of the surveys as well as in making service recommendations based on the survey results.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PROJECTS

Tennessee DOT Statewide Rural ITS Procurement

Mr. Shammout is leading the effort in developing a statewide request for proposals (RFP) to be used by TDOT to procure demand-response scheduling and dispatching software, automatic vehicle location (AVL), and mobile data terminals (MDTs) for rural and urban transit systems. The effort includes review and assessment of the management systems and business practices in use at the participating transit systems as well as the development of the technologies functional specifications.

Guidance for Developing and Deploying Real-Time Traveler Information Systems for Transit, Federal Transit Administration

Mr. Shammout provided detailed technical input to the FTA's Real-Time Transit Information System project, which identified and documented successful implementations of these systems, and provided guidance to transit agencies on implementing and operating real-time transit information systems. The study investigated the various aspects of these systems, including electronic display signs, prediction software, power and communications requirements as well as management and procurement needs.

Grand Rapids ITS Plan

Mr. Shammout is the technical lead in the design and implementation of a technology deployment project for Grand Rapids metropolitan area transit system, the Interurban Trnsit Partnership(ITP). Khaled led the preparation of a strategic technology implementation plan for ITP which was completed in 2004. Mr. Shammout is now leading the system design and procurement assistance. TranSystems will assume project management responsibility including oversight of the vendor's activities, system testing, and ITP staff integration.

Lake Erie Transit ITS Planning and Management Services

Mr. Shammout is leading this project to assist in planning, procuring and implementing ITS applications. This effort involves a comprehensive suite of applications, including AVL, APC, onboard next stop announcements, an upgraded fare system and real-time next bus signs at major stops.

FTA ITS Architecture Oversight and Assistance

Connecticut DOT (ConnDOT)/Greater Bridgeport Transit Authority (GBTA)

Mr. Shammout provided a variety of ITS technical and architecture assistance to ConnDOT and GBTA. He provided assistance to ConnDOT/GBTA in the identification of ITS Peer-to-Peer Program opportunities; review of the Bridgeport Regional ITS Architecture; and development of a Strategic Plan for sequencing Bridgeport ITS and other projects.

Kansas City Area Transportation Authority (KCATA) SCOUT Integration



Mr. Shammout is working with KCATA, the Missouri Department of Transportation (MoDOT) on integrating KCATA's transit AVL system with the Kansas City SCOUT Intelligent Transportation System (ITS) project. Mr. Shammout developed the Vision Plan that details how to integrate KCATA's ITS systems and City's SCOUT system allowing them to communicate appropriately.

ITS Integration Strategy for Central Ohio (Central Ohio's Regional ITS Architecture)

Mr. Shammout was part of a team of local agencies (MPO, ODOT, City of Columbus, Franklin County, FEMA, and suburb cities) that worked on developing Regional ITS Architecture for Central Ohio. Mr. Shammout led the transit subcommittee in developing the transit component of the regional ITS architecture.

Central Ohio Transit Authority (COTA)

While at COTA, Mr. Shammout developed functional requirements and specifications for a real-time bus arrival information system. The system included equipping 16 bus stops with electronic display signs and 8 indoor locations with touch-screen kiosks. Mr. Shammout also managed the implementation and testing of the system.

ITS Integration Strategy for Central Ohio (Central Ohio's Regional ITS Architecture)

Mr. Shammout was part of a time of local agencies (MPO, ODOT, City of Columbus, Franklin County, FEMA, and suburb cities) that worked on developing Regional ITS Architecture for Central Ohio. Mr. Shammout lead the transit subcommittee in developing the transit component of the regional ITS



Publications and Presentations

Strategies for Improved Traveler Information (Report 92), Transit Cooperative Research Program Project A-20A(2), Transportation Research Board, Washington, DC, ©2003 (co-author).

Real-Time Bus Arrival Information Systems (TCRP Synthesis 48), Transit Cooperative Research Program Synthesis Project SA-14, Transportation Research Board, Washington, DC, ©2003 (co-author).

Guidance for Developing and Deploying Real-time Traveler Information Systems for Transit," coauthored with Mala Raman, Carol Schweiger and David Williams, prepared for FTA and the ITS Joint Program Office, April 30, 2003, Report Numbers FTA-OH-26-7017-2003.1 and FHWA-OP-03-112.

"A Look at Unique Communications Systems Available for Transit Agencies". APTA's 2005 Bus and Paratransit Conference

"Monitoring Transit ITS Performance Measures". Paper published in the proceedings of APTA's 2004 Bus and Paratransit Conference. Co-authors: Larry S. Englisher, Joana Conklin.

"Transit Customer Response to Intelligent Transportation Systems Technologies: Survey of Northern Virginia Transit Riders". Paper published in the proceedings of Transportation Research Board (TRB) 83rd Annual Conference 2004, Washington, DC. Co-authors: Joana Conklin, Larry S. Englisher

"Benefits of an Investment in a Transit AVL System: A Before & After Study". APTA's 2003 Bus and Paratransit Conference

Carol Schweiger, Khaled Shammout, et al., "White Paper on Literature Review of Real-Time Transit Information Systems", prepared for the Federal Transit Administration, 2003 (www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS_TE/13845.html)

"Integrating Transit Priority and AVL: A Viable Solution". A paper presented at APTA's TransiTech 2001 conference. Co-authors: Glenn Havinoviski, and Ahmad Al-Akhras

Evaluated Votran's fixed-route transit and paratransit system as part of ITS Peer-to-Peer program, 2000

"Assessment of Transit Priority Benefits in Congested Corridors". Paper presented at the 7th World Congress on ITS. Co-authors: Ahmad Al-Akhras, and Vinod Dega

"Impacts of Transit Priority". Paper published in proceedings of APTA's 1999 Bus Conference. Co-authors: Vinod Dega, Ahmad Al-Akhras, et al.

