

# Transit System Planning and Operations

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**A**t Los Angeles County Metropolitan Transportation Authority (MTA) we have been involved in the business of workforce development at the high school level since 1985. It was no easy task to convince our executive staff that, for our own sake, transportation needed to be involved in the business of education, that we indeed needed to develop partnerships with our high schools, our middle schools, our universities and colleges, in terms of meeting the needs of MTA's 20-year plan.

As we looked at our 20-year plan and the 725 km (450 miles) of rail that we anticipated developing—the transportation systems, highways, and freeways within the Los Angeles County and Southern California region—what was absent from that 20-year strategic plan and even from our 5-year business plan was the workforce education and training required and the qualified people required to build and operate those systems. In Los Angeles, when we broke ground for our first line in 1985, the Long Beach to Los Angeles Blue Line, we imported every person who worked on that project, from planning to construction. As you can imagine, in an area where we have double-digit unemployment, that simply was not an acceptable practice. The Transportation Careers Academy Program (TCAP), with high school students from grades 9 through 12 and students from community college up to grade 14, is our effort to prepare the workforce that the Los Angeles County region needs in order to have a supply of qualified potential employees.

TCAP is managed through our Career Development and Training Center. We have developed a system of delivering education and training that involves not only our TCAP for grades 9 through 14 but also the Transporta-

tion Teaching Institute, which is our mechanism for providing support services to both teachers and students. We have a cadre of 300 volunteers, professionals from the MTA and our business partners, who support teachers and students in a variety of ways, including curriculum development, so that teachers have assistance in writing curriculum appropriate and relevant to the transportation industry. Each teacher and each 12th-grade student has an industry mentor. We are expanding that program to provide MTA mentors for 11th graders as well.

We have an information and resource team that goes out to schools and involves teachers in building relevant practical, real-life projects for the classroom. We have a group that makes lectures and tours and has developed a directory so teachers can pick and choose what is most important and appropriate for their particular subjects. We also have a train-the-teacher group. Each summer, teachers come to the MTA and are assigned mentors whom they shadow on the job. They also do actual work for the agency and attend a series of workshops to orient them to the transportation industry and familiarize them with the various transportation-related occupations.

The area I will focus on is our customized training department, established for the development of new and emerging technologies. The capstone for our system of delivering education and training is the Advanced Transportation Industry Consortium (ATIC), which the MTA cochairs with our regional planning agency, the Southern California Association of Governments (SCAG). The consortium is designed to be the initiative that brings public, private, and government entities to the table in the interest of workforce development for the Southern

California region. There is also a job development and training component of our system, which requires all contractors who do business with the MTA to allocate 3 percent of their labor dollars to employing unemployed persons in the area, including displaced workers, engineers from our aerospace industry, and others who are unemployed but qualified to work in the industry. These components make up our system of delivering education and training, encompassing high school students, college students, and unemployed adults.

Our customized training department recently focused on the development of a training program for signal system technicians in response to MTA's investment in and installation of new traffic signal controls. There are about 10,000 of these new controls throughout the 88 cities in Los Angeles County to measure congestion mitigation, air quality, and mobility in the Los Angeles County area. After the investment and installation of those signal control systems, it was discovered that no individuals had been trained to maintain and repair them. The career development and training center, working with the signal support group, an organization put together to address how repair and maintenance were going to be carried out in this particular initiative, looked at what needed to be done with existing employees. We set up a series of workshops on signal controls and communications for the existing public works employees from the 88 cities in Los Angeles County. These workshops were funded through MTA's internal funding mechanism, Call For Projects, by means of an application from the career development and training center, which received \$159,000 for a two-year period. The major objective of these programs was to provide comprehensive training to local traffic signal operation and maintenance personnel in the areas of signal synchronization, communication, operation, and maintenance.

The second objective was to provide a means for disseminating information and knowledge about current technologies in the areas of signal systems operation and maintenance. Many of the small cities did not have knowledge about the capabilities of such technology or how to fund its installation. This initiative served as a forum for the delivery and dissemination of that information and provided an opportunity for operation and maintenance staff to share their experiences and knowledge. We have held four or five workshops this year, sending out flyers to recruit for participation in the program. There are always more applicants than we have space for in the class, which is limited to 25. We do have a plan for continuing the workshops next year.

The proposed training is envisioned to draw resources from or expand existing programs at the federal, state, and local levels to suit the local agency projects funded by the MTA; to provide a forum to involve all concerned agencies, both public and private; and to

develop a curriculum at the community college level to provide training and encourage development in the areas of signal synchronization. In addition to the workshops that we have developed for existing employees, we have worked with the community college to develop a certificate-level program for those interested in entering the field and learning the trade of signal systems operations and maintenance. The final objective was to develop a curriculum that could lead to certification in the future and to provide the necessary future workforce in this particular field.

The signal systems program was developed with funds from the MTA. We have a technical advisory committee that helps with the technical information and provides oversight for curriculum development. The signal support group helps with the planning and coordination of signal system synchronization throughout Los Angeles County. It involves the highway program at the MTA and the career development and training center, funded by our internal Call For Projects funding mechanism. Throughout Los Angeles County we have several regional traffic forums that deal with signal synchronization in their particular region.

The MTA, through this investment, looked at what the next phase would be. We submitted a second application through our Call For Projects mechanism for funding beginning in the year 1999 to move into signal controls, traffic signal preemption for bus operations, and other areas in intelligent transportation systems that deal with signal synchronization as it relates to broader areas within the county on freeways and highways.

Some of the cities within the county had traffic control systems for which special training was necessary, so we set up a program that is actually being conducted by the manufacturer.

One of the areas in which we strongly believe is partnership with other entities in the delivery of education and training. In addition to our partnerships with the Los Angeles Unified School District, the Norwalk LaMarada School District, and the community college district, the California Advanced Transportation Training Alliance (CalSkills) is one of our partners in the delivery of this particular program and a broader range of programs.

ATIC is our effort to employ this kind of system of delivering education and training for a broader range in the Southern California region and imminently at a national level as we look at what the needs are in the transportation industry professionally, technically, and at the laborer levels.

The MTA internally has an administrative internship program in which we are dedicating some of our slots to graduates from our TCAP at the high school level. The executive level is very open to that program as we look at succession planning through TCAP into the regular workforce at the MTA.