

Phil Demosthenes

Consultant

Phil Demosthenes can recall the moment he began his career-long study of access management using planning and design to reduce roadway conflicts and preserve roadway function. In 1977, the director of the Colorado Department of Transportation (DOT) met with the City of Denver planning director to discuss economic impacts of downtown congestion—and returned with an assignment for Demosthenes to research strategies for arterial access control. Thirty-four years later, he affirms, “I still am creatively engaged in access management design and implementation.”

Access management involves everything from traffic operations and road design to human factors and the legislative process. Its multidisciplinary nature brings together many subject areas and stakeholders, but Demosthenes—a self-described

(NCHRP) Project Panel on Roundabout Corridors.

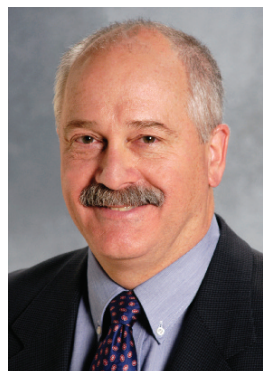
While pursuing what was to be an engineering career at the University of California, San Diego, Demosthenes felt himself drawn to such subjects as marine biology, plate tectonics, computer languages, and social anthropology. In 1970 he went to the California Institute of the Arts to study design for the real world under designer and educator Victor Papanek. As a graduate student, Demosthenes switched to environmental planning. At the time, the master plan for North Los Angeles County was in progress; he became involved in his local community association and later was appointed vice chair of the North Los Angeles Citizen Planning Council. “I particularly liked the transportation element of the plan and could see how crucial transportation design was becoming in urban growth areas,” he recalls.

Demosthenes joined Colorado DOT as a planner in 1976. He helped develop and enact a new state statute for improved access control on state highways, guided a new access management program, and obtained a \$10.5 million Federal Highway Administration grant for an access control demonstration project. His most rewarding endeavor, however, was the Colorado Access Code—a regulation managing access to the state’s highway system that was adopted in 1981 and remains in effect.

From 1982 to 2004, Demosthenes was Administrator of the DOT’s Access Management Program, overseeing its creation, implementation, and operation. Now an independent principal transportation planner, he advises clients on such matters as access management and roundabout planning, program and policy development, design criteria, and corridor planning. Among his current projects are an access management manual for the Department of Transport, Abu Dhabi, United Arab Emirates; the next-generation Kansas DOT Access Management Policy; and context-sensitive access management planning for SR-49 in Angels Camp, California.

Since 2002, Demosthenes has been a part-time instructor at the University of California, Berkeley. He has taught access management courses in Canada, Greece, Dubai, and China; in 2001, he delivered the keynote address at a national conference in Athens, Greece. In his presentations on access management, Demosthenes often opens with statistics on fatalities and injuries. “What drives me is public safety,” he notes.

In an ideal world, Demosthenes muses, he would be an independent advocate for safer roads, with a focus on road design. But he adds that in road safety there are few independent organizations that can act as a critical voice. “There are great ideas out there, especially from longtime professionals, who cannot raise their voices because they are inside the industry and depend on that industry to employ them,” he observes.



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generalist—is dedicated to ensuring safe roadway operations. “My approach has been to integrate these subject areas, but also to keep it as simple as possible, practicable, user-friendly—and effective,” he reflects.

Just over half of all vehicle accidents are related to maneuvers on roadway access points; this percentage is higher in urban areas and can reach up to 70 percent, Demosthenes comments. Although human error is a major factor in crashes, roadway design can and should be altered to accommodate driver error, he observes: “The application of access management techniques on a crash-prone corridor can achieve a 20 percent to 60 percent drop in crashes and injuries. The behavior and demographics of the drivers have not changed—the roadway has changed.”

A major focal point in access management is the spacing and frequency of traffic signals, which often are sites of traffic accidents. Demosthenes finds roundabouts to be a significant safety improvement compared with signaled intersections and cites a 1999 project in Golden, Colorado, that replaced four arterial intersections with roundabouts, with a decline of injurious crashes from 10 per year to one in 42 months. In 2007, he volunteered for TRB’s Task Force on Roundabouts and currently chairs the National Cooperative Highway Research Program