One Good Turn Deserves Another

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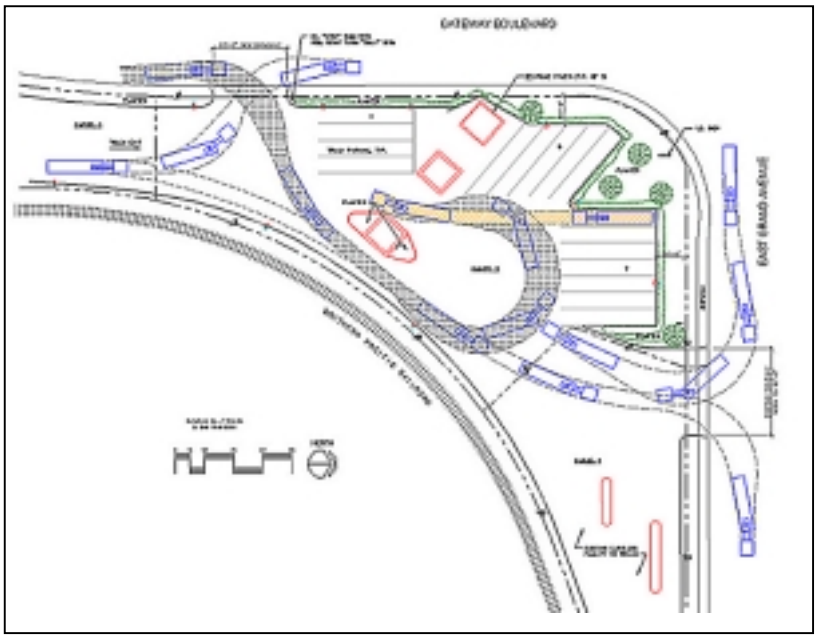
To ensure that vehicles move smoothly throughout the Olympian Auto and Truck Center in South San Francisco, Calif., Jim McGrath, project manager for RHL Design Group Inc. in Petaluma, Calif. Used AutoTURN from Richmond, B.C. (Canada)-based Transoft Solutions.

The program, a vehicle turn simulation program for roadway vehicles, is used to plan and design intersections, parking garages, loading areas, bus terminals and other vehicular facilities. It enables the user to select a vehicle (or define one, as McGrath did) and run forward or reverse turn simulation in CAD (computer assisted design) drawings.

McGrath customized the program to his applications and uses for the service station and cardlock facilities, where there are many specialty types of vehicles. “The program plots out the vehicle path and prints its so we can show it to the client and city officials,” says McGrath. “This way we can see how, when the site is arranged different ways, the vehicles can travel into and out of the site. It also brings out possible conflicts that might exist in the design.”

McGrath finds the AutoTURN especially helpful in designing large sites. “As service stations get more complex, with more uses being built within the location, you need something that can take the calculation off your hands, He says, “There are so many things to consider when designing the site: you have a drive through, carwashes, dispensers, parking, how vehicles will stack. The program shows the turning radius of vehicles, and whether or not it will clear a part of the site, or if there will be conflicts with other vehicle paths.”



The program is especially helpful when dealing with petroleum delivery trucks, which have a very large turning radius, he says. “The single-trailer fuel delivery truck have the largest turning radius of all. We actually staggered the commercial fuel islands in a diagonal orientation so there would be room for other trucks to queue up behind the truck that is fueling. The way, the truck that is fueling can still come out enough to clear the island and make the turn and continue through the truckwash and exit out of the facility.

“This was the most critical part of the design,” says McGrath. “The AutoTURN Program enabled us to use the site to the fullest extent possible, by plotting out the pattern of travel. From there all we had to do was determine where to locate the buildings and driveways so that the site has plenty of open space for maneuvering.”