

Gaining Powers

From local road to state highway to freeway? Locals hope so

One summer day in 2007, motorists in eastern Colorado Springs were in for a change on their morning commute.

Their busy expressway, known as Powers Boulevard, had suddenly sprouted signs indicating that it was a state highway.

The apparent overnight change was, of course, years in the making, the result of intergovernmental road swaps involving the Colorado Department of Transportation (CDOT), the city of Colorado Springs and El Paso County. CDOT took ownership of the expressway and designated it State Highway 21, while ceding jurisdiction over an equal number of miles of former state highways that no longer serve a state-level function. All parties agreed that this was a win-win-win deal.

Prior to the swap, CDOT had begun an environmental assessment to address projected future traffic congestion on the existing four-to six-lane expressway. Traffic on S.H. 21 is projected to double by 2035, and the existing roadway cannot accommodate that demand. The environmental assessment, to be completed by the end of 2009, indicates there is a workable solution to this problem.

High in calcium

It may now be S.H. 21, but everyone still calls the expressway Powers Boulevard. There is an interesting story behind the name.

The road to the Powers Dairy was unpaved when the 720-acre property was sold for development in 1967. The owner, 38-year-old Ray Powers, had operated the dairy since the age of 15, when his father was killed by lightning. When the developer promised to name the road after him, Powers reportedly replied, "I don't want any street named after me—I want a boulevard named after me."

The road was subsequently paved and named Powers Boulevard and was later expanded to an expressway. Private developers paid for much of the expansion through a metropolitan tax district. CDOT's S.H. 21 currently is 22 miles long, but a planned 2.5-mile northern extension and a potential southern extension could someday result in a 33-mile roadway.

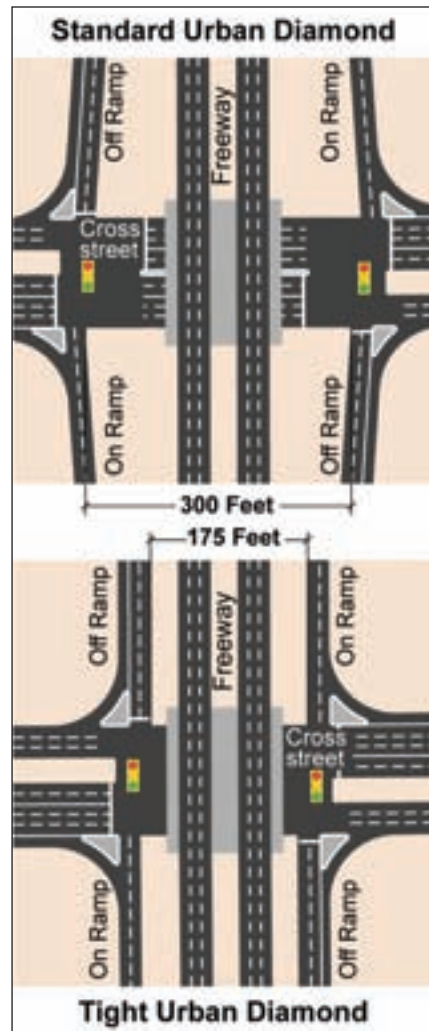
Need to be freeway

Regional planners have long foreseen the need to improve north-south traffic flow on the eastern side of fast-growing Colorado Springs, the state's second-largest metropolitan area. To deal with continuing growth of 100,000 new residents each decade, the region's current long-range transportation plan calls for Powers Boulevard to become a freeway.

CDOT's analysis confirms that a freeway is needed to relieve traffic congestion on S.H. 21. It calls for upgrading 11 miles of the expressway between Milton E. Proby Parkway (the entrance to the municipal airport) and Woodmen Road, a major regional route for east-west travel on the north side of the city. Ten freeway interchanges and three overpasses would be built to replace 13 existing signalized intersections.

Currently, about 60,000 vehicles per day use the busiest portion of Powers Boulevard. By 2035, demand will increase to 107,000 vehicles per day, fully consuming the road's capacity and resulting in severe congestion. If upgraded to a freeway, Powers would carry even more volume—124,000 vehicles daily—but would do so with

smooth, uncongested traffic flow. That is more traffic than is carried today by the region's primary north-south route, I-25.



Many of the proposed interchanges on S.H. 21 are of the "tight urban diamond" configuration, intended to minimize right-of-way impacts.

Forcing the issue

Ever-worsening congestion is a concern for Peterson Air Force Base, one of the region's largest employers, which reported nearly 12,000 employees in FY 2006. The main entrance to Peterson AFB is accessed from the congested Powers Boulevard intersection at Airport Road.

Construction of a grade-separated interchange at the Powers-Airport in-

tersection, therefore, is a high priority in the Pikes Peak region. The estimated \$57 million design-build project could be funded as soon as 2010. After this interchange is built, the rest of the corridor may have to wait another decade before receiving construction funding. Depending on future tax revenues, however, this could be pushed back to more than 10 years.

The proposed upgrade to 11 miles of Powers Boulevard was not sufficiently "shovel ready" in early 2009 to be funded under the American Recovery and Reinvestment Act. However, the interchange project at Powers and Airport will be ready in 2010 if additional money is available.

Cost of doing business

The proposed freeway concept was evaluated in a value engineering study to look for cost savings and more efficient design concepts. It also has been through a rigorous cost estimate review. Since the cost of the project clearly will exceed a half-billion dollars, Powers Boulevard is classified by the Federal Highway Administration (FHWA) as a major project. Major projects face a number of planning requirements that do not apply to smaller projects.

The cost estimate review was convened by FHWA's Colorado Division in 2008. Cost estimation experts from around the country participated in the review. The multiday session assigned uncertainties and probabilities to all critical cost components, resulting in an estimated cost range as well as a most likely estimate.

The experts determined that the probable cost for the total project in 2007 dollars was \$816 million. However, the bulk of the construction is unlikely to begin before the year 2020. Therefore the future inflated cost will be a larger number. That number depends upon many factors, especially the inflation rates that are assumed. Using CDOT's assumptions, there is an 80% probability that the inflated costs in the future



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years of expenditure will be between \$1.35 billion and \$1.56 billion.

It is anticipated that state and federal funds would pay for this major project. CDOT is currently preparing a finance plan that will be submitted to FHWA in the next few months. This plan will provide a potential funding scenario for the next 20 years.

Planning future projects like Powers Boulevard is extremely difficult now, given the ongoing national recession and increased uncertainty over future transportation appropriations at both the national and state level. The Pikes Peak Area Council of Governments has included full funding for the project in its last two updates of the long-range regional transportation plan. However, because of recent economic trends, the next plan update may have to assume lower levels of future funding. This could delay the start of the project and extend the time needed to complete it.

Smaller prices to pay

Unless a major funding source becomes available, upgrading Powers Boulevard to a freeway will not occur as a single project, but instead it would likely be funded and built as a series of affordable pieces over many years. Based on the region's current long-range transportation

plan, CDOT expects construction to take place over 10 years.

Drainage issues and traffic operations will have a bearing on how to break out construction projects. For now, Powers has been divided into 12 projects, one of which upgrades the Powers-Airport intersection. These projects range in cost from \$28 million to \$105 million each. The Powers-Airport intersection has been identified as the top-priority project.

Project phasing concepts have been developed to ensure maintenance of traffic throughout construction, including maintenance of access to nearby businesses. Because detour routes are few and far between, and there is minimal transit service in the corridor, it is critical the expressway remain open and functional during construction.

Customer always has right-of-way

The project is very structure-intensive, needing many costly bridges to carry the six-lane freeway over 13 at-grade arterials. Many of the proposed interchanges are of the "tight urban diamond" configuration, intended to minimize right-of-way impacts. Other interchange configurations with a bigger footprint are needed and would be used at a few locations where sufficient vacant land is avail-

able, including the Airport Road intersection serving Peterson AFB.

CDOT's context-sensitive planning process led to a proposed action that would minimize disruption to business access by taking Powers Boulevard over the east-west cross-streets. This is an economic necessity in what has become the region's powerhouse commercial corridor. For several miles, the expressway is flanked by superstores, big-box stores and restaurants, which collect a significant share of the city's sales-tax receipts.

The sustainability of the Powers Boulevard commercial corridor will depend on the ability of customers to get there conveniently. Ever-increasing traffic congestion will soon begin to shrink the market area that is within 15 minutes of the commercial areas. By 2035, this market area will become much smaller if no capacity improvements are made. The resulting increase in travel time would convince some customers to shop elsewhere. With the proposed upgrade to a freeway, however, travel times would decrease and the market area would grow larger than it is today.

An eighth of an effect

Freeway construction, including the initial interchange at Powers and Airport, must await the 2009 completion of the environmental assessment. CDOT's resident engineer and project manager for the work, Mark Andrew, P.E., reported that the corridor upgrade would affect surprisingly few resources: "Urban growth has erased all traces from a century of ranching. It has consumed the grasslands and displaced the pronghorn antelope. The project's total impact to wetlands would be just one-eighth of an acre."

According to Andrew, the project is likely to affect two-legged creatures more than anything else. For the expanded right-of-way, CDOT would need to buy about 380 acres of land from adjacent properties, mostly in small slivers along parcel edges.

One-dozen businesses and four-dozen homes would need to be bought outright. Also, eight noise walls are proposed to shield neighborhoods that would experience increased traffic noise.

Some local businesses are concerned about how their access would be affected, both during construction and permanently. These effects will be minimized because nearby homes and businesses get access from cross-streets, not directly from the expressway. The proposed freeway would pass over most cross-streets to avoid disrupting at-grade access from those streets. Frontage roads would be built to replace access in select locations where needed.

The challenge ahead

The challenge facing CDOT is clear. S.H. 21 has insufficient capac-

ity to meet future traffic demand. An effective, context-sensitive solution has been identified. Although there are commitments to fund the project in the future, the congestion will get significantly worse long before corrective action begins.

The billion-dollar question is—will the billion dollars be available? In recent years, fuel-tax receipts dropped, first because of \$4-per-gal gasoline prices and then as a result of the national recession. The 2008-09 fiscal year was CDOT's bleakest funding year in memory. A state-level Blue Ribbon Panel has made recommendations, but long-term funding problems have not yet been solved.

Ray Powers, the long-time dairyman, was elected to the Colorado General Assembly in 1978. Over a 22-year career in public office, he

earned a reputation as a highly effective legislator and a champion for increased state funding of transportation. In 1997, as senate president, he was successful in passing a \$200 million program to fund critically needed projects. He retired at the end of 2000, because of term limits, and died in 2008.

Today, if he were still with us, the need for additional state transportation funding programs would be as clear to Sen. Powers as the congested expressway in his old backyard. 🏠

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