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## The Secret to Making Federal Tax Dollars Work for Your State

*by Clark Merrefield, Susan Smichenko, and Gerry Flood*

*To improve safety on local roads, Florida accesses FHWA funds more quickly and with lower administrative costs. Learn from the Sunshine State's award-winning approach.*



**This illuminated sign at an intersection in Florida's District 7 was one of the improvements that resulted from the district's safety program for local roads. Improved sign visibility is particularly important for irregular traffic regulations, such as this one disallowing right turns.**

As other States may well have discovered, Florida found that making simple safety improvements to local roads could take as long as 3 to 5 years. The Florida Department of Transportation (FDOT) believes that this is way too long when lives are at stake.

In response, FDOT's District 7, working closely with the Florida Division of the Federal Highway Administration (FHWA), developed a "design-build push button" contract that has reduced the time to deliver simple, low-cost safety improvement projects to roughly 1 year. Transportation agencies in Florida's District 7--which includes the Tampa metropolitan area (Hillsborough County) and four neighboring counties--now can access Federal funds more easily and roll out safety improvements on local roads more quickly.

Small transportation agencies, particularly during the recession of the late 2000s, were struggling to maintain existing infrastructure and had few resources to address safety needs. In addition, Florida statute limits the State's seven transportation district agencies from directly using State funds for improvements on non-State roads.

To supplement their budgets, local agencies turned, in part, to funds set aside by FHWA for safety improvements. But the State's system for accessing Federal funds, called the Local Agency Program, incurs about \$20,000 in administrative costs per request. For example, for a local agency to access \$50,000 in Federal money, that agency would need to outlay \$20,000 in upfront administrative expenses. With an unfavorable investment-to-payoff ratio, particularly for small projects, few agencies were accessing those funds.

Over approximately the past 8 years, District 7 has worked to streamline the process for obtaining FHWA safety funds by exchanging knowledge at an annual summit for its county and municipal agencies. In addition to the summits, District 7 created a layered structure that includes technical support and encourages the use of local agency force account agreements to construct safety projects.

These initiatives have led to a simple and effective process to access Federal funds for implementing safety improvements on District 7's local roads. The summits, technical support, force account agreements, and design-build push button contracts also have nurtured a collaborative environment for local and State transportation professionals. Moreover, these programs can serve as a model for other districts in Florida--and, for that matter, for other States.

### **Safety Summits Encourage Communication**

A higher percentage of serious crashes happen on District 7's local roads than on the local roads in other Florida districts. In fact, more than 3,700 fatal and serious injury crashes take place in District 7 every year, and 52 percent of those crashes occur on local roads.

In 2010, District 7 formally stepped up its efforts to improve safety on county and municipal roads by holding its first Local Agency Safety Summit. Thirty transportation professionals from District 7's counties and municipalities attended the first summit.

At these annual meetings, transportation experts from Federal and State governments brief local agency partners on strategies to reduce crashes. Local staff members have the opportunity to discuss their most pressing safety concerns and present their own ideas for improving safety on local roads. Most important, the summits provide an opportunity for local and State transportation professionals to meet face to face and decide how to use the pool of available Federal money for making safety improvements on county and municipal roads.

Approximately 100 people from around the district attended the most recent safety summit, held in early March 2014. (The 2015 safety summit was held as this issue of Public Roads went to press.) Participants included board members of metropolitan planning organizations, law enforcement representatives, and managers and directors of local agencies.

Law enforcement officials, transportation planners, and traffic researchers presented updates on safety initiatives in the Tampa area. The presenters summarized the lessons learned from public outreach on safety issues, and described pedestrian and bicycle safety improvements on specific corridors.



FDOT District 7

**At District 7's 2014 safety summit, Peter Hsu, safety engineer with the district, explains how to apply for FHWA funds.**

Federal experts briefed attendees on the outlook for the Highway Safety Improvement Program (HSIP) and other Federal funding programs. The Federal representatives and District 7 staff provided updates to the district's *Local Agency Safety Funding Guide for Off-System Roadways*--a how-to document that helps local agencies find funding for safety projects. Also, the Federal officials summarized local HSIP-funded projects that were completed over the previous year.

"I was very happy that elected officials took notice," says Peter Hsu, safety engineer with District 7. "The first year there were no attendees at the director level. The attendees that first year liked our ideas to improve safety, and we liked their enthusiasm, but they didn't have the authority to make the call. Right now, attendees are at a higher level, and we are seeing results. I spent a lot of effort pushing pedestrian and bike safety at these summits, and in the last 4 years we have seen changes in Tampa Bay." Hsu added that the knowledge shared at each year's safety summit helped spur those changes.

Increased attention from Florida's transportation decisionmakers has affected the amount of Federal funding directed toward safety on local roads. Before the summits, 10 to 20 percent of HSIP funding in Florida went to safety improvements on those roads. By 2013--the third year of the summits--40 percent of HSIP funding went to local projects.



FDOT District 7

**Local transportation professionals from District 7 and around the State fill the room at Florida’s March 2014 Local Agency Safety Summit.**

In 2013, District 7 received \$18 million in funding requests and allocated more than \$7 million toward safety improvements on local roads. On average, county and municipal agencies in the district now submit more than 50 applications for Federal funds each year, up tenfold from the year before the safety summits began.

“We have a strong working relationship with Tampa staff and with the Hillsborough County Sheriff’s Office, as well as the people working with Mothers Against Drunk Driving and other outside organizations,” says Bob Campbell, manager of traffic engineering, Hillsborough County Public Works. “We work together almost on a daily basis. I got a call this morning about a safety issue, and if I hadn’t been to the safety summit, I wouldn’t have had that contact.”

**Accessing Federal Funds: A Layered Approach**

Creating a forum for local agencies to exchange ideas and make contacts with other public safety professionals was the critical first step in District 7’s plan to improve safety. But without funding, that exchange of knowledge would never turn into action.

Because the administrative costs of Florida’s Local Agency Program were prohibitively high for local agencies, Hsu and his team at District 7 developed what he calls a “layered approach” to help county and municipal agencies access FHWA funds, as part of the State Transportation Improvement Program. Each layer works within the existing State and Federal funding framework, and each layer may be employed individually or in concert, depending on the safety needs of the local agency. The idea behind the layered approach is to provide local agencies with the technical means to assess their needs and the financial flexibility to address them.

**The First Layer**

Under the first layer, District 7 uses HSIP funds to finance low-cost safety improvements on local roads with no additional funding outlay required from county and municipal agencies. They submit applications for HSIP funds via the District 7 Web site ([www.d7safetysummit.org/hsip](http://www.d7safetysummit.org/hsip)) through an informal solicitation.



FDOT District 7

**(L-R): Sergeant George Edmiston, supervisor with the Largo Police Traffic Safety Unit, and Corporal Timothy Craig, supervisor with the Hillsborough County Sheriff's Office Traffic Unit, participate in the 2014 summit.**

Hsu and his team have an annual budget of \$350,000 in Federal safety funding for simple improvements that can be installed quickly and do not require a formal contracting process. Examples include flashing beacons or chevron signs on particularly dangerous and curvy roads. Since 2006, District 7 has been able to allocate even more funds for systemic safety improvements, including \$2 million for countdown pedestrian signals, \$1.2 million for speed feedback signs at schools, and \$1 million for school flashers, among other simple and effective safety improvements.

Signs and signal accessories are installed within the right-of-way area, so land acquisition and easements are not required. Local agencies are responsible for maintaining the equipment.

The FHWA Florida Division leadership strongly supports this first-layer initiative and quickly approves safety purchases that District 7 submits.

### **The Second Layer**

Many county and municipal agencies in Florida are small. Although they may have the staff and budget to identify and perform basic road maintenance, they may lack the analytical expertise to determine precisely what safety improvements should be made and where. Without a data-driven approach to safety, local agencies do not have the facts to justify spending taxpayer dollars.

Within the second-layer approach, District 7 provides technical assistance. To improve data quality, the district centralized local crash databases, improved location data, and created a simple user interface for the centralized database. The district encouraged all five of its counties to submit data and use the new system. The most significant improvement was to establish relationships that encourage data sharing and cooperation.

"Hernando County, for instance, is a one-man show when it comes to road safety," Hsu says. "I have people in their office 2 days a week helping to crank up their analyses. Projects really rely on cost-benefit ratios."

Also falling under the second layer are monthly webinars held by District 7 to provide additional technical assistance. On the off-months between safety summits, the district's Local Agency Traffic Safety Academy hosts webinars to bring together local agencies, engineers, planners, and anyone else interested in traffic safety. The webinars connect them with experts on crash analysis, the permitting process as it relates to traffic safety, the basics of traffic signal operations, signing and pavement marking reflectivity, and numerous other safety management topics.

### **The Third Layer**

The third layer comprises what District 7 calls its design-build push button contracts, one of the innovations under FHWA's Every Day Counts initiative. District 7 spearheaded a pilot program for a design-build push button contract in 2007. Essentially, it is a contract template that covers the project process from design to construction. Local agencies that use the design-build push button contract can implement safety projects in a fraction of the time needed for typical projects. Local agencies need only "push a button"--use the contract template--to get their safety projects off the ground, with assistance from District 7.



**This view shows an example of centerline striping that was replaced by raised rumble strips. Safety improvements like these on local roads in District 7 were made possible through Federal funding accessed by using FDOT's layered approach.**

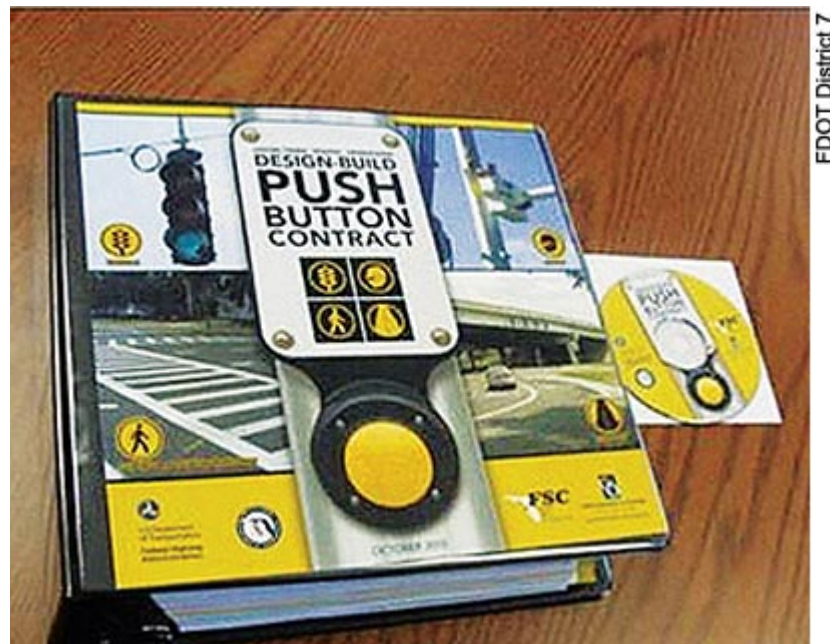
Although this kind of contract provides local agencies with easier access to Federal funds, it is considered a project delivery method rather than a funding mechanism. The design-build push button contract potentially shaves years off of projects by preselecting and prequalifying contracting teams, and putting task work orders under an umbrella project where prices are already negotiated.

Once District 7 had ensured that Federal dollars for safety could be made available through design-build push button contracts, it held an informational meeting with industry consultants and contractors. After incorporating their input, the district executed its first contract in late 2009.

From 2009 to 2012, projects that used the design-build push button framework created 63 jobs and saved 25 more, and funded 55 projects ranging from \$33,000 to \$2.7 million. During this time, FDOT distributed \$20.1 million in funds toward safety improvements using design-build push button contracts--which included \$12.2 million in Federal funds, \$6.1 million in State transportation safety funds, and \$1.8 million from other State funds.

Federally funded projects covered more than 109 miles (175 kilometers) of roadway with inverted profile markings--which, like rumble strips, audibly alert drivers who are veering off roads--and wet weather audible striping to address lane departure crashes. Those projects also included pedestrian improvements, such as repainting crosswalks, for more than 510 intersections; added more than 54 miles (87 kilometers) of bicycle lanes; implemented 12 intersection improvement projects; added high-friction pavement for two interstate ramps; rebuilt signals for three locations; and implemented one intelligent transportation system project.

District 7 was able to complete numerous safety improvement projects because design-build push button contracts dramatically reduce the funding, design, and construction processes. Traditional projects may take more than 36 months from certification to completion, while design-build push button projects typically take only 13 months from design to completion.



**Shown here is one of the binders that contains FDOT District 7's *Design-Build Push Button Contract* manual. The binder includes an instructional DVD in a pullout sleeve.**

"It's almost like a key was turned, like a light was turned on," says Mike Frederick, transportation manager, St. Petersburg Transportation and Parking Management Department. "For years it was smoke and mirrors. We knew all this money was available, and we couldn't get our hands on it. Now, this is how it's done; it's standard operating procedure. In the past it was like everyone was working autonomously, and now we're all rolling in the same direction."

### **The Fourth Layer**

The fourth layer for accessing Federal funds uses Florida's Local Agency Program procurement process for local agencies and municipalities to design and construct transportation projects using Federal funds. FDOT is responsible for sound stewardship of those Federal funds. Local agencies often find the Local Agency Program most useful for longer term, larger budget projects, such as median modifications, lighting projects, and infrastructure improvements to mitigate roadway departure crashes. Before a municipal or county agency enters the Local Agency Program, FDOT must verify that the local agency can undertake and satisfactorily complete the work. Federal funding might be rescinded if project milestones are not met.





FDOT District 7



FDOT District 7

The upgraded pedestrian crosswalk shown in these before (top) and after (bottom) photos is another safety improvement completed in District 7.

Local agencies may prefer the Local Agency Program procurement process in some cases because it allows for more control over design and implementation. In addition, the agency retains more approval authority throughout the development phase than under the first three layers.

As discussed earlier under the second layer, District 7 provides technical assistance to local agencies. Under this fourth layer, District 7 also provides assistance toward achieving Local Agency Program certification, which is needed before the local agency can apply for funding. Also included is help with navigating the remainder of the approval process for the Local Agency Program.

### **The Fifth Layer**

District 7 recently added a fifth layer to its framework for executing low-cost, Federal-aid safety projects on local roads. The fifth layer focuses on local force account agreements. District 7 uses this flexibility so that municipal work crews (local forces) can construct safety improvements, instead of requiring the usual competitive bidding processes for hiring outside contractors.

To use a local force account agreement, approval must be given to the local agency through a cost-effectiveness review, which ensures that labor, equipment, materials, and supplies are used efficiently to achieve the lowest overall cost. Force account agreements are cost effective for safety improvements that are relatively inexpensive and easy to build. FDOT reimburses agencies for wages related to work performed by local road crews on projects covered by local force account agreements.

“It’s a new approach for us,” says Frederick. “Previously, we’d have to go and identify the project and confirm the crash data ourselves and then usually hire an outside force to do the construction. But we can use city crews more cheaply and quickly.”

### **Observable Safety Impacts**

Although it is too soon for a holistic analysis of the safety impacts attributable to the annual summits and the layered approach for accessing Federal funds, several pieces of evidence indicate that these efforts are working, both to reduce crashes and to enhance relationships between local and State transportation professionals. Thirty-nine percent of the participants at the most recent safety summit completed a satisfaction survey and wrote that the knowledge and information they gained at the summit would definitely be useful in their work. Ninety-five percent gave a positive overall assessment of the summit, and respondents commented that the summit was “dynamic and fast paced” and a “very good format--short presentations were a key to success.”

#### **Reducing Correctable Crashes**

Correctable crashes are one safety issue that an agency can address relatively easily through simple infrastructure improvements. District 7 reviewed the before-and-after impacts on correctable crashes from five simple projects for infrastructure improvement. For example, inverted profile pavement markings installed on a stretch of SR-35 reduced the annual number of correctable crashes from 11.75 before construction to 3.33 after construction.

A new traffic signal on SR-582 reduced annual correctable crashes from 7 before construction to 1 after construction. And high-friction pavement installed on a ramp from I-275 to SR-60 reduced annual correctable crashes from 16.5 before construction to 3 after construction.

Preliminary statistics show that serious injuries and fatalities related to lane departure crashes are falling dramatically in District 7. From 2008–2010, there were 1,626 such serious injuries and fatalities, compared to 1,159 in 2011–2013, a 30-percent decrease in just 3 years.

“The advantage is that now we have a success story in District 7,” says Felix Delgado, former safety specialist with the FHWA Florida Division. “The goal is to compare crash trends among the seven districts in Florida. If we can say we are having positive results and fewer crashes, we can argue that this helped. It comes down to data analysis, but we’re only in the fourth year of the annual safety summit.”

Another noticeable impact is in the amount of money that District 7 receives from the State’s pool of Federal transportation safety funds. Formerly, each of the State’s seven districts would receive equal annual funding allocations. The system changed in 2012 to one in which FDOT allocates funds based on the feasibility of the projects proposed by the districts. Although allocation amounts are still roughly equal, in recent years, District 7 has received slightly higher allotments.



**These before (top) and after (bottom) views show installed overhead signage, another example of a safety improvement on a local road in District 7.**

“District 7 gets extra funding because its local roads projects tend to be low cost with higher net present values,” Delgado says. “And low-cost projects with high net present values indicate an efficient use of Federal funds.”

### **A Model for the State**

District 7 has reached out across the State to law enforcement and transportation professionals from other districts, encouraging them to attend the annual safety summits and to implement similar initiatives and funding frameworks in their own districts. In addition, District 7’s program has attracted interest from other States.



**Simple signage improvements, like this caution for right-turning vehicles to yield to pedestrians, help increase driver awareness and prevent fatalities and injuries on local roads in District 7.**

“People from as far away as Miami come up to visit, to learn what’s going on here,” Hsu says. “Identifying safety issues is relatively easy, but working on local roads without a lot of information is very tough. We want to make sure that we account for the National Environmental Policy Act and other things we have no control over, while seeing projects through to completion as quickly as possible.”

### **Award-Winning Thinking**

A variety of industry groups have recognized District 7’s use of design-build push button contracts. The district received a 2013 Best in Construction Award from the Florida Transportation Builders Association; a 2012 Prudential-Davis Productivity Eagle award, which recognizes a team or individual displaying exemplary performance for 5 years or longer; a 2011 Prudential-Davis Productivity Award, which recognizes innovative cost-saving strategies at the State level; and a 2010 John W. Barr Transportation Achievement Award from the Florida Institute of Transportation Engineers.

These awards showcase the success that District 7 has had in building collaboration between State and local partners, working with local agencies to access Federal funds, and substantially cutting down the years and dollars needed to complete safety improvements on local roads. Most important, in just a few years, District 7 has shown that even on shoestring budgets it is possible to fulfill its mission to “reduce the number of fatalities and serious injuries caused by traffic crashes.”

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*For more information, visit FHWA's Roadway Safety Noteworthy Practices Database at <http://rspcb.safety.fhwa.dot.gov/noteworthy> and see the Assessment of Local Road Safety Funding, Training, and Technical Assistance (FHWA-SA-13-029) report at [http://safety.fhwa.dot.gov/local\\_rural/training/fhwasa13029](http://safety.fhwa.dot.gov/local_rural/training/fhwasa13029). Also visit FDOT District 7 at [www.dot.state.fl.us/publicinformationoffice/moreDOT/districts/dist7.shtm](http://www.dot.state.fl.us/publicinformationoffice/moreDOT/districts/dist7.shtm). Contact Clark Merrefield at 617-494-3765 or [clark.merrefield.ctr@dot.gov](mailto:clark.merrefield.ctr@dot.gov).*