

INSIGHTS

Jones Edmunds & Associates, Inc. | Engineers, Architects and Scientists | Winter/Spring 2007

How Will We Do? Florida's Infrastructure About to be Graded

Grading the health of Florida's infrastructure will become an indispensable part of planning as our state tries to prepare for growth in a time unfavorable to project funding.

As reported in the spring 2006 issue of Insights, China's accelerating economic growth has increased demand on raw materials and costs associated with all types of construction. The destruction and rebuilding after the torrid 2004 and 2005 hurricane seasons and the increasing costs of petroleum have combined with China's effect to create a perfect storm of increasing raw materials costs that is shredding project budgets. Add to this the current proposal by Congress to cut \$4 billion in transportation funding from the FY 2007 federal budget and you have a recipe for quickly receding infrastructure expenditures.

Now consider that Florida is growing by 1,200 residents a day and, as a result, vehicle miles traveled on Florida roads are growing apace. In addition, statistics show that increases in tractor-trailer truck travel have outpaced overall vehicle travel growth—further burdening an already stressed transportation system.

With increasing pressure on budgets and an expanding population, Florida is now in the undesirable position of being forced to choose one infrastructure project over another. Many state transportation projects are being prioritized through the Strategic Intermodal System (SIS) and other decision making processes, leaving projects with lower priority with reduced or no funding.

To help project planners and state officials argue for improvements in this increasingly competitive funding environment, the American Society of Civil Engineers (ASCE) is bringing their well-known infrastructure report card program to Florida.

During a January 23rd conference call, ASCE members agreed to produce Florida's report card based on an evaluation of the state's infrastructure in 15 categories including bridges, highways, rail, ports, aviation, transit and energy. The report card should be available by the opening of the 2008 session of the Florida legislature.

Already existing on a national level as the ASCE Report Card on America's Infrastructure and in several other states, this program has helped officials across the country argue for improvements.

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Florida is expected to have 26 million residents by 2030. Unprecedented infrastructure expansion and repair will be needed to support this unbridled growth.

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Employee Spotlight: Greg Graden



Greg Graden

After receiving an AA degree from Sante Fe Community College, Greg Graden worked for eight years doing construction in Charleston, South Carolina, but the heat finally got to him and he opted for air conditioning, first in the classroom and later in an office. He took two whole leisurely days off after graduating from the University of Florida before diving into work at Jones Edmunds.

Greg was the Project Engineer for our first Florida Department of Transportation (FDOT) Gainesville project, the I-75 Rest Areas at Paynes Prairie. As our FDOT work has expanded, so have his responsibilities, and he now spends less time in the field on project-specific tasks and more time on arbitration and dispute resolution. He understands that bigger projects spur more litigation and that issues related to \$100-million construction projects aren't just handled with a handshake.

When Greg isn't wrangling a Contractor, he's at his arena chasing down cattle. Greg and his wife Donna are team ropers and raise crossbred longhorn/corriente cattle, a relatively small breed with big horns, making them perfect for roping. They currently have 90 head of cattle, some of which they'll sell, others they'll keep for roping. Their goal is to host invitational-style roping events, bringing in teams from all over Florida for a day of competition and camaraderie.

"I really enjoy working with livestock and meeting others who share the same passion," Greg said. "My work and my hobby both require attention to what is happening while keeping focused on what needs to happen." ■

Project Spotlight: The State Road 9A Project Series

When the interchange at J.T. Butler Boulevard and State Road 9A (SR 9A) is finished in 2007, the I-295 beltway around Jacksonville will be complete. JEAces provided construction engineering and inspection (CEI) services for the five large construction projects required to complete the beltway.

FDOT stipulated that if work went well on the first three projects they would sign a contract with the team for the last two projects. The first projects were successful and JEAces is currently working to complete the final project - the J.T. Butler Boulevard Interchange at SR 9A.

Some impressive numbers that illustrate the scale of these five projects include 33 bridges, 2.2 million cubic yards (CY) of excavation, 4.7 million CY of embankment, 169,000 tons of asphalt, 330,000 square yards of concrete pavement, and 661 drainage structures connecting over 14 miles of stormwater pipe. The bridge work included segmental boxes, bulb trees, steel plate girders, and AASHTO concrete beams. Three crossings over I-95 were constructed using Florida U-beams, pretensioned concrete beams which provide an economical and aesthetic alternative to I-beams -- only the second application of this type in the state.

With all the different aspects involved, it's been a wild but rewarding ride along the SR 9A corridor for JEAces. ■



State Road 9A Interchange

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Recent national-level examples of the report card in use include congressional approval of full funding for the nation's surface transportation program and increases to the clean water state loan program which provides low-interest loans for wastewater facilities. Additionally, Congress has taken action by holding hearings on legislation that would create a rehabilitation program for deficient dams.

In addition to helping secure funding, the report card program plays an important role in educating the public and building support for projects by publicizing the needs of America's infrastructure through press coverage in several national news outlets including USA Today, MSNBC and CBS News.

"The Report Card is a major asset in the ASCE Government Relations effort," Brian Pallasch, ASCE director of government relations, said. "By highlighting problems in areas of the national public works infrastructure, We are able to make the case for Congressional action." ■

Helping Formulate the Future of Civil Engineering

In October 2005, Kathy Caldwell, President of JEAces, was elected to the Board of Directors of the American Society of Engineers (ASCE). The mission of the Society is "To provide essential value to our members, their careers, our partners, and the public through developing leadership; advancing technology; advocating lifelong learning, and promoting the profession."

Part of Kathy's responsibilities include sitting on Society Board Committees. She is currently serving on the Policy Review Committee, the Educational Activities Committee (EdAC), the Engineer's Joint Contract Documents Committee (EJCDC) and EJCDC Planning and Budgeting Committee. She recently chaired the Formation and Governing Documents Committee for a new geographical unit consisting of Mississippi, Louisiana, Georgia, Alabama and Florida and will chair the Board of Governors for this Region next year. She is also active in the Society's current strategic-planning effort.

"The work I do with ASCE does keep me very busy," Caldwell says, "but I enjoy the many rewards. Civil Engineers are some of the greatest people on the planet and I have the opportunity to develop lifelong relationships with many of them. My work with ASCE also provides opportunities to hone my leadership, negotiating, and communication skills."

Kathy deeply appreciates Jones Edmunds' support of her position on the ASCE Board of Directors. One of her goals is to maximize the benefit of her participation for the Company through advanced knowledge of industry developments, strategic affiliations and recruiting opportunities.

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Did You Know?

- **Busting at the Seams** - Between 2000 and 2004, Florida grew an average of more than two percent a year. By 2030, Florida is expected to be the third most populous state, with about approximately 26 million residents.
- **No Elbow Room** - Every year there are about 4.5 visitors to the state for every Florida resident. The discrepancy will increase as the visitor growth rate is expected to outpace the population growth rate.
- **The Little Engine That Could, but Didn't** - Even though goods transported through Florida have increased, transporting via rail has not kept pace, meaning roads have had to accommodate the increase in freight traffic.
- **I Can See for Miles and Miles** - Since 2000, total public road length in Florida has increased by 3,084 center-line miles, still not enough to keep up with the growth in population.
- **We Are Car Junkies** - Walking isn't a popular means of transportation in Florida. Nearly 90 percent of all trips made by Floridians are either as a driver or passenger in a car. The two most popular destinations? Business and shopping.
- **Comparatively, We're Not That Bad** - Floridians travel slightly fewer miles and make slightly fewer trips annually than residents in the rest of the country. And we only spend an average of 408 hours per year in our car compared to the national average of 428 hours.

Source: Pocket Guide to Florida Transportation Trends & Conditions, Florida Department of Transportation, 2005 Edition.

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Kathy Caldwell (top row, second from the right) with fellow ASCE Board members

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Kathy is currently looking forward to early March 2007 when she'll participate in a Legislative Fly-In in Washington D.C. She will receive training in the legislative process, current infrastructure improvement and other societal issues. She will also visit members of the House and Senate to discuss important civil engineering and legislative issues such as clean water, math and science education, infrastructure improvement and security and smart and sustainable growth.

Kathy has been an active member of ASCE since 1983 and has served as president of the University of Tennessee Student Chapter, the Gainesville Branch and the Florida Section. Her involvement with ASCE has given her the opportunity to network with and learn from other Civil Engineering professionals throughout the world and to influence the direction the profession takes in the future.

ASCE, America's oldest national engineering society, was founded in 1852 and represents 137,000 civil engineers world wide. The Society has an annual budget of approximately \$50 million and employs over 200 staff members, most of whom work from the Reston, Virginia headquarters.

More about the Society's services and current activities can be found at www.asce.org or by calling Kathy – but be prepared to get involved! ■