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Interstate 75 Alligator Alley Cable Safety Barrier Wins FICE Award of Excellence

American Consulting Engineers of Florida, LLC (American), recently won the Grand Award of Excellence, Transportation Engineering from the Florida Institute of Consulting Engineers (FICE) for their I-75 Alligator Alley Cable Safety Barrier. The award recognizes projects that demonstrate a high degree of achievement, value, and ingenuity. This project accomplishes these objectives, as it is saving lives, was constructed under budget, and uses a unique cable system not previously used within the state of Florida.

In 2002, The Florida Department of Transportation (FDOT) responded to a disturbing trend of fatal crashes occurring on I-75 in Collier County as a result of vehicles leaving the roadway, crashing through existing wildlife fencing and entering into adjacent canals. Not only was this a problem, many times the Florida Highway Patrol was unable to locate the crash, as fencing would give way and collapse back into place. It was suspected that victims would have survived had they not drowned. Between 1995 and 1999, 14 fatalities occurred as a result of 56 crashes involving the canal. In 2002, there were 6 fatalities resulting from 26 crashes where the vehicle went into the canal.

To counter this fatal problem, a 50-mile cable barrier system was designed and constructed to harness the reserve capacity of the existing wildlife fence. The solution consists of two above ground cables, supported by the existing fence posts and added foundation systems nominally spaced at 2000'. Tension is placed in the cables by means of springs that are attached to the anchorage assembly, which aids in stopping an errant vehicle from plunging into the canal. It also provides a "soft" impact, due to its inherent flexibility, thereby protecting the vehicles occupants. To further supplement the system, a strobe light is attached to each anchorage assembly and is activated if impact occurs. This assists officers in quickly locating the crash site.

The unique system, which was completed in early 2004, finished 33% under budget, saving FDOT \$2.9 Million over the traditional guardrail systems. This dramatic cost savings allowed the reallocation of resources to other important projects. The system also maintained the natural beauty of the Everglades, as it was easily integrated into the existing fence, resulting in negligible environmental impacts and provided no further visual obstructions for the hundreds of thousands who travel Alligator Alley every year. In addition, it is easy to maintain and repair after impacts.

The system has been impacted in excess of 50 times with more than a 65% reduction in drowning fatalities from the year immediately prior to the construction of the system. Instances where fatalities occurred were a result of a tumbling vehicle not impacting the system directly, but was slowed and the notification system worked as planned. Typically, injuries and damage to the vehicles and passengers have been slight and most importantly lives are being saved.

American Consulting Engineers of Florida, LLC provides planning, civil engineering, consulting and project management services to local, state and federal agencies as well as the private sector. With its beginnings in 1987, American's Florida presence has grown throughout the state to include headquarters in Land O'Lakes and offices in Fort Pierce, Pace, Port Charlotte, Spring Hill, Tallahassee and West Palm Beach. American's personnel include civil engineers, structural engineers, drainage engineers, environmental scientists, urban & transportation planners, landscape architects, construction engineers and surveyors that perform a wide range of services.

"A Culture of Engineering Excellence"