



Globally Proven
Construction Solutions

SUWANNEE COUNTY TRANSFER STATION

Project Spotlight



BUILDING OWNER:
Suwannee County Transfer Station
Live Oak, Florida

CONTRACTOR:
Cornerstone Construction Services
Orlando, Florida



No Downtime for Suwannee

The Situation

Suwannee County Waste Transfer station is a busy trash transition area that operates nearly around the clock. Moving 100 to 150 tons of waste across its floors per day, the facility cannot afford downtime. Floor downtime results in lost sales revenue, something any business finds undesirable.

Orlando-based Cornerstone Construction Services (CCS) is a concrete contractor that has been subcontracted to provide concrete services at many of Central Florida's leading institutions, including the City of Orlando, Orange County Public Schools, Walt Disney World, Sea World, and The Kennedy Space Center. The construction group also has years of experience working in waste transfer stations and heavy-duty industrial applications.



The Challenge

Suwannee Country Transfer Station had a problem with their existing floor. And it wasn't the first time.

Waste transfer stations contain some of the harshest chemical and abrasion conditions for a concrete floor one can find. After performing preliminary analysis work on the existing transfer station floor, the Cornerstone crew saw that the chemicals from the waste and the impact from the heavy machinery ground the surface down as much as 3 to 4 inches (7.6-10.2 cm), nearing the rebar in some areas. Like in most transfer stations, the excess abrasion and impact and chemicals eat away at the existing concrete which made the floor inoperable for their big front loaders to transfer trash.



Suwannee County engineer, Dennis Rafferty, had contacted Jason Gonder of Orlando-based Cornerstone Construction Services about doing some concrete repair work a number of years ago. They installed 6,000 PSI (41.4 MPa) concrete backed with granite aggregate. The area in question was approximately 4,200 sq ft (3,902 m²) of transfer station flooring. While this high-strengths concrete was a good solution at the time, in these harsh conditions, the cement paste wore down rather rapidly, after only a few years, causing the aggregate to crumble, resulting in floor failure.

Some time later, Rafferty contacted Gonder again to see what he thought would be a good solution for their recurring transfer station flooring problem that was even tougher than 6,000 PSI (41.4 MPa) concrete.

A LATICRETE Solution

Rafferty started doing research to find a solution to top the entire floor instead of complete tear out. Rafferty discovered L&M™ EMERYTOP 400™, a high-strengths, emery-based aggregate that is often placed in waste transfer stations. The more he looked into it, the more he felt it was the perfect product fit for his transfer facility's problem.

From there, Rafferty contacted Alejandro Luna, the technical sales rep for Florida and EMERYTOP 400 expert to discuss his situation.

"What really sold me on the product was the minimal downtime. We gave Cornerstone the floor on late Thursday evening. They came in and did their demo. We had a staging area they could work with. They put the EMERYTOP 400 material down on Friday morning and we were back on it Monday morning."

Outcome

So far, the new transfer station floor has held up really well against the abrasion, impact and chemicals from the waste.

“If we had to do it all over again, I’d have done it sooner. By the time we got it approved, our floor was in really bad shape. Based upon the research that I’ve done, this floor should last for years to come.

“We are a local government facility. It takes a long time to get things done. We got the ball rolling. We took it to the board. We got it approved. And finally we got it done. Cornerstone resurfaced the floor back in September 2018.”



“I’m glad we did it. Glad we got it done. We plan to get many, many years of service out of this floor.”

– Dennis Rafferty,
Suwannee County Engineer



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