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Full-Depth Reclamation (FDR) Utilized as Part of Major Facelift of Downtown Tyrone, Georgia's "Main Street"

1 Senoia Road under construction

2 Overnight construction near railroad crossing

3 FDR work on Senoia Road

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Located 25 miles southwest of Atlanta, the town of Tyrone is a very typical small Georgia city with a railroad track running down the center of Senoia Road, downtown Tyrone's "Main Street." Settled in the late 1800s by Irish farmers, it is now a charming bedroom community of Atlanta, the largest city in the new South.

Due to limited funding, major projects such as the complete reconstruction of Senoia Road come only once in several generations. When it was apparent Senoia Road needed to be completely restored, Tyrone officials turned to its engineering consultant Mallett & Associates for recommendations. The consultant had completed several successful full-depth reclamation (FDR) projects and thought this technology would be a perfect solution to the tight budget and time restraints Senoia Road reconstruction included. Once preliminary soils investigations involving 11 different mix designs were completed, the project went out for bid in late 2014.

Atlanta Paving and Concrete Construction received the contract to perform FDR and began work in April 2015. The project totaled just over eight miles of FDR, but other improvements were required for its successful completion. For example, Senoia Road was once a Georgia State Route and had been overlaid with asphalt multiple times. These overlays created all types of drainage problems that became progressively worse over the years. Atlanta Paving began the reconstruction process by milling over 3,000 LF it to its original grade. Next, they milled a couple of inches off the roadway and began the FDR process. Reclaiming to a depth of 10 inches and adding 55 pounds of portland cement created a stabilized base for the new pavement.

One of the great benefits of FDR is the work typically can be performed under traffic. Traffic control for the project was a greater than normal challenge due to the fact the city park was located on Senoia Road and construction took place during the little league baseball season. On top of that, there is a graveyard located downtown. The work process had to be stopped four different times for funeral processions. All traffic control was handled with a pilot vehicle, working one lane of the road at a time.

Castlewood Road, a major arterial for Tyrone that connects to the interstate, was also reconstructed under this contract. Many upscale subdivisions adjoin Castlewood making it another high traffic area. Also the road varied in width from 18 feet to 22 feet. The contract called for the entire road to be widened to a total of 22 feet. FDR was an ideal way to accomplish the task. The project included reworking multiple driveways to the elevation of the new road, and constructing an asphalt golf cart path paralleling Castlewood.

Because the FDR process was so economical, the city was also able to add another short section of reconstructed roadway as well as rebuilding another section of golf cart path. In all, 125,000 square yards of road was reconstructed. The project took a total of four weeks to complete and city officials were pleased with the results.

"This project provided a much needed upgrade to two of Tyrone's main vehicular corridors. By utilizing the full-depth reclamation (FDR) process, we were able to rejuvenate more than 90 percent of the total length of these two critical roadways and stay well within the project's budget. We feel that FDR has provided not only a great value but a superior final product as well," said Mallett & Associates President David Jeager.

Tyrone City Manager Kyle Hood said, "This project has been a long time coming for the town of Tyrone; we believed that right now is the most ideal time for such a large project scope. Rebuilding this many miles of road in place is not an easy feat, but our hope was that doing a little extra infrastructure improvement now would help to ensure economic recovery and downtown revitalization for the next generation of Tyrone residents and business owners. We are extremely happy with the results, too. This is definitely a project that the materials suppliers, contractors, elected officials and taxpayers can all be proud to have been a part of."