

TRA CRWS MASTER PLAN AND MODELING PROJECT
Dallas, Texas

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Director's Insight

Jerry Holder, Director of Transportation



When Garver began serving as program manager for the Connecting Arkansas Program (CAP) five years ago, the starting blocks were difficult to see, let alone the program's finish line. But, now, halfway through the Arkansas Department of Transportation's \$2 billion program, we can say one thing for certain: We're better engineers and managers because of it.

First, we're proud to say that 11 of the 36 projects in the largest program ARDOT has ever undertaken are completed, including the Future 412 Bypass in northwest Arkansas, which you can read about in this issue. Six of them are currently under construction, 19 are approaching design completion, and eight will go to bid this year. Meaning, not only did we get off to a good start, but the end is in our sights.

After decades working with DOTs in various states as strictly designers, it has been rewarding for us to watch projects evolve from a new perspective. In the process, we've put together one of the region's most thorough Project Controls teams, which provides services such as project schedules, cost and contracts, quality control, reporting and document control, and systems engineering.

We're humbled by ARDOT's confidence in Garver, and appreciative for how they've helped us. The function of CAP is to improve the state's highways — and it is doing that — but it is also making a better Garver, along with a Transportation Team more equipped to bring any job to the finish line on time and on budget.

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We're invested in making a difference.

Water Infrastructure Team Leader Ian Toohey knows the value of service, whether he's developing hydraulic models for distribution systems in Texas, or training system operators in Peru. That's why he and Garver are passionate about enhancing the systems that deliver clean and potable water, no matter where they are.

✦ For more information, visit GarverUSA.com/Water.

Future 412 Bypass in Northwest Arkansas

OPENING EAST/WEST ACCESS

Northwest Arkansas routinely ranks as one of the fastest-growing areas in the country, as high as 14th according to the United States Census. In response to that trend, the area has desired an east/west oriented freeway for decades.

To join the Garver-designed, north/south Interstate 49, the area now has a facility to welcome east/west travel in the future U.S. Highway 412 Bypass. The four-mile, four-lane controlled access facility north of Springdale, Arkansas connects State Highway 112 to the west and Interstate 49 to the east, and was designed to accommodate future growth.

“This roadway has been a long time coming for this area,” said Roadway Team Leader John Cantabery. “It improves connectivity to I-49, provides safe and efficient movement of traffic within the region, and helps reduce congestion.”

Design included overpasses at Highway 112, Grimsley Road, Zion Road, and Spring Street; as well as main lane, dual bridges over Spring Creek and Wagon Wheel Road.

Part of the Arkansas Department of Transportation’s Connecting Arkansas Program, for which Garver is providing program management, design considerations were made for the terrain. Just south of the Ozark Mountains and near a large quarry, the design included many deep cuts and fills to bring to life a route that provides better access to, among other attractions, the Northwest Arkansas Regional Airport.

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SPRINGDALE, ARKANSAS

TRA CRWS Master Plan and Modeling Project

PLANNING FOR THE FUTURE

With 1.4 million customers and a peak capacity over 400 million gallons per day, the Trinity River Authority of Texas’s Central Regional Wastewater System (CRWS) is the state’s largest tertiary water resource recovery facility. To sustain such a critical facility, evaluations of capacity, performance, and future needs are essential.

The Garver team and the Authority produced a Master Plan that identified decisions on capital planning, operations, and maintenance. Rather than focus solely on future capacity, the team evaluated efficiency, flow management, treatment process optimization, and planning for regulatory changes. The team also developed and trained staff to operate a state-of-the-art treatment process model and a whole plant-integrated hydraulic model for future use.

“Stakeholder engagement and communication proved critical in the Master Plan’s success,” said Garver Project Manager Jeff Sober. “Together, we were able to evaluate the entire facility to produce over two dozen memoranda and analyze over 100 improvement alternatives for a capital improvements program consisting of 67 projects.”

The capital improvement program amounted to \$615 million over the planning horizon, which will help the Authority improve resiliency and efficiency at CRWS, while meeting the needs of the growing Dallas-Fort Worth region.

Jeff Sober | Project Manager
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DALLAS, TEXAS

Hurricane Harvey Damage Assessments for the TMD

ENSURING TOP PRODUCTIVITY

The effects of Hurricane Harvey are still being felt more than a year after more than 60 inches of rain fell on southeast Texas. And as the Texas Military Department (TMD) continues to provide aid to an estimated 13 million affected, its own installations are in need of repairs.

Garver's Federal Team performed facility condition assessments and completed reports on 21 of the TMD's installations. Comprised of more than 600,000 square-feet of space, the assessments identified scope and cost of storm damage and resulting data was entered into the U.S. Army Corps of Engineers' BUILDER software.

"Their job is to ensure the affected are taken care of, and ours is to make sure that's as easy as possible for them," said Garver Director of Federal Services Wallace Smith. "Storm damage assessments to determine severity of loss are essential in all recovery efforts."

Garver performed site investigations, met with facility personnel, and reviewed as-built information to determine what damage was storm-related and what was most essential to address. Findings included water encroachment, roof and drainage system damage, and mold.

The TMD will consider Garver's assessments when determining which infrastructure improvements to implement, ensuring that facilities are in peak condition while providing storm-related assistance.

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SOUTHEAST TEXAS

MEM Perimeter Intrusion Detection System

SECURING THE PERIMETER

For an airport to efficiently deliver passengers and goods to desired locations, it needs to be safe, secure, and efficient. Garver recently helped the Memphis International Airport enhance that capability with a new perimeter fence intrusion system carried by more than 20,000 linear feet of 10-foot fence.

Garver provided engineering design and construction administration services to replace the outdated detection system, increasing the safety at an airport that serves more than four million travelers annually. Designed by St. Louis, Missouri-based Faith Group, the system's ability to detect the exact time and location of a breach significantly shortens response times. The system is carried by fiber-optic cable and is connected to the new fence and gates, which replaced a previous six-foot-tall fence.

"We recommended the taller fence to discourage potential breaches," said Garver Aviation Electrical Director Eric Farmer. "Now, with that deterrent in addition to the detection system, the airport is much more equipped to respond to any security breaches at its perimeter."

A breach could lead to shutting down operations and canceled flights, creating drastic operational and economic impacts on the airport. With a taller fence and a more sophisticated system, the airport is now more secure for travelers, and more economically efficient for its operators.

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MEMPHIS, TENNESSEE