

3 South Dakota: Advance Planning

The need for accurate project communication.

South Dakota has 7,857 miles of state-owned roads for which its transportation workers have to plan projects for maintenance, upgrade and construction. In addition, there are nearly 76,000 miles of local roads that require coordination with local governments for similar work.

“Planning highway projects and preparing a set of construction plans can take anywhere from three months to 15 years, depending on the type of project,” explains Tim Bjerneberg, project development engineer with the Office of Project Development at the South Dakota Department of Transportation (SDDOT). “We need a reliable system for scheduling resources for the 1,200 projects that are going on concurrently.”



Paving concrete on the recently completed highway to Mt. Rushmore.

SDDOT is counting on Primavera software to provide that reliable system. The agency is in the process of implementing the software to schedule its staff members and their tasks for the planning and engineering processes of all highway-related

construction projects. Such projects include seal coating existing highway to preserve a stretch of road, building a full interchange for a freeway in an urban area, and developing a new four-lane expressway. The DOT intends for the software to manage scheduling from initial planning through the hiring of construction and maintenance contractors.

Until recently, the DOT used its 25-year-old main-frame for project scheduling. “It has served us well,” says Bjorneberg, “but it doesn’t allow for dynamic scheduling. The static monthly reports it lets us produce are not up with the times.”

SDDOT wants to record and report on scheduling activity in real time. Up to 150 people may be working on various planning aspects of one project at once. Some may be purchasing properties for new highway space, others may be dealing with utilities companies, and still others may be addressing political or environmental concerns. “Primavera will provide a better communication tool for all of us to see which phases of which jobs have been completed and which still need to be done,” says Bjorneberg.

SCHEDULING – AND MORE SCHEDULING

The need for accurate communication and scheduling will become even more important with the advent of SAFETEA-LU. According to Bjorneberg, the additional funding provided in SAFETEA-LU will allow for the implementation of more projects in the mix of already-planned highway construction. “Primavera will help us answer questions such as ‘How will we get these new projects done with the resources we have?’” he says. The DOT may uncover a need for external resources, for example.

One of the DOT’s missions is to spend funds wisely to meet the expectations of the state government and its citizens. SDDOT often needs approvals from external groups such as the transportation commission, which oversees how the DOT spends its funds. “We have a long history of accomplishment,” Bjorneberg says. “Dynamic-scheduling software gives us the ability to communicate that we are on track and, in turn, spending wisely, and can show us where we need to change things if we need to get back on schedule.”

Bjorneberg sees the DOT as a self-supporting engineering firm with diverse needs. Each project is different, he says: “It’s not a cookie-cutter situation. There may be a project that involves 30 miles of highway and one that is just an intersection. Our goal is to coordinate those projects for clear communication of project planning.” »