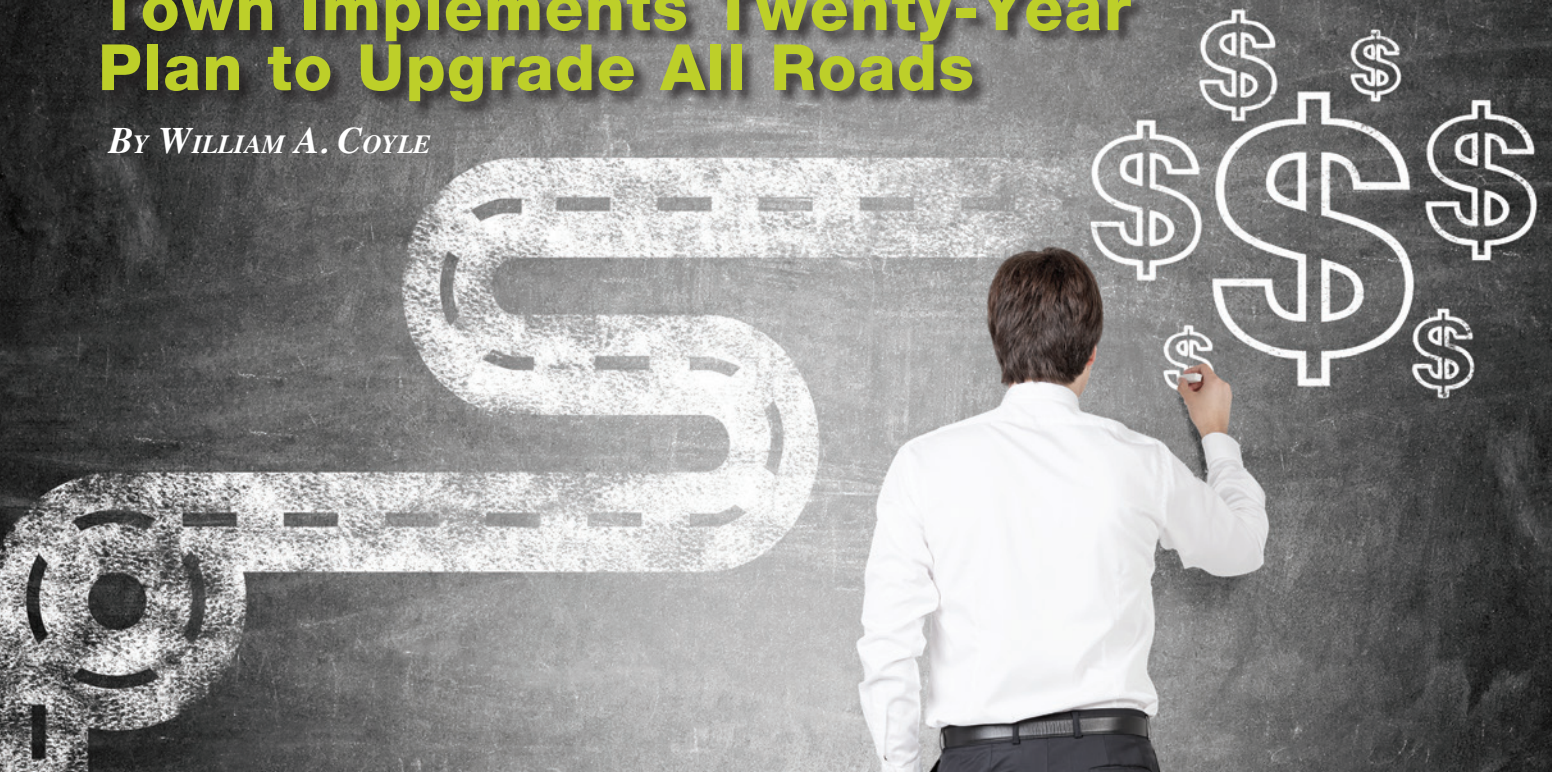


Taking the

Town Implements Twenty-Year Plan to Upgrade All Roads

By WILLIAM A. COYLE



Seven years ago, the Town of Auburn reorganized its form of government, which led to the appointment of the first town manager and the consolidation of all public works functions in a new Department of Public Works. The new town manager, Julie Jacobson, knew it was going to be important for residents to see major improvements quickly under the new form of government. A good place to start was improving the condition of the town's roads, which, as in most cities and towns, is one of the biggest topics of discussion in Auburn.

Long View

The town manager and I worked to develop a plan to improve the town's roadway system and have all ninety-six miles of town roads upgraded over a twenty-year period. The first step in developing this plan was to establish a baseline. With the help of the assistant town engineer, I began reviewing the condition of each town road and rating it. The review took several weeks. When it was complete, we calculated a cost estimate to upgrade all town roads over a twenty-year period.

At the time, it was determined that to achieve the plan's goals, the town would need to invest approximately \$1 million per year over and above the town's Chapter 90 apportionment, which in 2011 was \$466,022. Chapter 90 funding is now \$608,943 per year; combined with the town's appropriation of \$905,000, the town's roadway program is funded at \$1.5 million per year.

Know Your Roads

A major component of any roadway program is to know your roads. It is important to evaluate the condition of each city or town road every year. There are many different systems available for evaluating roadways, from the Pavement Condition Index (PCI) to a simple rating of 1 to 5 or A to F. The method of appraisal is not as critical as how it is used. I recommend doing this in-house; it certainly takes a lot of time to evaluate and rate every road in the community at first, but once the initial inventory is complete the process goes much faster in subsequent years. After all, who better to evaluate the condition of a town's roads than the people responsible for maintaining them?

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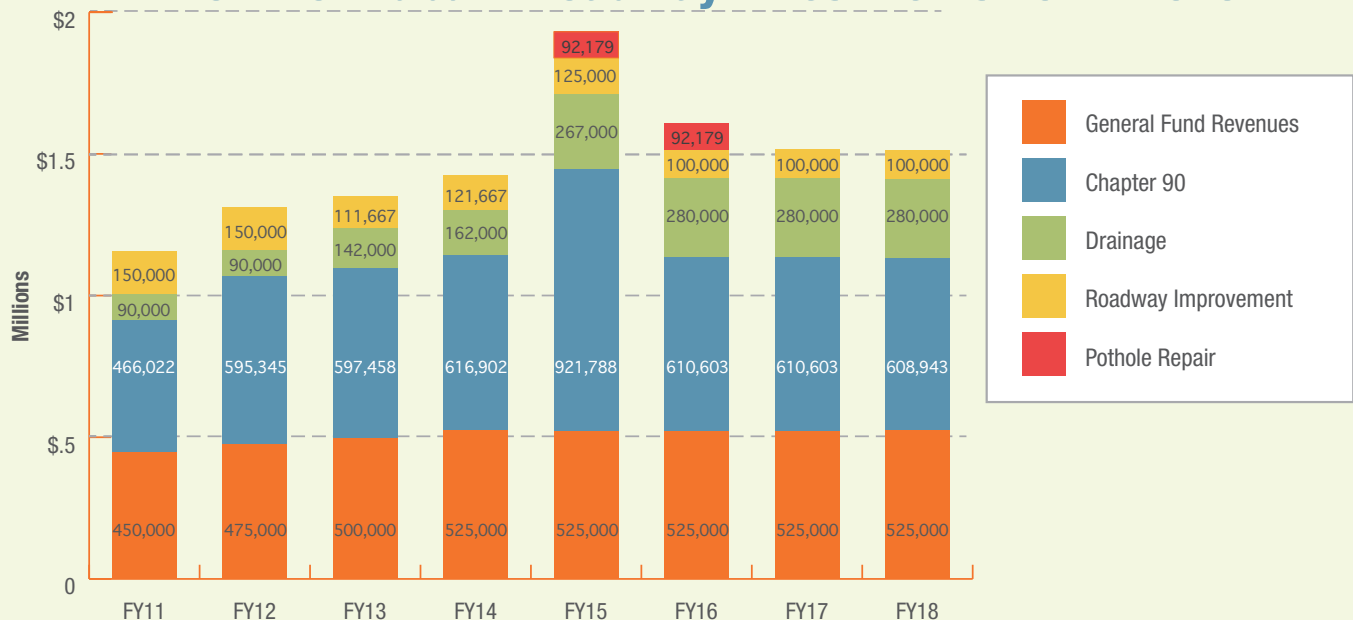


*As part of the town's long-term plan, road crews repair a small area in Auburn.
(Courtesy photo)*

It is also important to know when each road was resurfaced or reconstructed. When I first started working for the Town of Auburn as the town engineer in 2008, I discovered a file that contained a handwritten list of all the roads resurfaced or reconstructed since 1996. That information was a good starting point for creating a database, which now has twenty-two years of information. With this data, we know whether a road has had a surface treatment in the past twenty years. If not, then the road is likely in need of reconstruction. Having these records is critical in developing a long-term roadway program.

The town has also transferred this data to a GIS mapping system, where information such as the year a road received treatment, the type of treatment, the name of the contractor, and any noteworthy items are assigned to each street. The roads are then color-coded according to the time since the last surface treatment, which gives the DPW a snapshot of the age of the infrastructure. If a town does not have the staff to create and maintain a GIS system, old-fashioned pen and paper can be just as effective for maintaining records for a road program.

Town of Auburn Roadway Investments 2011–2018



Choose Your Surface Treatment

It is important to categorize the roads in classes according to their condition, and then to choose the surface treatment accordingly. There are many different surface treatments available, ranging from complete reconstruction, milling and resurfacing, microsurfacing and chip seals to hot in-place recycling. Each treatment varies in cost and service life. A method that's good for one community may not be a good fit for another. Before an unfamiliar method is selected, it is recommended to evaluate the application process and visit other communities that have used the treatment.

In Auburn, if a road has not had any treatment in more than twenty years, it most likely will be reclaimed (pulverized, graded and paved). Once this work is complete, the road will then have a target date for milling and resurfacing in fifteen to twenty years. A road that was reconstructed within the past twenty years would probably be milled and resurfaced.

Unfortunately, the roads in Auburn did not receive the attention they needed over the past forty years, and there has been a significant amount of catching up to do. When a road reaches the point

where it requires complete reconstruction or reclamation, then the opportunity to perform a less costly maintenance treatment is lost, and the most costly alternative is the only option. At this point, the passage of even more time will not change the outcome. Having only the most expensive option is certainly what every community would like to avoid. The Town of Auburn's ultimate goal is to get into a maintenance cycle where this situation is avoided and the town's roads are in good condition, requiring maintenance only, but achieving this goal comes at a cost.

Worst First Versus Keeping Good Roads Good

Every community is familiar with this story: most calls received by the DPW are from residents requesting that the worst roads be reconstructed first. It is difficult for a resident to understand why a road in better condition might receive attention before their road. As a result, Auburn tries to strike a balance between attending to the worst roads while maintaining the good roads. In addition, main roads are prioritized over secondary roads, a policy that most residents understand. It is a

difficult balance, but educating the public about the plan can go a long way. The reality is that road dollars cover a lot more ground when attention is paid to roads that are already in good condition. Keeping such roads from degrading will avoid more costly repairs down the line.

In line with this strategy, the town has an aggressive crack-sealing program. Sealing keeps water from seeping underneath the asphalt and causing more cracking and premature deterioration of the road. Several years ago, the town approved the purchase of a crack-sealing machine. When a road is resurfaced or reconstructed, the DPW will crack seal it within three to five years and will review these same roads again five years later. Keeping the work in-house has resulted in substantial savings to the town.

Investing in Your Roads

Having a roadway system that is well-maintained not only provides a comfortable driving surface, but also makes the city or town more attractive to businesses and prospective homebuyers who are comparing communities.

Ultimately, the most important part of the plan is having adequate funding to

accomplish it. Cities and towns continue to push for an increase in Chapter 90 funding, but Chapter 90 funds alone are not adequate to enable cities and towns to keep all of their roads in good condition.

The Town of Auburn's additional investment, now at \$905,000 per year from general fund revenues over and above Chapter 90, has afforded the town the opportunity not only to improve its roads but also to reconstruct sidewalks in disrepair, replace an aging drainage infrastructure, and make stormwater improvements.

Eight years into the town's twenty-year plan, thirty-two miles of roads have been reconstructed or repaved. When the plan was formulated, the majority of the roads were in fair to poor condition. Now, the majority of roads are in good to fair condition. Over the next twelve years, the goal is to do more surface treatments as opposed to reconstruction; this will be more cost-effective and increase the number of miles being maintained per year. 🌟



Auburn has an aggressive crack-sealing program to extend the life of its roads.
(Courtesy photo)