

NASHVILLE—Tennessee needs at least \$41.5 billion of public infrastructure improvements during the five-year period of 2014-2019 according to a new report by the Tennessee Advisory Commission on Intergovernmental Relations (TACIR). The need for public infrastructure improvements as reported by state and local officials is down \$299 million (0.7%) compared with the year before, mainly because of a \$611 million decrease in the Transportation and Utilities category that was driven by \$1 billion in decreased costs for road projects already in the inventory.

Costs for current infrastructure needs fall into six general categories:

- Transportation and Utilities: \$25.4 billion
- Education: \$8.5 billion
- Health, Safety, and Welfare: \$5.0 billion
- Recreation and Culture: \$1.6 billion
- General Government: \$614 million
- Economic Development: \$379 million

Transportation and Utilities has always been the single largest category and it remains so despite a decrease of \$611 million (2.4%) from last year to \$25.4 billion. Many Tennesseans are aware that the Tennessee Department of Transportation (TDOT) reports an approximately \$6 billion backlog of projects, but this includes only the total estimated cost of remaining phases of work for projects already approved by the Tennessee General Assembly and currently under development. The inventory's much larger estimate of \$25.2 billion for transportation (not including the category's other \$215 million for other utilities) includes all transportation improvements identified by state and local officials as needed, whether or not any funding has been approved or is even likely to be forthcoming.

The decrease in the inventory's Transportation and Utilities category is driven by a combination of decreased costs for existing road projects and road projects that were completed, canceled, or postponed, would be greater if not for the addition of new projects. Nearly \$200 million, or roughly one-fifth, of the decrease in road costs is reductions resulting from TDOT's Expedited Delivery Program, which develops lower cost, more timely alternatives for projects that have been needed but not funded for a long time. Comprising 60.7% of estimated costs for all infrastructure improvements, transportation alone dwarfs all other types of infrastructure needs.

Education is the second largest category and increased \$204 million (2.4%) to \$8.5 billion, mainly because of a \$218 million (10.5%) increase in the amount needed to renovate or replace existing public school buildings. This increase was partially offset by an \$80 million (5.1%) decrease in the need for new school space. Asked about the overall condition of their school buildings, public school officials

reported that 91.6% are in good or better condition. Post-secondary education accounted for 29.9% of the increase in the education category—there was a \$61 million (1.3%) increase in improvement needs at the state’s public college and university campuses, which now stands at \$4.6 billion.

Health, Safety, and Welfare, the third largest category, increased by \$265 million (5.6%) to \$5.0 billion. This increase resulted primarily from increases in the need for improved water and wastewater, and infrastructure needed for storm water. Water and wastewater accounts for the largest portion of the category at \$3.3 billion; it increased by \$202 million (6.5%) from last year as the cost and extent of EPA-decreed improvements in Nashville increased. The amount needed for storm water improvements increased by \$95 million (91.9%) to \$198 million, and the estimated cost for public health facilities improvements increased by \$87 million (24.7%) to \$441 million, both driven by the addition of a few costly, new projects. The total cost of two other types of infrastructure in this category also increased: fire protection increased by \$1.8 million (1.1%) to \$168 million and public housing increased by \$800,000 (75.6%) to \$1.9 million. The estimated cost of infrastructure improvements needed for law enforcement and solid waste decreased—law enforcement decreased \$117 million (12.6%) to \$812 million, and solid waste decreased \$5 million (15.9%) to \$26 million—primarily a reflection of projects completed.

The Recreation and Culture category decreased overall by \$119 million (7.0%) to \$1.6 billion because of decreases in all three types of infrastructure in this category but mainly because of community development projects that were completed, which reduced the total for that type of infrastructure by \$79 million (29.5%) to \$190 million. The estimated cost for libraries, museums, and historic sites decreased by \$25 million (6.9%) to \$343 million—few new projects of this type were added to the inventory, while several were completed, canceled, or reported as having a cost reduction. In addition, the estimated cost of infrastructure for recreation decreased \$14 million (1.4%) to \$1.0 billion as completed and canceled projects slightly outweighed the costs of new projects added.

The estimated cost of General Government infrastructure improvements decreased by \$56 million (8.4%) to \$614 million. This category includes only two types of infrastructure: public buildings and other facilities. The estimated cost of improvements in other facilities such as those used for storage and maintenance decreased by \$49 million (35.4%) to \$89 million, and the need for improvements in public buildings decreased by \$7 million (1.4%) to \$525 million.

The estimated cost of infrastructure improvements in the Economic Development category—the smallest category this year—increased by \$19 million (5.3%) since the last inventory and now totals \$379 million, mainly because a new \$40 million industrial park access road project at the Airport Industrial Park in White County produced a net \$28 million (11.8%) increase the cost of industrial sites and parks, which now totals \$261 million. The cost of business district development decreased by \$9 million (6.8%) to \$118 million.

In general, the more people a county has and the more its population grows, the more infrastructure it will need and, fortunately, the more wealth it will likely have to pay for those needs. As has been the case throughout the history of this inventory, relationships among these factors are strong and well demonstrated by the variation reported for each Tennessee county, although they are not perfectly aligned in any county. Some counties are able to meet their infrastructure needs more easily than others, some continue to report the same needs year after year, and even fast growing counties can find it difficult to meet their needs. And, relative to county population, counties with small populations need and complete just as much or more infrastructure than counties with large populations. Five

counties—Davidson, Shelby, Rutherford, Williamson, and Montgomery—account for 42.7% (\$5.9 billion) of the needed \$13.8 billion in infrastructure improvements reported by local officials.

Officials are confident in obtaining funding for only \$11.8 billion of the \$32.7 billion needed to meet infrastructure improvement needs. These figures do not include improvements for which funding information is not collected, such as improvements at existing schools or those in state agencies' capital budget requests. Most of this funding, \$11.3 billion, is for improvements that are fully funded; another \$528 million is for improvements that are partially funded. That leaves another \$20.9 billion of improvements for which funding is not yet available.

Unfunded infrastructure improvement needs are much less likely to be completed the longer they remain unfunded. For example, of the improvements needed in the current inventory that have been in the conceptual stage for three years, 28.7% are now fully funded. Only 0.04% of conceptual needs that have been in the inventory for eight years are now fully funded, and 82.5% of that is for transportation improvements. Revenue sources matter when it comes to this growing backlog of unfunded infrastructure improvements. For example, transportation infrastructure depends on a revenue stream that has been declining relative to need for many years because fuel costs and the related taxes have declined, but water and wastewater infrastructure is paid for by utility customers, for which only 7.8% of 8-year old projects remain unfunded in this inventory.

The full report is available on TACIR's web site at <http://www.tn.gov/tacir/article/tacir-infra-2014-2019>. For more information, contact Dave Keiser, Project Manager, at [david.keiser@tn.gov](mailto:david.keiser@tn.gov) or 615.253.4237.

### **TACIR Mission**

TACIR's mission is to serve as a forum for the discussion and resolution of intergovernmental problems; provide high quality research support to state and local government officials in order to improve the overall quality of government in Tennessee; and to improve the effectiveness of the intergovernmental system to better serve the citizens of Tennessee.