

# Building Tennessee's Tomorrow:

Anticipating the State's Infrastructure Needs

July 2014 through June 2019

## FUNDING THE STATE'S INFRASTRUCTURE NEEDS

***Nearly two thirds of infrastructure needs in the current inventory are not fully funded.***

Information about funding for public infrastructure needs reported by local officials indicates that 64% of the funds required to meet those needs was not available at the time the inventory was made, nearly the same as last year's 66%. Excluding improvements needed at existing schools and those drawn from capital budget requests submitted by state agencies, neither of which includes funding information, leaves \$32.7 billion of which \$11.3 billion is fully funded, \$775 million more than the amount that was fully funded in the previous inventory. Another \$528 million is available for improvements that are partially funded, bringing the total available to \$11.8 billion or about 4.5% more than the \$11.3 billion that was available for the infrastructure needs reported in last year's inventory. That leaves a need for another \$20.9 billion, about 6.2% less than last year's \$22.1 billion. See table 11.

*Local officials reported that \$11.8 billion is available to fund public infrastructure; of that amount, \$11.3 billion is for infrastructure that is fully funded.*

**Table 11. Public Infrastructure Needs  
Summary of Funding Availability\***  
*Five-year Period July 2014 through June 2019*

	Funding Available [in billions]	Funding Needed [in billions]	Total Estimated Cost [in billions]
Fully Funded Improvements	\$ 11.3	\$ 0.0	\$ 11.3
Partially Funded Improvements	0.5	6.0	6.6
Unfunded Improvements	0.0	14.8	14.8
<b>Total</b>	<b>\$ 11.8</b>	<b>\$ 20.9</b>	<b>\$ 32.7</b>

\*Excludes infrastructure improvements for which funding availability is not known.

Note: Totals may not equal 100% because of rounding.

### ***Funding sources vary based on ownership of infrastructure.***

Improvements that were entirely unfunded in July 2014 comprise 45% of the total funding needed, down from last year's 53%. As always, more of the funding needed will become available as projects move from the conceptual stage to the planning and design stage, but a lack of funding will prevent some projects from ever being completed. In fact, most of the infrastructure needs reported in the July 2009 inventory that were not already fully funded were still needed five years later. The percentage of funding available for infrastructure improvements that progressed from the conceptual stage in 2013 to the planning and design stage in 2014 was 42% compared with 9% for needs that remained conceptual. Infrastructure improvements must be fully funded to move from the planning and design stage to the construction stage.

A look at infrastructure projects completed over the last five years reveals some interesting funding source patterns. The government that owns infrastructure typically funds the bulk of its cost, and a variety of revenue sources are tapped. For example, the state collects taxes and appropriates those funds to its own projects but also provides grants to local governments through programs in various state agencies. Even so, cities and counties fund most of their infrastructure improvements with their own property and sales tax revenues, while utility districts fund their improvements primarily with dedicated revenue sources in the form of user fees.

Because most of the state's infrastructure needs are not included in this analysis, local government sources—mainly counties and cities—provide the majority of funding for all fully funded needs presented here except for transportation, which is funded primarily by the federal and state governments, and public health facilities and community development, both of which are funded primarily by the federal government (see table 12). It may appear that the state does not help pay for school buildings even though it does—although counties report funding more than four-fifths (83.3%) of new public school construction, and cities report funding the remainder (16.7%), the state provides an equivalent amount through its Basic Education Program (BEP) funding formula. The formula includes funds for capital outlay, an amount that topped \$700 million for fiscal year 2015-16. The state pays more than half of that amount but does not earmark those funds for that specific purpose, therefore school systems have the flexibility to use those funds to meet various school needs and for various reasons generally report using them for operating costs rather than capital outlay. Counties also report funding all of the reported \$6 million in school system-wide needs.

**Table 12. Funding Source for Fully Funded Improvement Needs by Category and Type of Infrastructure**  
**[in millions]**  
**Five-year Period July 2014 through June 2019**

Category and Project Type	State		Federal		Other		City		County		Special District		Total
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount
<b>Transportation and Utilities</b>	\$ 3,859.1	46.6%	\$ 3,818.4	46.1%	\$ 18.3	0.2%	\$ 289.2	3.5%	\$ 271.1	3.3%	\$ 12.4	0.1%	\$ 8,278.6
Transportation	3,859.1	47.0%	3,816.5	46.5%	18.2	0.2%	238.7	2.9%	271.1	3.3%	1.2	0.0%	8,204.9
Other Utilities	0.0	0.0%	1.9	3.0%	0.1	0.2%	50.5	79.3%	0.0	0.0%	11.2	17.6%	63.7
<b>Health, Safety and Welfare</b>	\$ 51.0	2.7%	\$ 150.6	8.0%	\$ 38.8	2.1%	\$ 468.8	24.9%	\$ 1,032.1	54.9%	\$ 139.2	7.4%	\$ 1,880.6
Water and Wastewater	50.4	3.0%	130.7	7.9%	38.5	2.3%	410.1	24.7%	894.4	53.8%	139.2	8.4%	1,663.3
Law Enforcement	0.0	0.0%	10.4	9.5%	0.1	0.0%	11.8	10.8%	86.9	79.7%	0.0	0.0%	109.1
Storm Water	0.0	0.0%	1.2	3.8%	0.0	0.0%	29.7	93.5%	0.8	2.5%	0.0	0.1%	31.7
Fire Protection	0.2	0.2%	3.8	6.0%	0.0	0.0%	14.7	22.9%	45.5	70.9%	0.0	0.0%	64.1
Public Health Facilities	0.0	0.0%	3.4	84.3%	0.0	0.0%	0.0	0.0%	0.6	15.7%	0.0	0.0%	4.0
Solid Waste	0.0	0.0%	0.0	0.0%	0.0	0.0%	2.6	39.8%	3.9	60.2%	0.0	0.0%	6.5
Housing	0.4	23.4%	1.1	60.4%	0.3	16.1%	0.0	0.0%	0.0	0.0%	0.0	0.0%	1.9
<b>Education</b>	\$ 0.0	0.0%	\$ 0.4	0.1%	\$ 0.0	0.0%	\$ 54.8	16.5%	\$ 277.5	83.4%	\$ 0.0	0.0%	\$ 332.7
New Public Schools	0.0	0.0%	0.0	0.0%	0.0	0.0%	54.4	16.7%	271.6	83.3%	0.0	0.0%	325.9
School-System-wide	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	6.0	100.0%	0.0	0.0%	6.0
Post-secondary Education	0.0	0.0%	0.4	48.2%	0.0	0.0%	0.4	51.8%	0.0	0.0%	0.0	0.0%	0.8
<b>Recreation and Culture</b>	\$ 13.5	2.4%	\$ 143.7	25.4%	\$ 26.8	4.7%	\$ 128.4	22.7%	\$ 253.5	44.8%	\$ 0.1	0.0%	\$ 566.0
Recreation	8.0	1.8%	99.7	22.1%	13.1	2.9%	100.7	22.3%	229.9	50.9%	0.1	0.0%	451.6
Community Development	3.7	6.5%	31.7	54.9%	2.1	3.6%	9.3	16.2%	10.9	18.8%	0.0	0.0%	57.7
Libraries, Museums, and Historic Sites	1.7	3.0%	12.3	21.7%	11.6	20.5%	18.4	32.4%	12.7	22.4%	0.0	0.0%	56.8
<b>Economic Development</b>	\$ 8.5	6.1%	\$ 14.3	10.2%	\$ 4.9	3.5%	\$ 74.5	53.3%	\$ 34.7	24.8%	\$ 2.9	2.1%	\$ 139.8
Business District Development	4.3	4.9%	0.9	1.0%	2.6	2.9%	68.4	77.4%	11.8	13.4%	0.3	0.3%	88.3
Industrial Sites and Parks	4.1	8.0%	13.4	26.1%	2.4	4.6%	6.1	11.9%	22.9	44.4%	2.6	5.0%	51.5
<b>General Government</b>	\$ 0.6	0.7%	\$ 3.7	4.2%	\$ -	0.0%	\$ 55.8	63.6%	\$ 27.6	31.5%	\$ 0.0	0.0%	\$ 87.6
Public Buildings	0.6	1.3%	1.7	3.7%	0.0	0.0%	17.1	36.3%	27.6	58.7%	0.0	0.0%	47.0
Other Facilities	0.0	0.0%	2.0	4.8%	0.0	0.0%	38.7	95.2%	0.0	0.0%	0.0	0.0%	40.6
<b>Grand Total</b>	\$ 3,932.7	34.9%	\$ 4,131.1	36.6%	\$ 88.9	0.8%	\$ 1,071.5	9.5%	\$ 1,896.6	16.8%	\$ 154.7	1.4%	\$ 11,275.4

Local officials reported that 83% of the funding for county-owned projects will come from county sources. The same pattern is true of improvements reported in the 2009 inventory that have since been completed—counties paid 86% of the cost of meeting their infrastructure needs. Overall, counties provide funds for 16.4% of fully funded needs. In addition to the public schools and system-wide improvements discussed above, counties are the principal source of funding for six other types of infrastructure needs: law enforcement (79.7%), fire protection (70.9%), solid waste (60.2%), public buildings (58.7%), water and wastewater (53.8%), and recreation (50.9%).

Although cities fund just 9.5% of all fully funded infrastructure needs, they contribute heavily to five types of infrastructure: other facilities (95.2%), storm water (93.5%), other utilities (79.3%), business district development (77.4%), and post-secondary education (51.8%). And more than 25% of fully funded solid waste; public buildings; and libraries, museums, and historic sites infrastructure are funded by cities. For libraries, museums, and historic sites, this constitutes the largest portion of the funding. Overall, cities provided 68% of the funds necessary for improvements they needed in 2009 and have completed since then, and they expect to provide 53% of the funds for current and future improvements.

Although special districts paid 75% of the cost of meeting their 2009 infrastructure needs and expect to fund 69% of their current and future costs, they do not provide the majority of funding for any type of infrastructure. Most special districts in Tennessee are water utilities, so it is no surprise that almost all (90.0%) special district funding is for water and wastewater improvements, but because most water and wastewater needs are met by cities, special district funding makes up only 8.4% of the total needed for that type. Most of the rest of special district funding is for other utilities (7.2%), making up 17.6% of that type.

***The percentage of funding available varies greatly across types of infrastructure.***

Table 13 breaks down the \$11.3 billion available for fully funded needs by type of infrastructure and compares it with the total needed for each type of infrastructure. Although transportation and water and wastewater represent the largest portion of needs, neither type is the one most fully funded. That honor goes to public housing, which needs the least funding of any type of infrastructure in the current inventory. Only three projects, all in Johnson City and totaling \$1.9 million, were reported, and most (60.4%) of the funding needed for them is federal with the rest coming from the city (23.4%) and other sources (16.1%). The recent history of this type of infrastructure in the inventory suggests that the need for it is generally not reported until it is fully funded.

Business district development is second with 74.9% fully funded, which isn't a surprise given how these types of projects often come about. Business district development can involve complex negotiations between partners, both private and public, and in many cases—as with public housing—funding is worked out before projects are announced. Cities propose funding

three-fourths (77.4%) of business district developments with the rest from counties (13.4%), the state (4.9%), other sources (2.9%), the federal government (1.0%), and special districts (0.3%).

Next in order of percent fully funded after business district development are other (general government) facilities (57.1%); recreation infrastructure (53.3%); and libraries, museums, and historic sites (52.9%) with a little over half of the projects in all three types fully funded. Cities own and fund most (95.2%) other facilities improvements. Local governments fund most recreation improvements with more than half (50.9%) of the cost paid by counties and nearly a quarter (22.3%) by cities. Local governments fund just over half of improvements for libraries, museums, and historic sites (54.8%) with the rest coming from federal (21.7%), other (20.5%), and state (3.0%) sources. A single other facilities project, a \$20 million public works complex that will be funded and owned by Knoxville, makes up half of the fully funded projects of that type, and two Nashville projects account for a quarter of all fully funded recreation needs, which include a \$65 million baseball stadium and \$59 million for park and greenway improvements. Half of the \$20 million for new exhibits at the Pink Palace Family of Museums in Memphis, the single largest fully funded libraries-museums-and historic-sites improvement in the inventory, will come from the city and half will be privately funded.

DRAFT

**Table 13. Comparison of Fully Funded Improvements to All Improvements  
Five-year Period July 2014 through June 2019**

Category and Type of Infrastructure	All Improvements <sup>1</sup>	Fully Funded Improvements	
	Estimated Cost [in millions]	Estimated Cost [in millions]	Percent of Total
<b>Transportation and Utilities</b>	<b>\$25,309.0</b>	<b>\$8,364.6</b>	<b>33.0%</b>
Transportation	25,093.8	8,300.9	33.1%
Other Utilities	215.2	63.7	29.6%
<b>Health, Safety and Welfare</b>	<b>\$4,078.3</b>	<b>\$1,880.6</b>	<b>46.1%</b>
Water and Wastewater	3,338.5	1,663.3	49.8%
Law Enforcement	334.9	109.1	32.6%
Fire Protection	166.3	64.1	38.6%
Storm Water	197.9	31.7	16.0%
Solid Waste	25.9	6.5	25.2%
Public Health Facilities	12.9	4.0	31.3%
Housing	1.9	1.9	100.0%
<b>Education</b>	<b>\$1,452.2</b>	<b>\$332.7</b>	<b>22.9%</b>
New Public Schools <sup>2</sup>	1,431.1	325.9	22.8%
School-System-wide	1.7	6.0	38.0%
Post-secondary Education	3.4	0.8	24.3%
<b>Recreation and Culture</b>	<b>\$1,136.5</b>	<b>\$566.0</b>	<b>49.8%</b>
Recreation	847.9	451.6	53.3%
Community Development	181.4	57.7	31.8%
Libraries, Museums, and Historic Sites	107.2	56.8	52.9%
<b>Economic Development</b>	<b>\$378.8</b>	<b>\$139.8</b>	<b>36.9%</b>
Business District Development	117.8	88.3	74.9%
Industrial Sites and Parks	261.0	51.5	19.7%
<b>General Government</b>	<b>\$303.4</b>	<b>\$87.6</b>	<b>28.9%</b>
Public Buildings	232.3	47.0	20.2%
Other Facilities	71.1	40.6	57.1%
<b>Grand Total</b>	<b>\$32,658.1</b>	<b>\$11,275.4</b>	<b>34.5%</b>

(1) Excludes infrastructure improvements for which funding availability is not known.

(2) Includes replacements of existing schools.

Water and wastewater comes next with 49.8% of needs fully funded. Two fully funded sewer projects in Davidson County account for 22.0% of all water and wastewater needs; without them, the percentage of water and wastewater needs that are fully funded would be 35.6%. Water and wastewater infrastructure, needed to ensure clean drinking water and protect water supply sources, is completed at a greater rate than other types of infrastructure, likely because it has a reliable funding source—the revenue collected from its customers. Many of those customers are in sparsely populated areas that are expensive to reach with new water and sewer lines. To assist local communities, the state provides 3.0% of the funds for fully funded projects and the federal government provides 7.9%; the rest is funded locally, 24.7% by cities, 53.8% by counties, and 8.4% by special districts.

Next is fire protection with 38.6% of needs fully funded. Most of the funding for these improvements will be used to renovate existing fire stations or build new ones. Most of the funding is from local sources (70.9% county and 22.9% city) with the rest coming from federal (6.0%) and state (0.2%) sources. Two-thirds of the funds are for renovations of several fire stations in Nashville and most of the rest is for others under construction in Maury, Montgomery, Rhea, Sullivan, Williamson, and Wilson counties. A new fire station was completed in Erin (Houston County) and a new EMS building, which will house the fire department, was completed in Clinton (Anderson County).

School system-wide projects are 38.0% fully funded and are needed for a variety of reasons. These projects, which support K-12 education, include central offices, support buildings, and maintenance and transportation facilities. Counties are the source of all funding for fully-funded improvements for this type because county systems were the only ones that reported system-wide needs in the inventory this year. Examples of unfunded school system-wide needs include the \$1.5 million need for security upgrades in all schools in Dickson County and the \$1.5 million need for a new central office for the Lebanon special school district.

Less than a third of each of the remaining types of public infrastructure in the inventory—transportation, law enforcement, community development, public health facilities, other utilities, solid waste, post-secondary education, new public schools, public buildings, industrial sites and parks, and storm water—are fully funded. Just 32.7% of transportation projects in the inventory are fully funded despite having several dedicated funding mechanisms, including federal and state fuel taxes and local wheel taxes, but those sources have fallen short of the amount needed in recent years. Because of the decline in fuel costs, federal fuel tax revenue in recent years has been insufficient to support Highway Trust Fund commitments to states and were supplemented with transfers from the US Treasury's general fund in 2008 through 2015 amounting to \$65 billion.<sup>11</sup> Finally this past year, Congress passed a five-year, \$305 billion transportation bill to bolster the fund, an estimated \$4.5 billion of which will come to Tennessee.<sup>12</sup> For those transportation improvements that are fully funded, the state and federal governments fund roughly the same percentage (47.0% and 46.5%), as do cities and counties (2.9% and 3.3%).

At 32.6%, the amount of law enforcement infrastructure in the current inventory that is fully funded falls just a hair short of the amount of transportation infrastructure that's fully funded. Unlike transportation, however, most of the cost of law enforcement infrastructure is paid with general tax revenue though in some cases federal loans and grants may be used. For example, the US Department of Agriculture offers the Community Facilities Direct Loan and Grant

---

<sup>11</sup> The Status of the Highway Trust Fund and Options for Paying for Highway Spending, Before the Committee on Ways and Means of the U.S. House of Representatives, 114th Cong. (2015) (statement of Chad Shirley, Deputy Assistant Director for Microeconomic Studies, Congressional Budget Office).  
[https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/50298-TransportationTestimony\\_1.pdf](https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/50298-TransportationTestimony_1.pdf).

<sup>12</sup> Himes, Jessica, "Fix America's Surface Transportation Signed into Law," Tennessee County News 38 No. 6 (2015).

Program<sup>13</sup> for rural police stations. Most of the funding for fully funded law enforcement improvements is provided by county governments (79.7%), with the federal and city governments providing roughly the same percentages (9.5% and 10.8%).

Two more types of public infrastructure are more than 30% fully funded. community development, with 31.8% of its projects fully funded, and public health facilities at 31.3%. A couple of large projects account for most of the estimated cost of community development infrastructure in the inventory, and as with business district development infrastructure, local officials tend not to announce it until all partners are in agreement on what to build and how to fund it. Unlike business district development, which is mostly funded by local governments, about half of the funding for community development is federal (54.9%) with the rest coming from county (18.8%), city (16.2%), state (6.5%), and other (3.6%) sources. The two largest fully funded community development projects were a \$12 million welcome center in Shelby County and an \$11 million river walk in downtown Chattanooga, both of which are under construction.

Public health facilities are funded by many different federal sources, which collectively account for 84.3% of funds for fully funded improvements. For example, a \$600,000 ambulance station is under construction in Cannon County, and half of the funding is from a federal Community Development Block Grant (CDBG). Counties provide the other 15.7%.

Other utility infrastructure—infrastructure owned by public gas and electric utilities—is close behind these two with 29.6% of projects fully funded, primarily with funds from electric and gas utility charges collected by cities (79.3%). Because those who benefit from the services they provide can be readily identified, utilities are required by state law to be self-funding and cannot be subsidized with tax revenue.<sup>14</sup>

Solid waste infrastructure is next in percent of needs that are fully funded (25.2%) with the total cost of needs for this type of infrastructure at \$25.9 million and the amount of them fully funded at only \$6.5 million. Construction of a landfill perimeter gas-collection system in Davidson County and expansion of a demolition landfill in Lawrence County together account for more than four-fifths (84.2%) of fully funded solid-waste needs, and all of the funding for these and other solid waste improvements is local.

Post-secondary education is next with 24.3% of the \$3.4 million of needed infrastructure fully funded. The only improvements with funding information for this type are locally identified vocational education and continuing education projects. Just over half (51.8%) of the \$830,000 in available funding is from cities and the rest is federal. All of the \$2.6 million in additional required funds are for the Regional Institute of Technology Excellence in Marion County, which is unfunded.

---

<sup>13</sup> <http://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program>.

<sup>14</sup> Tennessee Code Annotated, Section 7-82-403.

While new public school construction ranks third for the estimated cost of needed infrastructure improvements, it ranks 16<sup>th</sup> among the 20 infrastructure types for percent fully funded at 22.8%. Unlike in most states, school systems in Tennessee are not fiscally independent, which may hamper school officials' abilities to estimate funding and may at least partially account for the large percentage with no funding in table 14 on page 39.

Two more types of public infrastructure needs are about one-fifth fully funded. Public buildings, which include mainly county courthouses, county offices, city halls, and public works offices and are funded mostly with general tax revenue, are 20.2% fully funded. State-owned buildings are not included in this analysis because data received through the capital budget request process does not include funding information. Industrial sites and parks, 19.7% of which are fully funded, can be complex, with multiple components of other types of infrastructure such as roads, rail spurs, ports and various funding sources. For instance, an industrial park in Cumberland County needs water and wastewater improvements costing \$9.5 million and is funded by the federal, state, and local levels of government. Funding for fully funded industrial sites and parks comes 44.4% from counties, 26.1% from federal, 11.9% from cities, 8.0% from the state, 5.0% from special districts, and 4.6% from other sources.

Finally, only 16.0% storm water infrastructure needs are fully funded, down from 40.3% in the last inventory, mainly because of the addition of an unfunded \$100 million flood mitigation project for Nashville that local officials say is unlikely to move forward in its current form despite the need. Aside from this project, which is intended to avoid a reoccurrence of the kind of massive damage caused by the 2010 flood, nearly all storm water improvements are needed to meet increasing environmental standards meant to encourage low-impact development. A new permit for cities and counties issued by the US Environmental Protection Agency will require developments to reduce runoff with improved landscaping or by collecting rainwater.<sup>15</sup> Almost all (96.9%) storm water improvements will be owned by cities, and cities will also provide nearly all (93.5%) of the funding. The city of Greeneville needs \$20 million for city-wide storm water controls, representing 10.1% of total storm water needs, but the project is not funded. If that project were to receive funding, the percentage of storm water needs that are fully funded would increase to 26.1%.

***Overall, nearly \$21 billion of infrastructure needs are not yet funded.***

Overall, unfunded infrastructure improvements comprise nearly half (45.4%) of total estimated costs. At least half of the infrastructure improvements in ten types have no funding—storm water (77.5%), post-secondary education (75.7%), industrial sites and parks (69.7%), public health facilities (68.7%), new public schools (62.6%), school system-wide (62.0%), other utilities (58.9%), public buildings (57.2%), community development (55.5%), and solid waste (54.9%). See table 14.

---

<sup>15</sup> <https://www.nashville.gov/Water-Services/Developers/Low-Impact-Development.aspx>

The overall percentage of infrastructure needs that are not fully funded decreased from 53.3% to 45.4% since the last inventory, mainly because \$3.2 billion in transportation improvements received at least some funding and another \$334 million were canceled or will not be needed until after the five-year period covered by this report. The percentage unfunded for four other types of infrastructure also improved: other facilities; new public schools; recreation; and libraries, museums, and historic sites. The biggest improvement by far was the decrease from 63.9% to 37.2% in unfunded other-facility needs because the expected cost of unfunded public works buildings in Hamblen and Roane counties declined. The unfunded percentage for new public schools improved from 74.5% to 62.6% because \$242 million in improvements across the state that were not fully funded were canceled, mainly because enrollment growth slowed or existing schools were renovated instead. Unfunded recreation infrastructure needs improved by a smaller amount, from 36.0% to 26.8%, as counties increased funding for recreation by more than \$100 million, most of which (\$60 million) was for the new baseball stadium in Nashville, which is now complete but wasn't at the time of the inventory. Funding identified for libraries, museums, and historic site improvements costing \$20.4 million decreased the unfunded percentage for this type of infrastructure from 41.8% to 32.8%. Unfunded water and wastewater, fire protection, business district development, and law enforcement infrastructure needs also decreased. See figure 6.

DRAFT

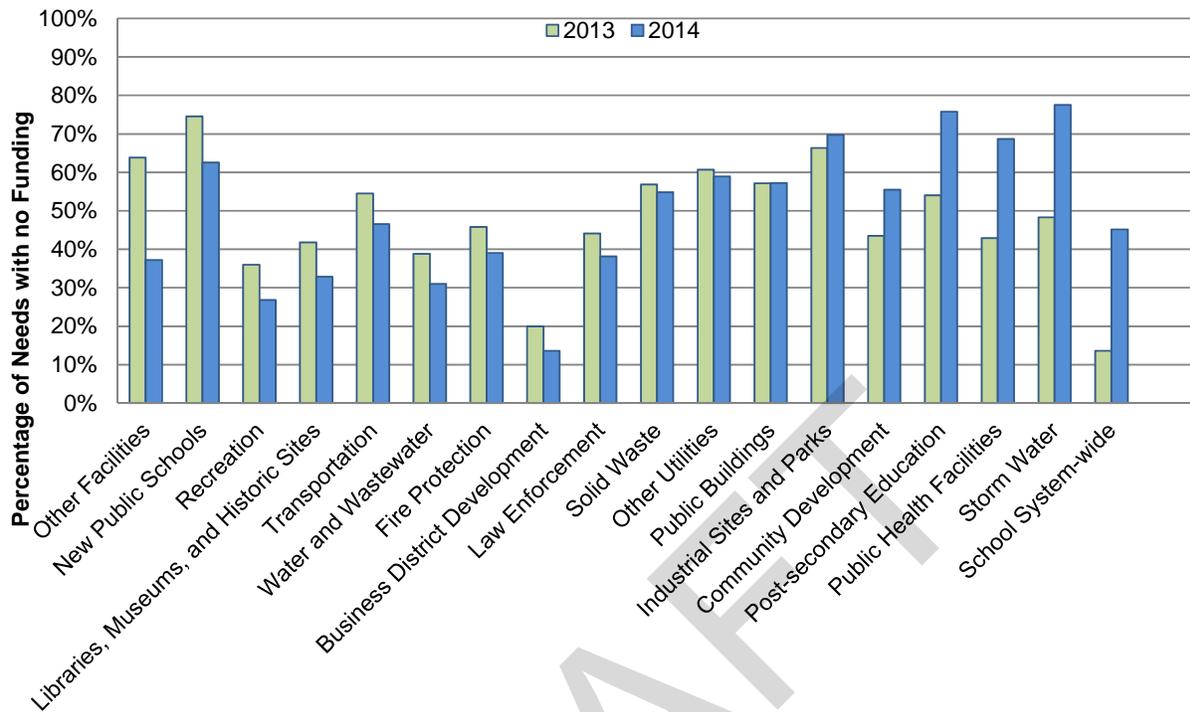
**Table 14. Comparison of Improvements with No Funding to All Improvements  
Five-year Period July 2014 through June 2019**

Category and Type of Infrastructure	All Improvements <sup>1</sup>	Improvements with No Funding	
	Estimated Cost [in millions]	Estimated Cost [in millions]	Percent of Total
<b>Transportation and Utilities</b>	<b>\$ 25,309.0</b>	<b>\$ 11,698.8</b>	<b>46.2%</b>
Transportation	25,093.8	11,572.1	46.1%
Other Utilities	215.2	126.7	58.9%
<b>Health, Safety and Welfare</b>	<b>\$ 4,078.3</b>	<b>\$ 1,404.9</b>	<b>34.4%</b>
Water and Wastewater	3,338.5	1,035.6	31.0%
Law Enforcement	334.9	127.7	38.1%
Fire Protection	166.3	65.0	39.1%
Storm Water	197.9	153.5	77.5%
Solid Waste	25.9	14.2	54.9%
Public Health Facilities	12.9	8.8	68.7%
Housing	1.9	0.0	0.0%
<b>Education</b>	<b>\$ 1,452.2</b>	<b>\$ 909.7</b>	<b>62.6%</b>
New Public Schools <sup>2</sup>	1,431.1	895.4	62.6%
School-System-wide	15.7	9.7	62.0%
Post-secondary Education	3.4	2.6	75.7%
<b>Recreation and Culture</b>	<b>\$ 1,136.5</b>	<b>\$ 363.0</b>	<b>31.9%</b>
Recreation	847.9	227.1	26.8%
Community Development	181.4	100.7	55.5%
Libraries, Museums, and Historic Sites	107.2	35.2	32.8%
<b>Economic Development</b>	<b>\$ 378.8</b>	<b>\$ 198.0</b>	<b>52.3%</b>
Business District Development	117.8	16.1	13.6%
Industrial Sites and Parks	261.0	181.9	69.7%
<b>General Government</b>	<b>\$ 303.4</b>	<b>\$ 159.4</b>	<b>52.6%</b>
Public Buildings	232.3	133.0	57.2%
Other Facilities	71.1	26.5	37.2%
<b>Grand Total</b>	<b>\$ 32,658.1</b>	<b>\$ 14,829.8</b>	<b>45.4%</b>

(1) Excludes infrastructure improvements for which funding availability is not known.

(2) Includes replacements of existing schools.

**Figure 6. Percentage of Improvements with No Funding by Type of Infrastructure  
Comparison of July 2013 and July 2014 Inventories**



***Unfunded needs are much less likely to be completed.***

Public infrastructure needs that spend many years in the conceptual stage become less and less likely ever to be funded. For example, of the improvements in the current inventory that have been in the conceptual stage for three years, 28.7% are fully funded, but only 0.04% of those that have been conceptual for eight years or more are. See table 15. Transportation accounts for 82.5% of the improvements in the conceptual stage for eight years or more, followed by water and wastewater and new public schools at far lower percentages (7.8% and 3.9%). As discussed earlier, the source of funding matters. For example, transportation infrastructure depends mainly on a revenue stream that has been declining relative to need for many years because fuel costs have declined, but water and wastewater infrastructure is paid for by utility customers.

**Table 15. Percent of Improvements Fully Funded  
by Number of Years in the Conceptual Phase**

Number of Years in the Conceptual Phase	All Improvements <sup>1</sup> Estimated Cost [in millions]	Fully Funded Improvements Estimated Cost [in millions]	Percent of Total
0	\$ 11,939.1	\$ 7,340.0	61.5%
1	2,505.1	869.6	34.7%
2	2,824.7	1,670.3	59.1%
3	2,160.7	621.0	28.7%
4	1,502.9	199.5	13.3%
5	674.6	196.5	29.1%
6	1,693.5	181.5	10.7%
7	951.6	193.6	20.3%
8	8,406.1	3.2	0.04%
<b>Grand Total</b>	<b>\$ 32,658.1</b>	<b>\$ 11,275.4</b>	<b>34.5%</b>

(1) Excludes infrastructure improvements for which funding availability is not known.

Infrastructure needs that were not fully funded on July 1, 2009, were much less likely to be completed within five years than were fully funded needs with most of the needs that were conceptual and unfunded in 2009 remaining so through 2014. Less than one-fifth (15.5%) of the infrastructure needs that were not fully funded on July 1, 2009, was completed by July 1, 2014, but more than half (52.6%) of the amount that was fully funded was completed. The difference was even greater for some types of infrastructure: 99.8% of law enforcement and 90.8% of community development infrastructure, 85.1% of public buildings, 79.7% of industrial sites and parks, and 75.7% of fire protection infrastructure that was fully funded in 2009 was completed within five years, but only 12.2%, 7.1%, 9.8%, 14.7%, and 11.4%, respectively, of the rest needed for those types of infrastructure was completed.

Nearly three-fourths of the unfunded needs from the 2009 inventory remain unfunded in the 2014 inventory, and the dollar amounts in both inventories are nearly the same: \$14.8 billion in the 2014 inventory compared with \$15.0 billion in 2009. Of the \$15.0 billion of additional funding that was needed in 2009, \$4.8 billion was identified by July 2014, and most of the needs that were funded received funding sooner rather than later: three-fifths (\$3.0 billion) got funded in the 2010 through the 2011 inventories, while the other two-fifths (\$1.8 billion) was funded in the following three inventories (2012 through 2014).