

Building Tennessee's Tomorrow: Anticipating the State's Infrastructure Needs

July 2002 through June 2007

Introduction

Basics of the Public Infrastructure Needs Inventory

The public infrastructure needs inventory is developed using two separate, but related inventory forms.⁷ Both forms are used to gather information about needed infrastructure improvements, and the second is also used to gather information about the condition of existing public school buildings, as well as the cost to meet all facilities mandates at the schools, put them in good condition and provide adequate technology infrastructure. Information about the need for new public school buildings and for school system-wide infrastructure improvements is gathered in the first form. This report begins with a statewide look at the information from both inventory forms and continues with a closer look at school systems.

In addition to gathering information from local officials, TACIR staff incorporated capital improvement requests submitted by state officials to the Governor's Office into the current inventory. Information reported in the inventory is based on the judgment of state and local officials. In many cases, information is found in the capital improvement programs of local governments. In order to be included in the inventory, projects reported by local officials must be recorded on the forms provided by TACIR. Both forms—the general form and the form for existing schools—include questions about the status of the projects reported and their relationship to state and federal mandates.

Projects included in the inventory for this report were required to be in the conceptual, the planning and design, or the construction phase at some time during the five-year period of July 2002 through June 2007. Because the source of information from state agencies was their capital budget requests for 2002-03, all of those projects were recorded as conceptual. Each project was required to have either a beginning or an ending date within that period and an estimated capital cost of at least \$50,000.

In the context of the public infrastructure needs inventory, the term mandate is defined as *any rule, regulation, or law originating from the federal or state government that affects the cost of a project.*⁸ The most

⁷Both forms are included in Appendix C.

⁸See the Glossary of Terms at the end of this report.



Projects in the inventory may be in any one of three stages of development at any time during the five-year period covered:

- conceptual—an infrastructure need with an estimated cost, but not yet in the process of being planned or designed,
- planning and design—development of a set of specific drawings or activities necessary to complete a project identified as an infrastructure need, or
- construction—actual execution of a plan or design developed to complete or acquire a project identified as an infrastructure need.

Mandates affect only 7.6% of all reported projects, but account for 33% of the total needs reported for public school facilities—nearly all of that is related to the EIA.

commonly reported mandates relate to the Americans with Disabilities Act (ADA), asbestos, lead, radon, underground storage tanks and the Education Improvement Act (EIA). The EIA mandate was to reduce the number of students in each public school classroom by an overall average of about 4½ by fall 2001.

Tennessee public schools had been working toward that requirement since the passage of the EIA in 1992, but may still not have sufficient classroom space to house the number of new teachers required.

Except in the case of existing public schools, the inventory does not include estimates of the cost to comply with mandates, only whether the need was the result of a mandate; therefore, mandates themselves are not analyzed here except to report the number of projects with aspects related to mandates. Even in the case of public schools, aside from the EIA, the cost reported to TACIR as part of the public infrastructure needs inventory is relatively small at less than two percent of the total.

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July 2002 through June 2007

Reported Infrastructure Needs Statewide

Total Needs Grow More Than Five Percent—Transportation and Education Continue to Top the List of Categories with Increased Need

State and local officials reported a total need for public infrastructure improvements to be in some stage of development during fiscal years 2002 through 2007 of more than \$21.6 billion, including the estimated cost of upgrading existing public school facilities to good condition. This represents an increase of close to \$8 billion, or fifty-eight percent, since the first inventory was published four years ago and an increase of about \$1.1 billion since last year's report. Transportation and utilities represents the single largest category and the largest increase in estimated cost (\$753 million) with about one-third of that increase coming from the inclusion of information directly from state highway officials.

**Table 2. Comparison of Estimated Cost of Needed Infrastructure Improvements
—July 2002 Inventory vs. July 2001 Inventory⁹**

Category ¹⁰	Reported Cost		
	July 2001 through June 2006	July 2002 through June 2007	Difference
Transportation & Utilities	\$ 8,320,311,820	\$ 9,073,361,524	9.1%
Education ¹¹	4,779,475,405	5,115,143,336	7.0%
Health, Safety & Welfare	4,408,005,642	4,689,150,833	6.4%
Recreation & Culture	1,712,485,731	1,744,175,930	1.9%
Economic Development	878,112,513	564,117,715	-35.8%
General Government	352,856,407	373,861,963	6.0%
Grand Total	\$ 20,451,247,518	\$ 21,559,811,301	5.4%

The second largest increase was in the education category (from \$4.8 billion to \$5.1 billion). Most of this \$336 million change (\$289 million) is attributable to growth in needs reported for the state's post-secondary institutions, including capital maintenance and capital outlay needs requested through the state's budgetary process. The remaining \$47 million difference is the net increase in needs reported by the local public school systems less an eight million dollar decrease in needs at the state's special schools. The increase for local schools actually masks a large shift away from general building improvements, which declined \$428 million statewide, to technology needs, which increased

⁹For complete listings of all reported needs by county and by public school system, see Appendices D and E.

¹⁰For more detail on the categories, see Table 3 on page 11.

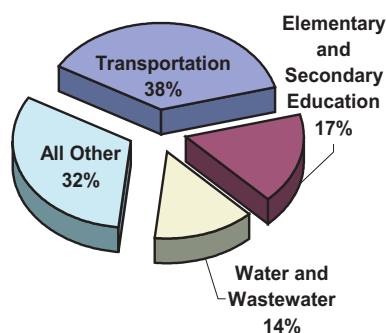
¹¹Includes improvements needed at existing schools. Number of projects includes the 1,283 schools for which needs were reported.

**Top Concerns of
Tennessee's Civil
Engineers,
January 2001**

- Water Infrastructure
- Roads & Bridges
- Schools

American Society of Civil
Engineers
www.asce.org/

**Figure 1. Percent of
Total Reported Cost of
Infrastructure Needs by
Type of Project**



\$493 million in the Memphis city school system. The continuing decline in the need for general building improvements and the coincident increases in the number of schools in good or excellent condition supports the notion that the increased capital outlay funding provided by the General Assembly through the Basic Education Program funding formula has been well used by local officials to improve their school buildings.

The category with the largest percentage change was the second smallest of the six major categories of need: economic development, which declined thirty-six percent. Estimated needs to support economic development declined by almost \$314 million since last year, but a single project accounts for most of that change. The restructuring of one Knox County business district development project decreased the costs in the category from \$280 million to \$22 million. Without that change, the total need for infrastructure to support economic development would still have decreased, but only by \$56 million or six percent.

***Transportation, Education, and Water and Wastewater
Continue to Dominate Statewide Needs***

As shown in Figure 1 in the sidebar at left and in Table 3 opposite, three types of projects within the six broad categories presented in Table 2 dominate reported needs. Transportation needs alone represent around thirty-eight percent of the total at \$8.1 billion. Needs reported for Tennessee's public school systems follow at a total of 3.6 billion or nearly 17 percent of the total. Those two types of projects combined with the water and wastewater projects represent more than two-thirds of the total reported needs.

The figures for transportation and for water and wastewater needs are even more impressive considering that they do not include the cost of those types of projects if they are needed to support other projects. For example, if a rail spur is needed to create a new industrial site, then the rail spur is recorded in the inventory as an industrial site project with transportation as its secondary project type. Similarly, if a sewer line is needed for a new school, then the sewer line is recorded as new school construction with water and wastewater as its secondary type. This two-dimensional classification facilitates more complete analysis of the costs of different types of infrastructure improvements.

Table 3. Total Number & Estimated Cost of Needed Infrastructure Improvements
 — July 2002 Inventory vs. July 2001 Inventory¹²

Category and Project Type¹³	Number of Projects or Schools Reported		Five-year Reported Estimated Cost	
Transportation & Utilities	1,958	27.3%	\$ 9,073,361,524	42.1%
Transportation	1,831	25.5%	8,091,867,520	37.5%
Other Utilities	85	1.2%	619,049,352	2.9%
Navigation	4	0.1%	343,104,977	1.6%
Telecommunications	38	0.5%	19,339,675	0.1%
Education	1,708	23.9%	\$ 5,115,143,336	23.7%
Existing School Improvements	1,266	17.7%	1,954,708,079	9.1%
K-12 New School Construction	176	2.5%	1,643,282,594	7.6%
Non K-12 Education ¹⁴	240	3.4%	1,486,256,663	6.9%
LEA System-wide Need	26	0.4%	30,896,000	0.1%
Health, Safety and Welfare	2,146	29.9%	\$ 4,689,150,833	21.7%
Water and Wastewater	1,462	20.4%	2,985,252,392	13.8%
Law Enforcement	184	2.6%	725,739,479	3.4%
Stormwater	141	2.0%	416,121,985	1.9%
Solid Waste	91	1.3%	209,991,037	1.0%
Fire Protection	165	2.3%	137,626,058	0.6%
Public Health Facilities	71	1.0%	135,574,000	0.6%
Housing	32	0.4%	78,845,882	0.4%
Recreation and Culture	871	12.2%	\$ 1,744,175,930	8.1%
Recreation	630	8.8%	833,076,572	3.9%
Libraries and Museums	101	1.4%	500,616,006	2.3%
Community Development	140	2.0%	410,483,352	1.9%
Economic Development	238	3.3%	\$ 564,117,715	2.6%
Industrial Sites and Parks	176	2.5%	316,978,455	1.5%
Business District Development	62	0.9%	247,139,260	1.1%
General Government	230	3.2%	\$ 373,861,963	1.7%
Public Buildings	177	2.5%	307,371,623	1.4%
Other Facilities	45	0.6%	59,247,140	0.3%
Property Acquisition	8	0.1%	7,243,200	0.0%
Grand Total	7,151	100.0%	\$ 21,559,811,301	100.0%

¹²For complete listings of all reported needs by county and by public school system, see Appendices D and E.

¹³Descriptions of the project types are included in the Glossary of Terms at the end of the report.

¹⁴K-12 (kindergarten through 12th grade) education includes public elementary and secondary schools. Non-K-12 projects include facilities for post-secondary programs, pre-school programs, etc., as described in the Glossary of Terms at the end of this report.

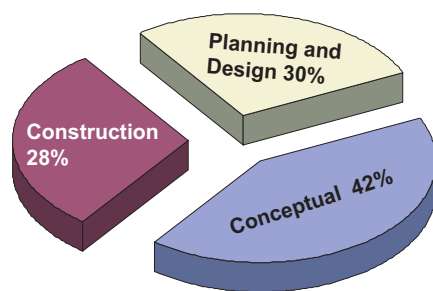
Problems with Dams May Become a Larger Concern

More than 44% of the lock chambers in the nation's dams are over 50 years of age.

Many locks are undersized for modern commercial barge movements.

*American Society of Civil Engineers
www.asce.org/*

Figure 2. Percent of Total Reported Cost of Infrastructure Needs by Stage of Development*



*Excludes needs reported for existing public schools.

City Ownership Dominates Four of the Six Major Categories of Need

Although most of the projects in the public infrastructure needs inventory are reported by local officials, they may ultimately be owned or controlled by a variety of entities, including the state or federal governments or utility districts. Not surprisingly, cities will own or control more than half in monetary terms of the infrastructure needs reported in four of the six major categories. Those four categories comprise the primary functions of cities, which include providing sewer service, fire and police protection, community and economic development, public housing and solid waste disposal. The two exceptions are the education category, slightly more than half of which is primarily the responsibility of counties, and the transportation and utilities category, which is dominated by state highway projects. A single federal dam project reported by Hamilton County accounts for almost 90 percent of the navigation costs included in that category. (See Table 4 opposite.)

Stage of Development Varies with Type of Project

As shown in Figure 2, projects in the conceptual stage comprised a greater share of the total cost of projects in the general inventory at forty-two percent than did projects in the planning and design or construction phases. Costs were about evenly divided between the planning and design stage and the construction stage. As Table 5 illustrates, the distribution varies with different types of projects. More than seventy percent of needed education improvements are in the conceptual stage. This figure is strongly influenced by the state's higher education projects, but even when only new elementary and secondary schools are considered, over half are in the conceptual stage. Information about improvement needs at existing schools is not included in this analysis because there are numerous small projects in varying stages of development reported for existing schools, making it impossible to identify a single stage for each school.

**Table 4. Total Estimated Cost [in millions] of Needed Infrastructure Improvements by Project Type and Level of Government
—Five-year Period July 2002 Through June 2007**

Category and Project Type ¹⁵	City		County		State		Federal		Joint		Other	
Transportation & Utilities	\$2,902.2	32.0%	\$991.6	10.9%	\$4,415.1	48.7%	\$306.4	3.4%	\$446.0	4.9%	\$12.1	0.1%
Transportation	2,244.6	27.7%	978.4	12.1%	4,415.1	54.6%	6.4	0.1%	443.9	5.5%	3.4	0.0%
Other Utilities	601.7	97.2%	8.3	1.3%	0.0	0.0%	0.0	0.0%	0.5	0.1%	8.7	1.4%
Navigation	39.1	11.4%	4.0	1.2%	0.0	0.0%	300.0	87.4%	0.0	0.0%	0.0	0.0%
Telecommunications	16.8	87.0%	0.9	4.7%	0.0	0.0%	0.0	0.0%	1.6	8.3%	0.0	0.0%
Education	\$998.6	19.5%	\$2,643.2	51.7%	\$1,453.8	28.4%	\$0.0	0.0%	\$5.3	0.1%	\$14.1	0.3%
Existing School Improvements	726.5	37.2%	1,221.1	62.5%	0.0	0.0%	0.0	0.0%	0.0	0.0%	7.2	0.4%
K-12 New School Construction	253.6	15.4%	1,383.5	84.2%	0.0	0.0%	0.0	0.0%	0.0	0.0%	6.2	0.4%
Non K-12 Education ¹⁶	5.2	0.3%	30.3	2.0%	1,445.5	97.3%	0.0	0.0%	5.3	0.4%	0.0	0.0%
LEA System-wide Need	13.4	43.2%	8.4	27.2%	8.4	27.1%	0.0	0.0%	0.0	0.0%	0.8	2.5%
Health, Safety and Welfare	\$3,085.5	65.8%	\$719.2	15.3%	\$111.0	2.4%	\$0.0	0.0%	\$224.7	4.8%	\$548.8	11.7%
Water and Wastewater	2,018.1	67.6%	208.4	7.0%	0.0	0.0%	0.0	0.0%	211.8	7.1%	547.0	18.3%
Law Enforcement	277.8	38.3%	342.9	47.3%	95.1	13.1%	0.0	0.0%	10.0	1.4%	0.0	0.0%
Stormwater	393.0	94.4%	23.1	5.6%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%
Public Health Facilities	184.0	87.6%	25.7	12.3%	0.0	0.0%	0.0	0.0%	0.3	0.1%	0.0	0.0%
Fire Protection	126.3	91.7%	9.6	7.0%	0.0	0.0%	0.0	0.0%	1.6	1.2%	0.2	0.1%
Housing	18.3	13.5%	101.3	74.7%	15.9	11.7%	0.0	0.0%	0.0	0.0%	0.0	0.0%
Solid Waste	68.2	86.4%	8.1	10.2%	0.0	0.0%	0.0	0.0%	1.0	1.3%	1.6	2.1%
Recreation and Culture	\$1,226.5	70.3%	\$178.6	10.2%	\$237.8	13.6%	\$2.8	0.2%	\$94.2	5.4%	\$4.2	0.2%
Recreation	599.3	71.9%	106.8	12.8%	94.5	11.3%	2.8	0.3%	27.3	3.3%	2.4	0.3%
Libraries and Museums	320.1	63.9%	41.0	8.2%	91.0	18.2%	0.0	0.0%	48.5	9.7%	0.0	0.0%
Community Development	307.1	74.8%	30.8	7.5%	52.3	12.7%	0.0	0.0%	18.4	4.5%	1.8	0.4%
Economic Development	\$347.6	61.6%	\$132.7	23.5%	\$0.1	0.0%	\$0.0	0.0%	\$60.3	10.7%	\$23.4	4.2%
Business District Development	117.8	37.2%	118.2	37.3%	0.1	0.0%	0.0	0.0%	57.6	18.2%	23.2	7.3%
Industrial Sites and Parks	229.7	93.0%	14.5	5.8%	0.0	0.0%	0.0	0.0%	2.8	1.1%	0.2	0.1%
General Government	\$278.9	74.6%	\$71.8	19.2%	\$3.9	1.0%	\$0.0	0.0%	\$14.0	3.7%	\$5.3	1.4%
Public Buildings	227.7	74.1%	58.7	19.1%	3.9	1.3%	0.0	0.0%	13.7	4.4%	3.5	1.1%
Other Facilities	44.1	74.4%	13.1	22.2%	0.0	0.0%	0.0	0.0%	0.3	0.5%	1.7	2.9%
Property Acquisition	7.2	98.9%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.1	1.1%
Grand Total	\$8,839.4	41.0%	\$4,737.1	22.0%	\$6,221.8	28.9%	\$309.2	1.4%	\$844.4	3.9%	\$607.9	2.8%

¹⁵Descriptions of the project types are included in the Glossary of Terms at the end of the report.

¹⁶K-12 (kindergarten through 12th grade) education includes public elementary and secondary schools. Non-K-12 projects include facilities for post-secondary programs, pre-school programs, etc., as described in the Glossary of Terms at the end of this report.

Table 5. Needed Infrastructure Improvements by Project Type and State of Development
—Five-year Period July 2002 Through June 2007¹⁷

Category and Project Type ¹⁸	Conceptual				Planning & Design				Construction			
	Number		Cost [in millions]		Number		Cost [in millions]		Number		Cost [in millions]	
Transportation & Utilities	806	41.2%	\$ 3,438.56	37.9%	788	40.2%	\$ 3,267.04	36.0%	364	18.6%	\$ 2,367.76	26.1%
<i>Transportation</i>	749	40.9%	3,337.38	41.2%	756	41.3%	2,901.87	35.9%	326	17.8%	1,852.62	22.9%
<i>Other Utilities</i>	37	43.5%	86.76	14.0%	21	24.7%	59.57	9.6%	27	31.8%	472.71	76.4%
<i>Navigation</i>	2	50.0%	4.18	1.2%	1	25.0%	300.00	87.4%	1	25.0%	38.93	11.3%
<i>Telecommunications</i>	18	47.4%	10.25	53.0%	10	26.3%	5.59	28.9%	10	26.3%	3.51	18.1%
Education	324	73.3%	\$ 2,346.57	74.2%	47	10.6%	279.97	8.9%	71	16.1%	\$ 533.90	16.9%
<i>New Public School Construction</i>	90	51.1%	908.36	55.3%	32	18.2%	224.24	13.6%	54	30.7%	510.68	31.1%
<i>Non K-12 Education¹⁹</i>	215	89.6%	1,412.99	95.1%	13	5.4%	54.93	3.7%	12	5.0%	18.34	1.2%
<i>School System-wide Needs</i>	19	73.1%	25.22	81.6%	2	7.7%	0.80	2.6%	5	19.2%	4.88	15.8%
Health, Safety & Welfare	984	45.9%	\$ 1,667.17	35.6%	706	32.9%	\$ 1,305.21	27.8%	456	21.2%	\$ 1,716.78	36.6%
<i>Water & Wastewater</i>	642	43.9%	1,208.82	40.5%	484	33.1%	741.93	24.9%	336	23.0%	1,034.50	34.7%
<i>Law Enforcement</i>	113	61.4%	271.24	37.4%	53	28.8%	295.04	40.7%	18	9.8%	159.46	22.0%
<i>Storm Water</i>	40	28.4%	50.79	12.2%	58	41.1%	101.97	24.5%	43	30.5%	263.37	63.3%
<i>Public Health Facilities</i>	41	57.7%	29.74	21.9%	21	29.6%	35.20	26.0%	9	12.7%	70.64	52.1%
<i>Fire Protection</i>	90	54.5%	63.40	46.1%	52	31.5%	48.96	35.6%	23	13.9%	25.27	18.4%
<i>Housing</i>	22	68.8%	18.85	23.9%	3	9.4%	3.08	3.9%	7	21.9%	56.92	72.2%
<i>Solid Waste</i>	36	39.6%	24.33	11.6%	35	38.5%	79.03	37.6%	20	22.0%	106.63	50.8%
Recreation & Culture	387	44.4%	\$ 507.84	29.1%	306	35.1%	\$ 618.67	35.5%	178	20.4%	\$ 617.66	35.4%
<i>Recreation</i>	284	45.1%	313.35	37.6%	230	36.5%	285.35	34.3%	116	18.4%	234.38	28.1%
<i>Libraries & Museums</i>	48	47.5%	138.51	27.7%	32	31.7%	228.15	45.6%	21	20.8%	133.96	26.8%
<i>Community Development</i>	55	39.3%	55.99	13.6%	44	31.4%	105.18	25.6%	41	29.3%	249.32	60.7%
Economic Development	136	57.1%	\$ 221.09	39.2%	69	29.0%	\$ 200.86	35.6%	33	13.9%	\$ 142.16	25.2%
<i>Business District Development</i>	31	50.0%	59.75	24.2%	23	37.1%	128.84	52.1%	8	12.9%	58.55	23.7%
<i>Industrial Sites & Parks</i>	105	59.7%	161.34	50.9%	46	26.1%	72.03	22.7%	25	14.2%	83.61	26.4%
General Government	106	46.1%	\$ 97.43	26.1%	75	32.6%	\$ 163.67	43.8%	49	21.3%	\$ 112.75	30.2%
<i>Public Buildings</i>	83	46.9%	76.38	24.8%	53	29.9%	124.09	40.4%	41	23.2%	106.90	34.8%
<i>Other Facilities</i>	19	42.2%	20.42	34.5%	19	42.2%	33.27	56.2%	7	15.6%	5.55	9.4%
<i>Property Acquisition</i>	4	50.0%	0.63	8.7%	3	37.5%	6.31	87.2%	1	12.5%	0.30	4.1%
Grand Total	2,743	46.6%	\$ 8,278.67	42.2%	1,991	33.8%	\$ 5,835.42	29.8%	1,151	19.6%	\$ 5,491.02	28.0%

¹⁷For complete listings of costs by project type, stage of development and county, see Appendix D.

¹⁸Descriptions of the project types are included in the Glossary of Terms at the end of the report. Does not include existing public schools.

¹⁹K-12 (kindergarten through 12th grade) education includes public elementary and secondary schools. Non-K-12 projects include facilities for post-secondary programs, pre-school programs, etc., as described in the Glossary of Terms at the end of this report.

Projects Included in Capital Improvement Programs Are Far More Likely To Be Under Construction

Excluding improvements needed at existing schools and state facilities, more than half of the infrastructure needs reported for July 2002 through June 2007 were part of some governmental entity's official capital improvement program (CIP). In terms of estimated costs, more than three-fifths of the needs that were not part of a CIP were in the conceptual stage, more than one-fifth were in planning and design and about one-sixth were under construction. In contrast, the estimated cost for the needs reported as being listed in CIP documents were about evenly split between the planning and design stage and the construction stage with just over one-fifth of the total still in the conceptual stage. (See Table 6.)²⁰

These relationships have been consistent since the beginning of the inventory in 1997. In addition, fifty-five percent of the projects reported in last year's inventory to be in one of these three stages of development and are now complete, were in CIPs. The fact that projects in CIPs are less likely to be in the conceptual stage and dominate the list of projects reported to have been completed suggests both that projects included in CIPs are more likely to be funded and that only projects likely to be funded are included in those documents. The current inventory includes information about whether funds are available for each project, and that information will be reviewed for inclusion in a later report.

Table 6. Estimated Cost of Needed Infrastructure Improvements [in millions] by Project Stage and Inclusion in Capital Improvement Programs*

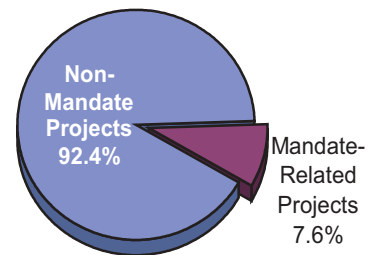
Project Stage	Project Included in Capital Improvement Program?				Grand Total
	No		Yes		
Conceptual	\$ 4,229.7	61.2%	\$ 2,456.0	22.2%	\$ 6,685.6
Planning & Design	1,528.3	22.1%	4,257.7	38.6%	5,786.0
Construction	1,157.0	16.7%	4,325.0	39.2%	5,482.1
Grand Total	\$ 6,915.0	100.0%	\$ 11,038.7	100.0%	\$ 17,953.7

*Does not include improvements at existing schools or state facilities.

State or Federal Mandates Affect Nearly Nine Percent of All Projects and Account for Forty Percent of Elementary and Secondary School Costs

It is not clear from the data gathered in the current inventory how much of the total estimated costs reported is attributable to state or federal mandates; however, the overall number of projects affected by mandates, such as the Americans with Disabilities Act, is a relatively small portion, less than eight percent, of the total number of projects in the inventory. (See Figure 3.) Collectively, schools account for more than eighty percent of the total number of projects affected by facilities mandates and were far more likely to be associated with mandates than any other

Figure 3. Percent of Infrastructure Projects Involving Facilities Mandates



²⁰ For information by county on percent of reported costs included in capital improvement plans, see Appendix D.

type of project.²¹ As shown in Table 7, public schools are far more likely than other types of projects to be affected by mandates; storm water, water and wastewater, and solid waste rank a distant fourth, fifth, and sixth.

Table 7. Percent of Projects Reported to Involve Facilities Mandates by Type of Project
—Five-year Period July 2002 Through June 2007

Type of Project ²²	Number of Projects or Schools Reported ²³	Projects or Schools Affected by Mandates	
		Number	Percent
Existing School Improvements	1,266	418	33.0%
LEA System-wide Need	26	2	7.7%
K-12 New School Construction	176	16	9.1%
Storm Water	141	7	5.0%
Water and Wastewater	1,462	71	4.9%
Solid Waste	91	4	4.4%
Public Buildings	177	4	2.3%
Business District Development	62	1	1.6%
Fire Protection	165	2	1.2%
Other Utilities	85	1	1.2%
Law Enforcement	184	2	1.1%
Libraries and Museums	101	1	1.0%
Community Development	140	1	0.7%
Transportation	1,831	10	0.5%
Recreation	630	2	0.3%
Industrial Sites and Parks	176	0	0.0%
Non K-12 Education	240	0	0.0%
Public Health Facilities	71	0	0.0%
Other Facilities	45	0	0.0%
Telecommunications	38	0	0.0%
Housing	32	0	0.0%
Property Acquisition	8	0	0.0%
Navigation	4	0	0.0%
Grand Total	7,151	542	7.6%

²¹Projects reported for existing schools were aggregated so that each school is counted only once in this figure.

²²Descriptions of the project types are included in the Glossary of Terms at the end of the report.

²³Each public school campus is counted as one project.

TACIR staff estimate that twenty-four percent of all improvement costs reported for schools were the result of state or federal mandates,²⁴ with nearly all of that cost attributable to the Education Improvement Act of 1992.²⁵ (See Table 8.) This act was passed by the General Assembly in 1992 and required a substantial reduction in the class sizes throughout all grades in Tennessee public schools by fall 2001.²⁶ All schools met that requirement; however, many continue to need facilities improvements to house the additional number of teachers and classes required.

Table 8. Estimated Cost of Facilities Mandates Reported for Elementary and Secondary Schools
— Five-year Period July 2002 Through June 2007

Type of Need	Estimated Cost [in millions]	Percent of Total
State & Federal Mandates	\$ 875.0	24.2%
<i>EIA Costs at New and Existing Schools</i>	806.7	22.3%
<i>Other State Mandates</i>	32.8	0.9%
<i>Federal Mandates</i>	35.4	1.0%
Non-mandated Needs	\$ 2,745.5	75.8%
Statewide Total	\$ 3,620.5	100.0%

²⁴ Patterns of growth in student counts were analyzed to develop estimates of the percentage of new school construction attributable to the lower class sizes required by the Education Improvement Act of 1992 rather than to enrollment growth or replacement of existing schools.

²⁵ Chapter No. 535, Public Acts of 1992.

²⁶ Tennessee Code Annotated, § 49-3-353.

Table 9. Largest and Smallest Reported Infrastructure Improvement Needs by County

—Excluding Projects Identified as Regional—
Five - year Period July 2002 Through June 2007

Rank	County	Total Estimated Cost	Percent of State Total	2001 Population	Percent of State Total	Cost Per Capita
1	Shelby	\$ 3,636,291,463	20.60%	896,013	15.60%	\$4,058
2	Davidson	2,989,633,250	17.00%	565,352	9.80%	\$5,288
3	Knox	842,662,485	4.80%	385,572	6.70%	\$2,185
4	Rutherford	753,667,886	4.30%	190,143	3.30%	\$3,964
5	Williamson	575,752,999	3.30%	133,825	2.30%	\$4,302
6	Hamilton	561,708,355	3.20%	307,377	5.40%	\$1,827
7	Montgomery	456,246,802	2.60%	135,023	2.40%	\$3,379
8	Madison	407,671,160	2.30%	92,389	1.60%	\$4,413
9	Sumner	353,948,513	2.00%	134,336	2.30%	\$2,635
10	Wilson	328,544,625	1.90%	91,696	1.60%	\$3,583
Top Ten Subtotal		\$ 10,906,127,538	61.90%	2,931,726	51.10%	\$3,720
All Others²⁷		\$ 6,600,830,153	37.50%	2,709,534	47.20%	\$2,436
86	Pickett	14,978,000	0.10%	5,048	0.10%	\$2,967
87	Jackson	14,711,400	0.10%	11,162	0.20%	\$1,318
88	Crockett	14,084,000	0.10%	14,547	0.30%	\$968
89	Lewis	12,468,000	0.10%	11,437	0.20%	\$1,090
90	Houston	12,447,000	0.10%	7,916	0.10%	\$1,572
91	Hancock	12,040,888	0.10%	6,768	0.10%	\$1,779
92	Sequatchie	11,933,750	0.10%	11,616	0.20%	\$1,027
93	Moore	6,866,000	0.00%	5,887	0.10%	\$1,166
94	Benton	4,728,164	0.00%	16,616	0.30%	\$285
95	Lake	3,236,000	0.00%	7,764	0.10%	\$417
Bottom Ten Subtotal		\$ 107,493,202	0.60%	98,761	1.70%	\$1,088
Grand Total		\$ 17,614,450,893	100.00%	5,740,021	100.00%	\$3,069

²⁷ For information about the middle 75 counties, see Appendix D.