



Infrastructure & Capital Assets Commitment Burden: Quantifying the Hidden Fiscal Risk

May 5, 2026



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Executive Summary

This executive summary distills the principal findings, methodology, and policy implications of the full Infrastructure & Capital Assets Commitment Burden report prepared by Merritt Research Services, an Investortools company. The report introduces a first-of-its-kind, accounting-based framework to quantify the hidden financial obligation associated with replacing and maintaining depreciated municipal infrastructure and capital assets still in service. Drawing on audited financial statements for nearly 2,000 U.S. cities, the analysis estimates that cities face an aggregate Infrastructure and Capital Asset Burden (ICA Burden) topping \$1 trillion.

This study demonstrates that infrastructure decay is not merely an engineering concern, but a systemic fiscal risk that exceeds other long-term municipal obligations such as bonded debt, unfunded pensions, and OPEB liabilities. While infrastructure assets do not meet the formal accounting definition of liabilities, their eventual replacement represents an unavoidable financial commitment. The ICA Burden therefore represents a latent obligation that affects a city's long-term fiscal sustainability and credit profile.

Purpose and Scope of the Study

The primary purpose of the study is threefold: (1) to develop a consistent, accounting-based methodology to estimate the dollar value of 'spent' municipal capital assets; (2) to compare cities based on the relative scale and degree of capital asset depletion, using accounting based proxies derived from depreciation and estimated useful life reporting, adjusted for inflation; and (3) to assess each city's fiscal capacity to absorb the cost of replenishing its infrastructure. The analysis focuses exclusively on Governmental Activities, including roads, bridges, buildings, equipment, and public safety assets, while excluding enterprise operations such as water, sewer, and electric utilities.

By relying on Generally Accepted Accounting Principles (GAAP)-compliant depreciation schedules and historical cost data, the methodology offers a replicable and transparent approach to measuring infrastructure condition at the individual city level—something that national estimates and engineering studies have historically failed to provide. Cities that do not report depreciation or that use the modified infrastructure accounting approach are excluded, ensuring methodological consistency.

Key Findings

The study estimates the aggregate ICA Burden for U.S. cities is approximately \$1.03 trillion. This figure represents the inflation-adjusted cost to offset the portion of infrastructure and capital assets that have already been consumed but remain in use. The magnitude of this burden far exceeds other municipal obligations: it is roughly four times the size of total unfunded pension liabilities and three times total direct debt outstanding for cities. On a per-capita basis, the median ICA Burden is approximately \$4,700, compared with median direct debt of about \$1,200 per capita.

The findings indicate that Governmental Activities assets are significantly more depleted than Business Activities assets, suggesting that tax-supported infrastructure is more frequently subject to deferred maintenance than revenue-generating enterprises. High ratios of accumulated depreciation to depreciable assets signal that many cities are operating infrastructure and capital assets well beyond their expected useful lives, heightening the risk of service disruptions, emergency repairs, and higher long-term costs.

Methodology Overview

The ICA Burden is derived from accumulated depreciation reported in audited financial statements, adjusted for inflation, and normalized using average asset age. Depreciation data are smoothed over a three-year period to reduce volatility from one-time abnormalities, including accounting changes. Estimated useful life assumptions are critical inputs,

with wide variation observed across cities. The study finds a median dollar-weighted estimated useful life of approximately 34 years, although some cities report assumptions that materially differ from this norm.

The methodology also incorporates indicators of fiscal capacity, including population, taxable property value, income levels, debt burden, and pension obligations—to generate a companion metric known as the ICA Burden Fiscal Ability.

Together, these two metrics distinguish between cities with large infrastructure and capital asset needs that are affordable and those where the burden poses acute financial stress.

City Rankings and Comparative Insights

Results show substantial variation across cities and population groups. Smaller and faster-growing cities, particularly in suburban regions, generally exhibit lower ICA Burdens due to newer infrastructure. In contrast, large legacy cities—many in the industrial Midwest and Northeast—tend to show the highest burdens relative to resources. Among the nation's largest cities, Jacksonville, FL; San Francisco, CA; and Columbus, OH rank among the best positioned, while San Jose, CA; Detroit, MI; and Baltimore, MD exhibit some of the highest relative burdens. Among middle-sized and smaller cities, Aurora, CO; Irving, TX; and Charleston, SC scored well, while Kenner, LA; Flint, MI; and Pontiac, MI fall among the lowest-ranked cities.

The analysis also reveals systematic patterns: cities with stronger economic growth, newer housing stock, higher incomes, and better-funded pensions tend to maintain infrastructure more effectively. Conversely, cities with stagnant or declining populations and weaker fiscal metrics are far more likely to defer capital maintenance, compounding long-term costs.

Policy and Credit Implications

The findings underscore a critical blind spot in municipal finance. Because accounting standards do not classify depleted infrastructure as a liability, governments can defer maintenance without immediate balance sheet consequences. This masks the true scope of all long-term obligations borne by taxpayers and creditors. This report argues that depreciation-based capital metrics should be incorporated more explicitly into credit analysis and capital planning processes.

Improving transparency around estimated useful lives, fully depreciated assets, and replacement planning would significantly enhance infrastructure accountability. A necessary first step toward addressing the nation's infrastructure crisis in a fiscally sustainable manner is recognizing and quantifying the ICA Burden.

Introduction

Infrastructure & Capital Assets Commitment Burden: Quantifying the Hidden Fiscal Risk

For decades, concerns have mounted over the deteriorating condition of America's capital assets and infrastructure. While periodic federal stimulus and appropriation programs have temporarily boosted activity, sustainable and adequate funding remains elusive.

The spotlight on the ill state of America's infrastructure and capital assets is well documented at the national and, to some extent, the state level. But there is no standardized approach to assess the financial burden on individual governments.

In a first-of-its-kind report, Investortools' Merritt Research Services¹ (Merritt) has leveraged its database of more than 2,000 municipalities to present a comprehensive accounting-based methodology for estimating the monetary value required to restore and replace depreciated capital and infrastructure assets currently in use. This analysis provides a method to impute a monetized replacement cost that can be applied in models to rank cities based on both the monetary burden of their assets and their relative fiscal capacity to address these obligations.

Without clear estimates of consumed or depleted assets by an individual government, it is difficult to assess how well it maintains its infrastructure—or its ability to afford necessary replacements as assets reach or exceed their useful lives.

Understanding that governments have a responsibility to maintain infrastructure and capital assets to preserve the viability of a functioning place is of paramount importance. Properly maintaining roads, bridges, fire and police equipment, and administrative structures and apparatus constitute a standing commitment. This obligates governmental bodies to cover the cost to keep its infrastructure and capital assets in dependable working order as long as the assets remain vital or desirable to its mission.

Drawing on audited financial statements, the findings identify cities that show both small and enormous funding gaps to replenish depreciated capital assets that are still in use. The degree of neglect and their fiscal capacity to absorb the cost varies widely: while some governments effectively manage their capital needs, others lack the political will or economic resources to maintain the viability of their infrastructure.

This study, years in development, presents a unique approach to quantify the inflation-adjusted cost burden of existing consumed or depleted capital assets and infrastructure based on their estimated expected useful lives. This analysis focuses exclusively on assets reported under Governmental Activities, excluding those tied to municipal business enterprises (Business Activities). Using accounting data reported in compliance with Generally Accepted Accounting Principles (GAAP), our estimates are derived from depreciation schedules and historical cost figures provided by each reporting government. The result is an inflation-adjusted calculation of the dollar value of capital assets consumed to date.

Since the analysis relies on GAAP-based financial data from each city's audited financial statements, cities that do not report historical cost and depreciation—such as those in New Jersey—are excluded. Additionally, the study omits jurisdictions that use the GAAP allowed modified infrastructure approach, or do not meet the U.S. Census Bureau's definition of a municipality or a consolidated city-county government.

¹ Merritt Research Services is a wholly owned Investortools company.

The Infrastructure Crisis: Persistent and Escalating

For more than five decades, public finance professionals, engineers, academics, and policymakers have raised alarms about the United States' aging and deteriorating infrastructure.

Research dating back to the 1970s highlights declining systems—such as New Orleans' 100-year-old wooden pipes. In 1981, Patrick Choate and Susan Walter warned of a nationwide infrastructure decline, estimating a \$1 trillion cost to address the full gamut of state and local public infrastructure (e.g. roads, bridges, water and sewer, electric, mass transits, airports and dams) -- far below today's figures. Subsequent studies throughout the 1980s and 1990s echoed these concerns, yet consistent action never materialized. Postponement of capital projects borders on being the norm, rather than the exception.

In 1994, Professor Michael Pagano highlighted this postponement problem, noting:

“The hundreds of billions of dollars of infrastructure needs have anesthetized the public to the critical importance of the issue and to its immediacy. The public no longer accepts, if indeed it ever did, that all infrastructure needs must be met and must be met immediately.”²

The public and its elected leaders have become complacent about the consequences of delaying repairs to infrastructure. Under a “business-as-usual” approach, available dollars are stretched by delaying the use of public funds until it becomes absolutely necessary.

Historically, infrastructure funding has surged only sporadically, often driven by necessity, regulatory mandates, economic stimulus, or temporary infusions of federal or state funds. Capital funding remains inconsistent, and maintenance budgets are often the first to be cut during fiscal stress. Deferred upkeep of buildings, vehicles, and technology compounds the backlog of public infrastructure needs, creating an enormous future funding obligation.

While organizations such as the American Society of Civil Engineers estimate trillions of dollars are needed for repairs and replacements encompassing all public infrastructure (e.g. water projects, roads, mass transit, sewers), these figures are rarely broken down to the level of individual governments. While the problem of deferred maintenance and replacement applies to states, counties, school districts, and other local governments, this analysis is focused on cities.

A city's long-term viability depends on the maintenance and replacement of its infrastructure and capital assets as they reach or exceed their useful lives. Until now, it has been difficult to quantify this cost.

Merritt's comprehensive analysis of approximately 2,000 cities estimates that the consolidated bill to replace or renovate their infrastructure and capital assets, under Governmental Activities, is estimated to hover around the \$1 trillion mark. This figure, focused only on cities, excludes assets tied to Business Activities, such as water, sewer, electricity, and airports.

Governmental Activities are services provided to the public without charge (e.g., roads, bridges, police, fire, education, parks). They are mostly supported by taxes and intergovernmental revenues.

Business Activities are services that are funded through user fees and charges (e.g., public utilities, airports, and toll roads). These are often referred to as municipal enterprises and treated separately on financial statements, in support of their own bonds or loans used to finance them.

² Michael Pagano, Paper delivered at the annual meeting of the American Political Science Association, “Key Issues for an Infrastructure Policy for the 21st Century: Thinking Locally and Globally?” New York, NY, September 1, 1994.

This estimated \$1.03 trillion amount represents the inflation-adjusted cost to offset the depletion of infrastructure and capital assets still in use. If capital assets are still in use and needed, the government will eventually have to fund the replenishment cost to maintain viability after assets exceed their projected useful lives.

The trillion-dollar gap far exceeds other municipal long-term obligations and liabilities (e.g., debt and pensions) borne by cities. It is approximately six times greater than the aggregate net pension liability (unfunded pensions) and four times greater than total direct debt.

This study has three objectives:

1. Develop an accounting-based methodology to estimate the Infrastructure and Capital Asset Burden (ICA Burden) that represents the dollar amount of replacing and maintaining the depleted portion of the capital stock of U.S. cities.
2. Rank and evaluate the ICA Burden in the context of each city's size, scope, resources, and proxies reflecting capital asset age.
3. Assess and rank the fiscal capacity of each city's ability to afford its capital replenishment needs considering competing financial obligations and dynamics of wealth and growth (ICA Burden Fiscal Ability).

Defining the Terms: Capital Assets and Infrastructure

Throughout this analysis, the terms Capital Assets and Infrastructure will be defined as follows:

Capital Assets are defined by the Governmental Accounting Standards Board (GASB) as:

“Non-financial tangible and intangible assets used in operations that have an initial useful life extending beyond a single reporting period, typically more than one year. Governments set their own monetary threshold (e.g. \$25,000) for capitalizing assets. Items below the amount are usually expensed in the year of the acquisition.”

Examples: buildings, equipment, vehicles, software, and infrastructure.

Infrastructure is defined by the GASB as:

“Assets that are part of a network of long-lived capital assets used to provide a specific public service, stationary in nature, and capable of being preserved for many years.”

Examples: roads, bridges, tunnels, drainage systems, water and sewer systems, dams, lighting systems, and communication networks. In some cases, buildings that are part of a network also qualify.

Under accounting standards, all infrastructure assets are classified as capital assets, but not all capital assets qualify as infrastructure.

The use of the term infrastructure is narrowly defined by professionals in accounting and engineering fields, but often interpreted more broadly to include city halls, jails, fire engines, police vehicles, equipment, and so on.

A case can be made that traditionally defined infrastructure could be classified as primary infrastructure while all other capital assets, which play a significant role in the performance of city or governmental service, could theoretically be deemed secondary infrastructure.

For this analysis, references and calculations apply to the broader base of all Governmental Activities' capital assets, including infrastructure, unless otherwise specifically indicated.

For most cities, infrastructure represents the majority of capital assets; but the median share in our study is 56% (most recent audit year of all reporting cities). Other non-core infrastructure categories, such as buildings, land improvements, and equipment, make up the difference.

While GASB excludes items like fire trucks, police cars, city halls, police stations, and essential software from its infrastructure definition, these assets are critical for municipal operations. Our analysis includes them because their maintenance and sustainability are equally vital.

This analysis focuses exclusively on assets reported under Governmental Activities, and only comparative references to those tied to Business Activities.

In addition, only depreciable capital assets, including infrastructure, are incorporated in the numbers, while non-depreciable capital assets, such as land and construction in progress, are excluded.

Making the appraisal process more troublesome, governments have long extended the actual use of assets beyond their projected lifespans. However, delaying repairs or replacements often leads to higher costs and, in some cases, safety risks.

Our analysis finds that the overall accumulated value of the “spent” portion of assets belonging to cities is staggering. The cost commitment to replenish consumed capital assets dwarfs both outstanding direct debt and unfunded pension and OPEB liabilities combined. While historical federal and state programs temporarily boosted infrastructure spending, they did not eliminate the backlog. The growing need to replace aging assets threatens to escalate costs further, especially as new infrastructure demands emerge in the evolving economy.

The Compounding Burden of Capital Assets & Infrastructure

For more than a century, municipal credit quality has heavily concentrated on weighing the combined burden of long-term liabilities such as bonded debt, unfunded pensions, and other post-employment benefits (OPEB) relative to the size and resources of its tax base. However, the full or partial cost of replacing depreciated capital assets is hardly factored in these evaluations, causing them to become hidden commitments and circumstantial obligations that slip through the reported accounting standards.

Because there is no legal or contractual deadline for asset maintenance, governments often treat this issue as a lesser concern—despite the reality that aging assets, like unfunded benefits for retiring employees, will eventually require funding.

Unlike pension obligations, which in many cases have defined actuarial or statutory funding requirements, there is no structured funding mechanism for capital assets. Infrastructure replacement and repairs are typically financed on a pay-as-you-go basis or by the issuance of bonds. While maintaining the viability of existing capital assets is an ongoing obligation to the public, this commitment cost responsibility does not meet the technical accounting definition of a liability since there are no third-party creditors or fixed payment schedules; still, it shares many characteristics of one. To the extent that capital maintenance costs are deferred beyond the determined useful lifespan of the assets, it can be argued that a “liability” requiring outlay of funds has been incurred. A sudden failure of critical infrastructure can trigger immediate and substantial costs, with significant financial and credit implications for taxpayers, creditors, and businesses that rely on uninterrupted services.

Depreciation reflects the gradual consumption of an asset’s useful life. When an asset is fully depreciated, funding for replacement is technically overdue if the government intends to maintain its functionality. At that point, governments typically face three options:

1. Issue debt to finance replacement
2. Use available designated funds and cashflow
3. Defer maintenance, which often leads to eventual borrowing at higher costs

Deferring maintenance beyond reasonable expectations increases the risk of service disruptions and safety hazards. While depreciation schedules are not precise, when properly applied, they are intended to provide a sensible benchmark for reliability based on third party or in-house appraisals of materials used, wear and tear conditions, climate, and technology. Failure to act within these timelines can result in legal and financial consequences if service interruptions harm residents or investors. In addition, any government that uses unrealistic, outdated, or generic projected useful life spans for capital assets potentially impedes appropriate capital planning, as well as the accurate evaluation of asset depreciation estimates.

Deferred Maintenance: A Growing Obligation

Deferred and neglected capital assets and infrastructure obligations represent a significant threat to any government committed to remaining physically viable. Postponing significant maintenance and replacement projects pose a persistent challenge, often driven by political reasons, such as the reluctance to cut other spending to make room for repairs or issue new debt — actions that typically require higher taxes, fees, or charges. Each year that a road goes unrepaired, a bridge remains unsafe, streetlights stay dark, or pipes deteriorate, the financial burden on the community grows. Ultimately, these costs must be addressed if the asset is expected to continue providing essential services.

What Are “Spent” Capital Assets?

“Spent assets” refer to infrastructure and other capital assets that have consumed all or a portion of their estimated useful life relative to their original service expectations. In accounting terms, this is measured by accumulated depreciation — the sum of annual depreciation expenses recorded since the asset was placed in service. Depreciation is typically allocated on a straight-line basis, dividing the historical cost of the asset by its expected useful life. Proportional consumption of a capital asset is accounted for as an annual depreciation expense (i.e. incremental spent portions) and the aggregation of the sum of depreciation expense amounts are combined into accumulated depreciation, which is reported on the balance sheet of a government.

When major repairs or replacement projects occur that extend or reset the life span of capital assets, the associated costs are added to the gross value of fixed assets, and theoretically the replaced assets and related accumulated depreciation are deducted³. Depreciation figures collectively represent the consumed portion of an asset’s value. If the government intends to keep these assets in service beyond their useful life, funding for replacement becomes inevitable and, in essence, an obligation, if not a “liability”, of the government.

The scale of these obligations often dwarfs reported liabilities, including outstanding debt, unfunded pensions, and OPEB. Yet, because accounting standards do not classify spent capital assets as “liabilities”, governments can continue using worn-out infrastructure without any penalty on their financial statements. In effect, audits do not hold governments accountable for deferred maintenance or asset depletion.

Initiative-Taking Funding for Capital

As an alternative to pay-as-you-go funding or the use of bond issuance proceeds, governments can plan for and set aside funds for asset replacement while the asset is still in service. This is like pension funding where actuarial or statutory contributions made during an employee’s active years ensure full funding by retirement. Likewise, best practices suggest that capital assets intended for long-term use should have an associated funding strategy to cover eventual repair or replacement costs once they reach the end of their useful life. Deliberate set aside funding options that budget for annual allocations to cover service cost that equate to depreciation schedules like actuarial pension funding is one option. This way, the cost of paying for the “spent” portion of capital assets is borne by taxpayers who received the benefit, rather than passed along to future taxpayers or a future generation.

When assets continue to operate beyond their projected lifespan, concerns arise about reliability and safety for users. For creditors, this signals that capital spending is overdue, and that higher fund balances or lower debt levels may understate the “liability” or capital commitment caused by deferred financing. From a bondholder’s perspective, postponed maintenance suppresses capital investment, most likely allowing debt ratios to be lower than they would be if capital investments were properly recognized and financed through debt.

Our Evaluation Approach to Estimate the ICA Burden

This study uses data from each government’s own audited financial statements to estimate a reasonable cost required to replace its existing capital assets and infrastructure. It focuses exclusively on current assets and does not include projects under construction or in planning stages.

The Infrastructure & Capital Asset Burden (ICA Burden) estimates for each city, developed by Merritt, are intended to impute a proxy value that reflects the relative potential weight of expected estimated replacement costs. Actual

³ Some governments do not deduct a component that they replaced from accumulated depreciation, as the accounting guidelines intend, because they do not have detailed records of each component.

replacement and repair costs depend on realistic assumptions and current government accounting practices, which can sometimes lack detail or contain errors—particularly when estimating an asset’s useful life after it is placed in service. Our analysis is derived from three primary accounting inputs: depreciation expenses and estimated useful life schedules, changes for additions and deletions from balance sheets, and historical inflation calculations to approximate replacement costs.

This approach allows us to estimate the cost of replacing depleted assets and generate related metrics to rank cities by the condition of their capital assets. In addition, we incorporate demographic and financial indicators to evaluate each city’s capacity to absorb and fund the cost of replenishing its infrastructure.

How an Accounting Approach Provides a Meaningful Estimation of the ICA Burden

Depreciation schedules provide a critical tool for evaluating a government’s capability to maintain its infrastructure and capital assets.

Monetizing the future cost of replacing capital assets is an underutilized approach—yet it offers valuable insight into municipal credit risk and long-term financial sustainability.

Unfortunately, audited financial reports are not perfect when it comes to assessing depreciation, but in their current form they deserve to be put to better use to size up current and developing funding requirements. They do not provide all the details you need to precisely calculate the repair or replacement cost to maintain the capital plant and auxiliary assets, but they do present a reasonable basis for estimating funding capital costs either now or in the future. On occasion, gross imbalances can occur when the total amount of accumulated depreciation overshadows annual depreciation expense. That can happen when new investments in capital assets have dried up to a trickle. The consequent impact can swell the estimated imputed value of the ICA Burden.

Nearly all local governments and most states use straight line depreciation schedules that allocate equal amounts annually coinciding with the estimated useful life schedules. This approach offers an advantage to parties looking for a reasonable gauge to measure a government’s status relative to the lifespan of its inventory of capital assets and infrastructure to anticipate future funding needs.

There is one important caveat on depreciation accounting that applies to government accounting. Under GASB standards, a complex option is available that allows a “modified infrastructure accounting” approach. This option forgoes the need for recording annual depreciation expenses if a complex method involving strict monitoring tests are used to assess whether minimum acceptable condition levels established by the government are met. A government may choose to use this approach, in part or whole, relative only to its assets defined as infrastructure in a network. When the modified accounting approach is used, which excludes the scheduled depreciation expense, the ICA Burden cannot be calculated, and the government is excluded from the Merritt rankings.

Methodology

Our analysis uses an accounting-based approach grounded in audited financial statement data. Specifically, we extract information from audited financial statements prepared under Generally Accepted Accounting Principles (GAAP). Cities that do not report historical cost and depreciation — such as those in New Jersey — are excluded from this study.

The methodology relies on:

- Reported capital asset historical values and depreciation schedules
- Estimated useful life projections for each asset
- Adjustments for additions, deletions, and inflation

The key calculation that drives our methodology is the ICA Burden, which is an imputed figure based on each government's accumulated depreciation, adjusted for inflation and normalized using the average age of all capital assets⁴. Depreciation inputs are smoothed over a three-year average to ensure consistency. Using a three-year period mitigates potential distortions caused by one-time accounting or other short-term aberrations.

This computation provides a reasonable assessment for analysts to incorporate capital asset commitment obligations into municipal credit evaluations—an area historically overlooked despite its growing significance.

The starting point for determining the ICA Burden begins with the historical cost of all capital assets, followed by the measured accumulation of proportional annual depreciation expenses that represent the dollar value portion of the expected useful life spent. It is assumed that the amounts of accumulated depreciation will eventually have to be rebuilt once the asset has reached the end of its useful life. Any assets still in use after the expected life is over are considered ripe for repair and replacement at any time. When that happens, the government — based on its own determination of useful life — is expected to make a capital outlay to cover the replacement cost in current dollars, which is likely to be considerably higher than the historical cost. Although the entire amount of accumulated depreciation is included in the ICA Burden value, our methodology adjusts for inflation using the US 100-year annual inflation rate of 2.95%. This inflation rate is only used on the portion of the accumulated depreciation tied to the average age of the overall Governmental Activities capital assets⁵.

Estimated Useful Life Assumptions

The estimated useful lifespan of capital assets is a critical component in determining each city's overall ICA Burden. Understanding how it is calculated and how its application can vary from one governmental unit to another provides essential information to analysts applying this research project's findings.

Projected estimates reported in the audited financial statements for the expected useful life span for each asset, both individually by asset and collectively by category, generally follow industry standards, which are normally based on conventional appraisal practice and national civil engineering guidelines of how long assets will normally last for service. However, actual application varies significantly among governments due to historical experience, local conditions (including climate), and policy preferences. Accurate projections are essential for effective planning and for financial analysts reviewing audited financial statements.

Useful life estimates influence:

- Depreciation schedules
- Credit analysis metrics (e.g., average age of capital stock)
- Government funding sufficiency and maintenance strategies

For this study, determining the appropriate useful life and average age of capital assets relevant to the specific situation (e.g. materials used, weather conditions, usage) is critical to assessing financial obligations and ensuring accurate comparisons across governments.

⁴ In the public sector, total capital assets are equivalent to Property, Plant, and Equipment (PPE) used in corporate accounting.

⁵ Average Age of capital assets) definitions is Accumulated Depreciation (Gov Activities)/Depreciation Expense (Gov).

Variability Across Governments

Typical ranges exist for Governmental Activities' estimated useful life span projections of the depreciable capital asset classifications, i.e. infrastructure, buildings, improvements etc., but some governments adopt values significantly outside these norms. For example, these reflect the wide variance relative just to the infrastructure type of capital assets:

- **San Francisco, CA:** 15–70 years
- **Chicago, IL:** 10–40 years
- **Irving, TX:** 50 years
- **Newport Beach, CA:** 20-75
- **San Jose, CA:** 25-50

In conducting our research on these assumptions applying to Governmental Activities capital assets, we performed a detailed survey inspection and analysis of 50 cities and found that the average dollar-weighted total initial life expectancy for each city's depreciable capital assets (consolidated by type) was 33.9 years, and the median was 33.5 years. But the variance among the cities in the quasi-random research survey was wide, ranging from a low of 20.3 years in Crowley, TX and 23.2 years in Chicago, to as wide as 45.5 years in El Monte, CA and 57.9 years in Aurora, CO.

Such differences complicate comparisons of asset longevity. Traditional analysis measures average age by comparing recent depreciation expenses to accumulated depreciation.

- Shorter useful lives → Faster depreciation → Assets appear older → Replacement seems more imminent.
- Longer useful lives → Slower depreciation → May reflect better maintenance, materials, usage or optimistic condition assumptions.

It is hard to reconcile the justifications for significant deviations in expected usefulness of assets since audited financial statement disclosures or supplemental reporting rarely discuss unique factors that cause their assets to age so differently. In all, the median useful life age in our survey shows a concentration in the 34-year range for all cities. Interestingly, we conducted a random fifty government survey of counties and school districts and found a similarly aligned useful life age expectation of around 34 years despite varied differences in the asset weightings within the governmental activities' accounts.

Useful Life and Asset Inclusion Reporting Challenges

Defining useful lifespan estimates is not meant to be finite, precise pinpoints of real-life durability; they are generalizing predictions of life expectancy based on experience with the same or similar types of estimates. The process of determining the longevity of their safe, useful service life is as much of an art as it is a science. Expert guidance from civil engineers plays a key role, particularly with respect to infrastructure components, in evaluating how well a design is likely to last. Estimators must consider the materials used, the climate, topography, or the amount of traffic or load it carries. Capital asset appraisers may also be involved in analyzing the data and incorporating planned maintenance that might extend or shorten the asset's life span. Experience garnered from in-house managers, consultants or other specialized experts, or accountants familiar with what other governments deem reasonable are commonly involved in constructing original or ongoing determinations for estimated useful life schedules. Revisions are expected if actual life spans prove to be overly optimistic or pessimistic.

The mix of art, science, and collective experience to forecast the longevity of a capital asset is not much different from using a wide variety of records and assumptions to make an actuarial assessment of pension funding adequacy.

Existing municipal government reporting standards pertaining to capital assets contained in the audited financial statements and notes leave too much room for interpretation without an explanation for why the differences in estimated useful life spans are based on fact or reason.

Moreover, the classification of capital assets is loosely defined. Determining useful-life, or range estimates, by asset type is subjective and broad. Additionally, financial statement disclosures rarely link asset categories and their dollar values to a specific life-expectancy forecast.

Users are left to draw from their own subjective judgments to complete their assessment.

Determining the specific measure of fully depreciated assets that might be deemed “deferred” within the accumulated depreciated amount is elusive. In addition, there may be a small portion of capital assets which were included on the balance sheet under accumulated depreciation because they were exempt under the standards when GASB 34 became effective in 2001:

- Certain assets were exempt from depreciation for obvious reasons, including:
 - Land (non-depreciable assets)
 - Construction in progress (non-depreciable assets)
- Other exemptions appear more subjective and rationalized on the basis of compromise or practicality, including:
 - Infrastructure using the modified infrastructure approach
 - All infrastructure assets that were placed in service before 1980

Some pre-1980 infrastructure remains in use, though typically a small share. Excluding these assets understates accumulated depreciation and average age. The exclusion of infrastructure placed in service before 1980 that remains in use understates both a government’s true accumulated depreciation and the average age of its capital assets. While relatively few assets remain in service after 46 years, reducing the significance of this issue, the exclusion nonetheless could distort long-term depreciation measures in rare cases.

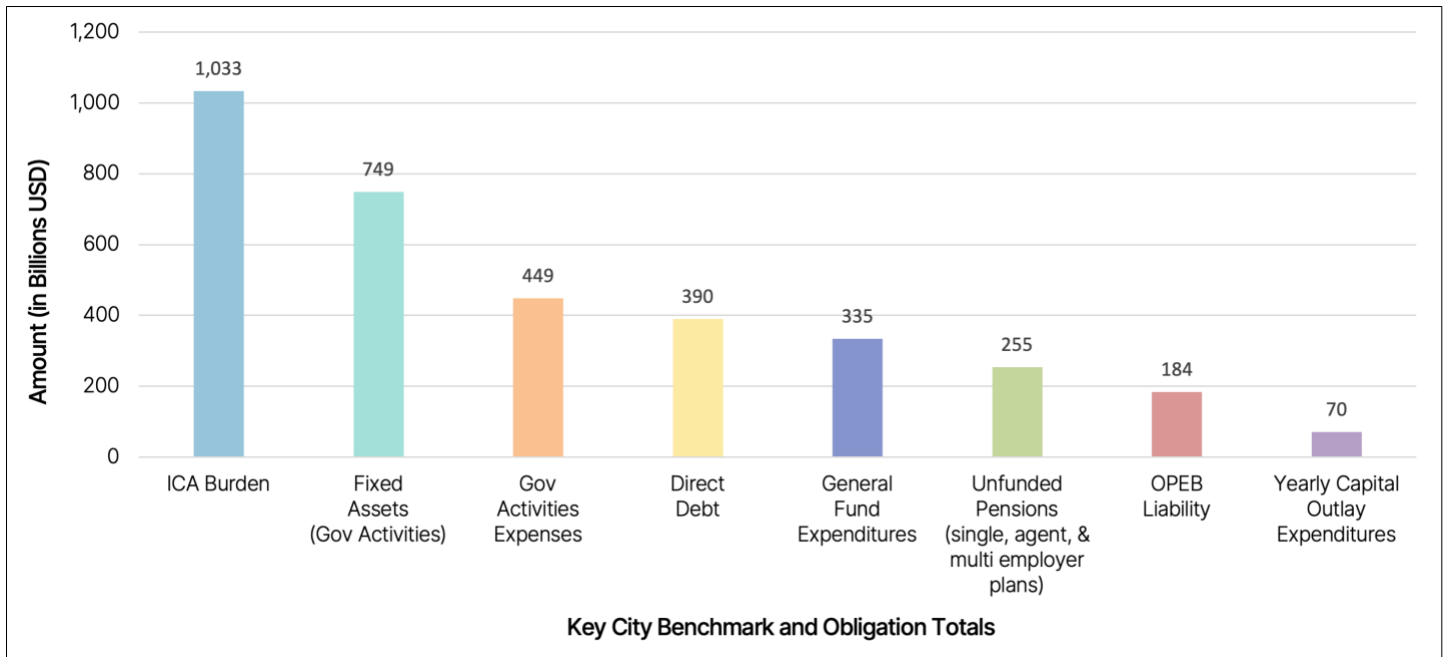
The exclusion of infrastructure placed in service before 1980 that remains in use understates both a government’s true accumulated depreciation and the average age of its capital assets. While relatively few assets remain in service after 46 years, reducing the significance of this issue, the exclusion nonetheless distorts long-term depreciation measures.

Instances of any pre-1980 assets still in operation are worth noting and footnoted in the audit since the existence of any of these numbers would increase the accumulated depreciation total and be added into determining the Merritt-calculated ICA Burden.

Key Findings

By all counts, the ICA Burden, just for U.S. cities, is enormous – it tops a little over \$1.03 trillion. That is approximately 25% of the SIFMA estimated total \$4.4 trillion dollar amount of all municipal bonds outstanding at the end of February 2026⁶.

Infrastructure & Capital Asset Burden for U.S. Cities vs. Key City Benchmark & Obligation Totals
(in Billions USD of the totals of the most recent year’s audits)



Source: Merritt Research Services, an Investortools company. Data as of April 9, 2026.

To put this in perspective, the estimated \$1.03 billion ICA Burden represents a commitment that hangs heavy in comparison to other city financial benchmarks⁷:

- 2.6 times total direct debt (\$390 billion)
- 4.1 times the total unfunded pension liability share across all single-employer, agent, and multiple-employer plans (\$255 billion)
- 5.6 times the grand total unfunded OPEB liability (\$184 billion)
- 14.7 times annual capital outlay expenditures from all governmental funds in a single year (\$70 billion)
- 1.4 times net fixed assets of governmental activities (\$749 billion)
- 2.3 times total of all governmental activities’ expenses (\$449 billion)
- 3.1 times total of all general fund expenditures (\$335 billion)

Additionally, the ICA Burden is 1.8 times the total municipal bond issuance in 2025 for all types of tax-exempt bonds (\$579.9 billion)⁸.

⁶ SIFMA estimate from “Quarterly Report: US Fixed Income, 4Q25” on March 20, 2026.

⁷ City financial benchmarks listed here are cities as municipalities and city-county consolidations, based on data as of April 9, 2026. All totals are based on most recent audits (no earlier than 2023).

⁸ Source: The Bond Buyer derived from LSEG (based on data available on January 2, 2026)

The \$1 trillion ICA Burden constitutes a substantial long-term financial commitment relative to the economic resources of most cities. The ICA Burden per capita amounts to \$4,748 and represents 3.5% of the estimated full market value of taxable property. Both figures (per capita and percent of the estimated full market value) are near quadruple the Total Direct Debt medians for all cities of \$1,179 per capita and 0.9%, respectively. Relative to Governmental Activities assets, the ICA Burden amounts to 73% of Total Governmental Assets.

When the ICA Burden is combined with total long-term liabilities associated with municipal governments (i.e., Total Direct Debt, Net Pension Liability, and Net OPEB Liability), the impact strikes hard at the ability of taxpayers in many cities to pay down the load, let alone the debt for any new projects needing funding. The median combined weight of the ICA Burden and total long-term liabilities is \$7,761 per capita and 5.8% of the estimated full value of property (See table below).

Although this analysis focuses on capital assets associated with Governmental Activities, which are supported mostly by tax dollars, we examined some basic accounting statistics in city audited financial statements related to the business assets of municipalities like water, sewer, and electric enterprises owned by cities. What we found might be surprising to those that think that the most neglected capital stock is always underground and out of sight. Our research found that the assets categorized as Governmental Activities (supported mostly by tax dollars) show a higher percentage of depletion of capital assets relative to their expected life spans than capital assets attributed to Business Activities (i.e., municipal enterprises such as water, sewer, and airports). That suggests that municipal enterprises may generally be neglected less than capital assets backed by tax and other revenues. Municipal enterprises may have longer remaining useful life spans than capital assets paid for by tax and revenue appropriations. This point is evidenced by the percentage of assets attributed to accumulated depreciation compared to the assets that are reported as depreciable. The ratio comparison is this:

Capital Assets & Infrastructure by Type	City Median for Accumulated Depreciation to Depreciable Assets (Ratio)
Governmental Activities	1.09
Business Activities	.89

The higher level of accumulated depreciation to depreciable assets ratio indicates that the bulk of in-service capital assets have exceeded their projected useful life span. This supports analytical concerns that capital assets remain in service longer than they were expected and reported in their audit. That leads us to the conclusion that there is a strong likelihood that most cities have significant levels of deferred maintenance, likely requiring urgent or near-term repair or replacement. On the other side of the coin, governments that consistently underestimate useful life spans on assets that remain in good condition beyond their reported projected life dates may be shortchanging the accuracy of their estimates.

The fact that the accumulated depreciation to depreciable assets ratio is higher for Governmental Activities than for Business Activities enterprises may come as a surprise to some. We can only speculate as to why that might be the case. Perhaps, the simple answer is that it is politically easier to increase utility rates based on usage than it is to raise taxes. It is also likely that governments have multiple competing demands for their dollars as well as the burdens related to past service costs for unfunded pensions and other public employee benefits.

Ranking Cities by Core Infrastructure and Capital Assets Condition

The core ranking model for this analysis and ranking of each city's governmental activities infrastructure and capital asset condition is centered around the total dollar amount of assets that have been spent and an inflation adjustment charge to project the eventual replacement and repair cost that will be needed to keep the asset in serviceable condition.

Condition quality is assessed relative to the following:

1. Size of each government
2. Average age and the remaining estimated useful life
3. Current outlay for capital assets
4. Resources to bear the burden to cover its existing commitment load
5. Total spent capital assets to depreciable assets, which infer the escalated likelihood of deferred maintenance being present

In addition, the model contains two trend proxies reflecting infrastructure age, i.e., changes in population and the ICA Burden. Lastly, a flag factor is incorporated to indicate whether the city's separate business activity enterprise capital assets show whether a high proportion of their gross depreciable assets have been consumed. Pent up maintenance initiatives for a city's business enterprises are more likely to squeeze resources and focus, distracting city officials.

A total of 1,939⁹ cities qualified for a multivariable ranking score because they met our criteria for inclusion by having recent data available for the required data points.¹⁰

Factors for Determining the ICA Burden

Relative Scale of ICA Burden (Weight = 55%):

- ICA Burden to Total Governmental Assets
- Total Capital Outlay to Population
- ICA Burden by population
- ICA Burden by Full Market Value
- ICA Burden percentage change for past three years
- Population Growth percentage change for past ten years

Usage and Life Span (Weight = 45%):

- Average Age of PPE Gov
- Estimated Useful Life (remaining useful life)
- Depreciable PPE of Gov Activities to Gross Depreciable PPE Gov
- Accumulated Depreciation PPE Gov/Depreciable PPE Gov
- Accumulated Depreciation PPE Bus/Depreciable PPE Bus

⁹ Cities eligible for scoring are those municipalities and consolidated city & county units in compliance with GAAP depreciation scheduled reporting as of April 8, 2026.

¹⁰ Seven out of eleven variables are required be present for a city to receive a score. The most common element that was not always available was the ICA Burden to Full Market Value of the city's total property tax base. This is not a required variable since it has a near 100% correlation with the ICA Burden per capita.

Ranking Cities by ICA Burden Fiscal Ability

The degree of difficulty that a city faces when it comes to its ability to finance the repair and replacement of its existing infrastructure is examined in the Infrastructure & Capital Asset Burden Fiscal Ability (ICA Burden Fiscal Ability) model. The model, which gauges taxpayer affordability, weighs the projected ICA Burden relative to the fiscal and economic capacity. Fiscal and economic factors measure size, tax base, wealth, home values, newness of the city and economic growth along with competing demands to pay outstanding debt, interest cost, grand total net pension and OPEB liability, and the implicit capital asset condition of the city's Business Activities.

Over 1,800¹¹ cities qualified for a multivariable affordability ranking score because they met our criteria for inclusion by having recent data available for all required data points and at least nineteen out of twenty-eight total measures.

Factors for Determining ICA Burden Fiscal Ability Rankings

Scale, Age, and Weight of ICA Burden – Governmental Activities (Weight=30%)

- ICA Burden to total Assets of Governmental Activities
- ICA Burden by Population
- ICA Burden by Full Market Value
- Average Age of PPE Gov
- Estimated Useful Life (remaining useful life)
- Accumulated Depreciation PPE Gov Activities to Depreciable Gov Activities
- Depreciable PPE Gov Activities to Gross Depreciable PPE Gov
- Total Capital Outlay to Population %
- Total Capital Outlay to Full Value %
- Trend Avg Age PPE Gov 3 Year % Change

Fiscal & Economic Relative Capacity to Absorb ICA Burden (Weight=28%)

- ICA Burden & Tot Dir Debt +Grand Total Net Pension &OPEB Liabilities Per Capita
- ICA Burden & Tot Dir Debt + Grand Total Net Pension & OPEB Liabilities to Full Value
- Current Debt Service Pension OPEB Total Expenditures to All Funds Expenditures
- Unrestricted Net Asset Gov (Net Position) to Tot Exp Governmental Expense
- Grand Total Pension Funding Ratio
- Total Direct Debt & Unfunded Pension & OPEB and Overlapping Debt to Population
- Population Change (Ten year % Change)

Demographic and Economic Strength & Trend (Weight=26%)

- Median Household Income
- Median Owner-Occupied Home Value
- Unemployment Rate %
- Median Home Year Built
- Poverty Rate %
- County GDP (10 Year % Change)

¹¹ Cities eligible for scoring are municipalities and city-county consolidation units in compliance with GAAP depreciation scheduled reporting and the minimum number of qualified variable factors used in the calculation of the Fiscal Ability score as of April 8, 2026.

Internal Competition with Business Assets (Weight = 3%)

- Accumulated Depreciation PPE Business Activities/Depreciable PPE Business Act

Credit Quality (Weight=13%)

- Lowest credit rating by Moody's, S&P or Fitch
- Merritt Statistical Financial Range Score
- Total Outstanding Borrowing Cost (i.e. total interest to total outstanding debt %)

Note: These measures were formula weighted based on our assessment of their significance

Several highly correlated ratios were included, primarily viewing the weight of the ICA Burden and other liabilities from different perspectives having to do with population, full value, and scale. For example, elevated ICA Burden or other liabilities can appear to be overly burdensome on small populations, yet manageable when viewed in light of an extraordinarily strong taxable full market valuation or other wealth statistics.

Other factors were included in the weighted formula to measure economic trends or the character of the city's growth and development. A good example is the U.S. Census derived data point that reports the median year that housing was built in the community is used as proxy for physical decline or deterioration. This measure was adopted and used in the 1977 Housing and Community Development Act, tied to qualifying for community development block grants. In preparation for this analysis, the median year built statistical figure was found to show a meaningful correlation with the ICA Burden developed in this model.

City Rankings by ICA Burden and ICA Burden Fiscal Ability

The top 10 highest and lowest ranking cities are listed for each group based on the group's population size range. Cities are displayed in percentile order with the highest score of 99 tied to the best ranking. The cities are segmented into five population groups:

- At least 500,000
- 250,000 to 500,000
- 100,000 to 250,000
- 50,000 to 100,000
- Less than 50,000

As mentioned earlier, cities were excluded if they did not follow generally accepted accounting practices which require annual depreciation schedules (e.g., New Jersey cities), if they used the modified infrastructure accounting approach for all or part of their assets (e.g., Los Angeles and Kansas City), or they omitted certain required data inputs to compute the estimated ICA Burden model score.

In some cities, the ICA Burden Fiscal Ability percentile ranking, which reflects a city's ability to pay for infrastructure, is absent because certain required data variables are not available to make the calculation.

Cities Highlighted by Population Group

Best and Worst Ranking Cities in America

Cities that make proactive, well-timed investments in infrastructure and capital assets—aligned with growth patterns and the expected service life of those assets—are far more likely to maintain manageable ICA Burdens. The highest-ranking cities in our models consistently exhibited relatively low levels of fully depreciated assets, thereby limiting the accumulation of depreciation associated with capital assets that have already been consumed.

Based on our calculations, which estimate an imputed dollar burden from an accounting perspective, both the strongest and weakest ICA Burden rankings were concentrated among small cities with populations under 25,000. Rankings were determined using each city's percentile score within the model, with higher percentiles indicating stronger performance. For example, a percentile ranking of 99 or higher places a city in the top one percent of all cities analyzed, while percentile scores below one place cities in the bottom one percent.

The Best:

Topping the list with the best ICA Burden ranking of all cities is the small but growing city of Holly Springs, GA. With a population of 20,133, it scored the best, and highest possible, ICA Burden Percentile Rank for cities in the nation. Holly Springs' population has surged by 95% in the past ten years. It is poised for further growth, as it is one of several outer-ring suburbs north of Atlanta experiencing an influx of new residents seeking less-congested areas. The relative newness of its infrastructure and capital assets means that a smaller share of its capital assets has been consumed, which lightens its load of accumulated depreciation. In line with the need to build new infrastructure and expand its base of capital assets, the city has tripled its total direct debt since 2022 to finance the projects. Holly Springs' ICA Burden per capita is relatively light at only \$878 per capita and only half of 1% of its Full Market Value of all its taxable property. When it comes to its ability to afford its ICA Burden, its ICA Burden Fiscal Ability Percentile Ranking is in the top two percent of all cities in the nation. The city's strong showing is bolstered by a solid influx of wealthier residents making Holly Springs home.

The Worst:

The two lowest ICA Burden percentile rankings were recorded by small cities with populations under 20,000. According to the Merritt model, Alice, TX ranked last among all cities included in the analysis. Alice is located in southeastern Texas, approximately 45 miles west of Corpus Christi. With a current population of 17,619, the city has declined by 9 percent over the past decade and is well below its 20-year population peak of nearly 21,000 in 1999.

In its most recently reported audit (fiscal year ending September 30, 2024), Alice's Governmental Activities accumulated depreciation exceeded the value of its net depreciable capital assets by more than twelve times. As a result, the city's ICA Burden is exceptionally large and disproportionate to the size and wealth of the community. This reflects an oversized stock of accumulated depreciation relative to very low current depreciation expenses, indicating that the city's active capital asset base is largely worn out. Approximately 92 percent of the gross value of Alice's depreciable assets has already been consumed, and only about 3 percent of its governmental infrastructure assets remain undepreciated. This level of capital consumption places significant strain on both the city's full market value of taxable property and its population base.

Midlothian Village, IL—a southwestern Cook County suburb of Chicago—ranks slightly higher than Alice. Midlothian has a population of approximately 13,781, modestly below its 30-year peak of 15,047 reached in 1995. Local wealth metrics are below national medians: the village's median household income is roughly \$70,000 compared with \$78,151 for all U.S. cities, while the median value of an owner-occupied home is \$207,000, about 35 percent lower than the national city median.

In its most recent audit (fiscal year ending April 30, 2024), Midlothian's governmental activities accumulated depreciation was more than seventeen times the value of its net depreciable capital assets. This indicates that the vast majority of its capital and infrastructure assets are fully depreciated and approaching replacement necessity. More than 98 percent of Midlothian's governmental infrastructure assets have been fully consumed, significantly elevating its ICA Burden.

As with Alice, the combination of an aging capital stock and limited remaining asset value places substantial pressure on Midlothian's community resources, particularly the full market value of taxable property and its population. Both Midlothian's ICA Burden and ICA Burden Fiscal Ability rankings place the village in the bottom one percent of all U.S. Cities.

Infrastructure & Capital Asset Burden and Fiscal Ability Ranking Percentiles

The tables that follow rank the top ten and bottom ten cities in the United States by their ICA Burden percentile scores.

Best-Positioned Cities with Population of 500,000 or more

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden (\$000)	ICA Burden Per Capita	ICA Burden % FV
Jacksonville	FL	09/30/2024	82.7	51.8	\$3,071,508	\$3,092	1.95
San Francisco City & County	CA	06/30/2025	81.9	61.6	\$5,225,462	\$6,315	1.41
Columbus	OH	12/31/2025	80.4	51.8	\$3,394,504	\$3,637	4.13
Austin	TX	09/30/2025	79.0	58.0	\$4,340,634	\$4,369	1.33
Dallas	TX	09/30/2025	78.6	34.3	\$5,484,139	\$4,136	1.98
El Paso	TX	08/31/2025	77.2	36.0	\$1,267,544	\$1,859	1.85
Charlotte	NC	06/30/2025	76.6	73.7	\$4,345,079	\$4,605	1.92
Seattle	WA	12/31/2024	71.7	83.7	\$4,956,814	\$6,347	1.65
Phoenix	AZ	06/30/2025	67.9	53.5	\$5,506,205	\$3,291	1.52
Memphis	TN	06/30/2025	67.0	23.0	\$1,946,242	\$3,186	4.03

Source: Merritt Research Services, an Investortools company. Data as of April 8, 2026. Scoring is based on the most recent fiscal year audit available. Cities using the Modified Infrastructure Approach are excluded from scoring. Any cities that did not capitalize specific core infrastructure assets are not included in the top or bottom ten rankings.

Best of the Biggest Cities in the U.S.

Jacksonville Consolidated City and County, FL edged out San Francisco City & County, CA to receive the best ranking (83rd percentile) among the nation's largest cities with populations of 500,000 people or more. The city has been engaged in an active infrastructure capital improvement program over the past five years, driven in part by a ½-cent sales tax dedicated to infrastructure, federal stimulus funding, and responses to recent hurricanes. Jacksonville has been one of the fastest growing cities in the 500,000 or higher population category, which means that a substantial portion of its infrastructure and capital assets are relatively newer than most big cities. The average age of its capital stock at the end of Fiscal Year 2024 was only 12.4 years compared to the median for the largest cities of 16.9 years. Its city's estimated ICA Burden of \$3 billion is one of the lowest within its population category and relative to its population and full market value of its tax base. When it comes to its fiscal ability to cover its ICA burden, the city ranks in the 52nd percentile, placing it in the mid-range of all cities. Jacksonville's favorable ICA Burden is a positive offset to the city's low funded pension liabilities, which remains a negative drag on its fiscal ability score.

San Francisco, CA ranked second best in the biggest city category. The main reason is because of its low level of consumed capital assets relative to the size of net assets with remaining useful lives. The accumulated depreciation of its Governmental Activities capital assets represents only .61% of its net depreciable capital assets in service. Although San Francisco's per capita ICA Burden is higher than the median for its population group, the wealth of the estimated full market value of its taxable property generally has the effect of lessening the impact of the burden on individual taxpayers to cover the cost of maintaining the city's infrastructure and capital assets. Its Governmental Activities estimated ICA

Burden of \$5.2 billion amounts to 1.4% of its full market value of the taxable property in the city, which is well below the 3.7% median in its population bracket and has the lowest share of all big cities. San Francisco's ICA Burden, which is inflation-adjusted, is comparable to the city's current total direct debt load of \$4.97 billion total direct tax support debt outstanding.

Other reasons that favor San Francisco's high percentile ranking (82nd percentile of all U.S. cities) are its low average age of PPE Gov, high net to gross (original cost of its capital asset) depreciable ratio, and its low ICA Burden to total Governmental Activities assets.

Since San Francisco estimates the projected useful life spans of its capital assets to be longer than most cities (43-year vs. national index average of 34), this has the impact of extending depreciation schedules and slowing the total amount reflected in accumulated depreciation. If the projected useful lives are accurate, the city's strong showing in this analysis is validated; if not, the amount of accumulated infrastructure and capital asset replacement cost and maintenance is likely understated. San Francisco's ICA Burden Fiscal Ability ranked in the top five among the biggest cities and in the 62nd percentile among all cities due to its favorable wealth and economic strength statistics.

Columbus, OH places third in the biggest cities group of ICA Burden rankings (80th percentile of all cities). One of the few large cities in the Midwest that has experienced population growth over the past twenty years, the statistical support for Columbus' stronger ICA Burden marks applies to its low accumulated depreciation to net depreciable capital assets, as well as its manageable ICA Burden ratios relative to its resources (i.e., size of its population, overall city governmental assets and full market value).

Columbus' ICA Burden of \$3.2 billion is nearly on par with the city's total direct debt outstanding. Columbus' projected life expectations for its capital assets are within the normal dollar-weighted national average of 34 years.

On the fiscal ability side, it benefits from carrying lower levels of long-term liabilities (debt, unfunded pension, and OPEB) than other large cities. Columbus also benefits from a state statute that automatically designates a portion of its income-tax revenue to capital improvements.

The city's focus on excellent financial reporting contributes to a uniquely extensive read of the historical cost of its infrastructure. When GASB 34 standards became effective, cities were only required to include historical cost reporting for all infrastructure placed into service in 1980 or later. Columbus included all infrastructure in service since 1965 because it was already keeping cost and depreciation records on these assets. Although the dollar amount of the pre-1980 infrastructure assets is not known and may not be material, their inclusion of a longer historical record of infrastructure speaks well of the city's attempt to be transparent and reflects a positive commitment to capital asset accountability.

Columbus' AAA rating allows the city to hold its borrowing costs lower. Its interest expense on total Governmental Activities debt is 2.7%, which is one of the lowest levels of all cities with more than 500,000 people.

The Worst Big Cities

Worst-Positioned Cities with Population of 500,000 or more

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden (\$000)	ICA Burden Per Capita	ICA Burden % FV
San Jose	CA	06/30/2025	3.2	19.0	\$35,326,021	\$35,419	13.24
Portland	OR	06/30/2025	8.1	10.6	\$19,807,791	\$31,157	11.41
Indianapolis	IN	12/31/2024	8.9	14.5	\$6,924,734	\$7,687	
Detroit	MI	06/30/2025	11.3	0.6	\$4,515,731	\$6,994	13.43
Baltimore	MD	06/30/2025	11.4	9.7	\$7,976,909	\$14,037	15.97
Fresno	CA	06/30/2025	15.4	28.2	\$3,069,278	\$5,579	5.89
Philadelphia	PA	06/30/2025	23.6	10.4	\$8,871,449	\$5,637	3.83
Louisville-Jefferson County Metro Gov.	KY	06/30/2025	24.3	29.9	\$3,670,661	\$4,624	2.71
Milwaukee	WI	12/31/2024	24.6	5.4	\$3,376,975	\$5,993	7.71
Sacramento	CA	06/30/2025	25.3	24.6	\$4,026,421	\$7,515	5.33

Source: Merritt Research Services, an Investortools company. Data as of April 8, 2026. Scoring is based on the most recent fiscal year audit available. Cities using the Modified Infrastructure Approach are excluded from scoring. Any cities that did not capitalize specific core infrastructure assets are not included in the top or bottom ten rankings.

The city of **San Jose, CA** has the worst ICA Burden among the nation's largest cities. Despite its growing population and role as a hub for major technology companies, San Jose has been slower than one would expect to replenish the spent portion of its capital assets. Its ICA Burden ranks in the bottom 2% of all cities and last among the biggest cities, even though it has earned a AAA credit rating by Fitch and AA+ and Aa1 by S&P and Moody's. Based on its FY 2025 audited financial statements, city data indicates that the accumulated depreciation to depreciable governmental activities assets ratio is 2.7—more than twice the median of 1.1 for large cities. San Jose's projections for the estimated useful life span of its assets are well within the normal range for all assets as well as for infrastructure specifically. That indicates that San Jose's surprising results are not due to extended forecasts that might slow the rate of accelerated depreciation. Rather, it suggests that San Jose is slow to replenish the spent portion of its infrastructure and capital assets. The impact of low-level reinvestment in infrastructure and capital assets produces high burden ratios relative to resources. The city's ICA Burden amounts to \$35 billion, which is the highest of any big city except New York. The city's ICA Burden amounts to \$35,419 per capita and 13.2% of the estimated full value of its property tax base. The city's Governmental Activities accumulated depreciation of \$10.3 billion (not inflation-adjusted) is approximately three times greater than the combined net pension liabilities of all its pension plans. Since 2008, the city's governmental net depreciable capital assets have decreased every year. That presents a clear picture that net investment in capital assets has been languishing.

The combined weight of San Jose's ICA Burden, along with outstanding debt, net pension, and other liabilities, is likely to pose a long-term fiscal challenge for future taxpayers. Instead of taking advantage of its strong and steady local GDP growth since 2002, it appears to have missed the opportunity to invest in maintaining its capital assets, including infrastructure, according to its own estimated life assumptions of its assets.

The Best & Worst Tables from Other Population Groups

Best-Positioned Cities with Population of 250,000 - 500,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Aurora	CO	12/31/2024	93.1	92.4	\$1,771,685	\$4,395	2.38
Durham	NC	06/30/2025	88.2	86.2	\$782,369	\$2,592	1.81
Winston-Salem	NC	06/30/2025	87.7	68.1	\$546,095	\$2,135	1.94
Irving	TX	09/30/2025	86.5	80.4	\$895,104	\$3,469	1.91
Stockton	CA	06/30/2024	79.2	53.2	\$852,435	\$2,643	2.65
Colorado Springs	CO	12/31/2024	78.4	79.9	\$1,674,246	\$3,392	
Omaha	NE	12/31/2024	75.1	38.4	\$1,900,267	\$3,884	3.81
Madison	WI	12/31/2024	73.3	85.1	\$1,251,770	\$4,388	2.72
Wichita	KS	12/31/2024	69.7	57.4	\$1,379,042	\$3,439	3.97
Lincoln	NE	08/31/2024	69.0	73.2	\$1,270,938	\$4,282	3.72

Worst-Positioned Cities with Population of 250,000 - 500,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Chesapeake	VA	06/30/2025	6.9	55.3	\$3,988,728	\$15,642	9.02
St Louis	MO	06/30/2025	7.7	1.4	\$2,800,562	\$10,013	11.74
Tulsa	OK	06/30/2025	7.8	13.0	\$10,711,396	\$25,801	25.13
New Orleans	LA	12/31/2024	11.8	2.3	\$7,301,280	\$20,130	13.62
Bakersfield	CA	06/30/2023	12.8	26.1	\$2,644,498	\$6,403	6.86
Toledo	OH	12/31/2024	13.5	4.7	\$1,746,553	\$6,575	12.54
Miami	FL	09/30/2024	14.6	14.6	\$4,027,879	\$8,558	3.00
Cleveland	OH	12/31/2024	16.3	3.4	\$2,597,632	\$7,109	16.09
Cincinnati	OH	06/30/2024	20.8	6.5	\$2,720,251	\$8,699	14.26
Chandler	AZ	06/30/2025	26.4	73.1	\$1,605,435	\$5,709	2.36

Best-Positioned Cities with Population of 100,000 - 250,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Charleston	SC	12/31/2024	97.5	91.5	\$423,181	\$2,684	1.04
Quincy	MA	06/30/2024	95.7	69.2	\$373,999	\$3,656	1.82
Sandy Springs	GA	06/30/2025	95.4		\$276,700	\$2,623	0.88
Menifee	CA	06/30/2024	94.1	97.6	\$197,229	\$1,735	1.27
Carmel	IN	12/31/2024	93.6	87.3	\$440,617	\$4,253	2.09
Nampa	ID	09/30/2024	93.0	97.8	\$281,266	\$2,450	1.58
St George	UT	06/30/2025	92.3	96.3	\$404,098	\$3,802	1.35
Georgetown	TX	09/30/2025	91.8	85.9	\$313,456	\$3,093	1.52
Salt Lake City	UT	06/30/2024	91.3	92.0	\$739,690	\$3,492	1.10
Lee's Summit	MO	06/30/2025	91.3	96.9	\$429,619	\$4,037	2.84

Worst-Positioned Cities with Population of 100,000 - 250,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Topeka	KS	12/31/2024	1.1	4.4	\$2,853,827	\$22,746	26.80
Gresham	OR	06/30/2025	1.9	13.9	\$2,834,470	\$25,420	12.18
San Bernardino	CA	06/30/2025	3.9	6.6	\$1,755,049	\$7,808	7.78
Montgomery	AL	09/30/2024	4.5	7.0	\$2,128,121	\$10,852	
High Point	NC	06/30/2025	5.5	17.8	\$1,383,279	\$11,663	6.84
Macon-Bibb County	GA	06/30/2024	5.6	9.9	\$1,390,781	\$8,877	9.01
South Bend	IN	12/31/2023	6.8	7.3	\$1,059,438	\$10,215	14.19
Richmond	CA	06/30/2025	6.9	8.6	\$1,653,946	\$14,338	7.72
Tallahassee	FL	09/30/2024	7.0	13.1	\$1,641,930	\$8,062	6.50
Escondido	CA	06/30/2024	7.0	17.6	\$1,269,060	\$8,525	5.76

Best-Positioned Cities with Population of 50,000 – 100,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Celina	TX	09/30/2025	99.6	96.1	\$65,099	\$1,260	0.55
Eastvale	CA	06/30/2024	99.0	99.8	\$130,447	\$1,845	0.98
Brookhaven	GA	12/31/2024	98.7		\$62,067	\$1,045	0.38
Leander	TX	09/30/2024	98.5	95.9	\$159,273	\$1,978	0.96
Fulshear	TX	09/30/2025	98.4	99.4	\$49,782	\$911	0.78
Marysville	WA	12/31/2024	98.0	98.6	\$95,907	\$1,259	0.70
Johns Creek	GA	09/30/2024	97.0		\$105,233	\$1,291	0.51
Caldwell	ID	09/30/2025	96.2	98.7	\$132,693	\$1,816	
Kyle	TX	09/30/2025	96.2	96.1	\$136,159	\$2,068	1.71
Blaine	MN	12/31/2024	96.1	98.0	\$130,355	\$1,734	1.17

Worst-Positioned Cities with Population of 50,000 – 100,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Kenner	LA	06/30/2024	0.1	3.5	\$4,354,112	\$68,134	62.25
Flint	MI	06/30/2024	0.5	0.1	\$1,025,586	\$12,873	41.81
Wheaton	IL	12/31/2024	0.9	39.5	\$612,630	\$11,400	7.27
Pontiac	MI	06/30/2025	1.0	6.5	\$1,385,623	\$22,160	38.69
Westland	MI	06/30/2024	1.4	4.3	\$1,740,359	\$21,038	28.71
Taylor	MI	06/30/2025	2.5	2.7	\$793,314	\$12,890	15.65
Oak Lawn Village	IL	12/31/2024	2.5	2.7	\$435,815	\$7,709	8.90
Dothan	AL	09/30/2024	2.6	8.2	\$3,538,971	\$49,623	47.87
Port Arthur	TX	09/30/2025	2.8	4.1	\$1,152,228	\$20,650	21.48
White Plains	NY	06/30/2025	3.2	14.1	\$1,047,526	\$16,744	8.91

Best-Positioned Cities with Population of Less than 50,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Holly Springs	GA	12/31/2024	100.0	99.4	\$17,683	\$878	0.48
Fort Mill	SC	09/30/2024	99.9	99.6	\$23,423	\$696	
Locust Grove	GA	12/31/2024	99.8	93.5	\$11,941	\$1,016	0.58
Fate	TX	09/30/2024	99.8	99.2	\$29,148	\$1,182	0.93
Glenn Heights	TX	09/30/2024	99.7	97.8	\$9,592	\$504	0.47
Nolensville	TN	06/30/2024	99.5	99.8	\$10,271	\$663	
Youngsville	LA	06/30/2024	99.5	94.8	\$27,784	\$1,538	
Gautier	MS	09/30/2024	99.4	79.0	\$9,981	\$524	1.08
North Ogden	UT	06/30/2024	99.4	99.9	\$23,102	\$1,036	
Republic	MO	12/31/2024	99.4	93.4	\$24,219	\$1,132	1.32

Worst-Positioned Cities with Population of Less than 50,000

City	State	Most Recent Audit FYE	ICA Burden Percentile ⁷ Rank Most Recent FYE	ICA Burden Fiscal Ability Percentile Rank	ICA Burden	ICA Burden Per Capita	ICA Burden % FV
Alice	TX	09/30/2024	0.0	2.4	\$507,369	\$28,797	55.39
Midlothian Village	IL	04/30/2024	0.1	0.8	\$847,414	\$61,492	134.97
Fraser	MI	06/30/2024	0.2	3.2	\$641,737	\$44,279	37.90
Riverview	MI	06/30/2024	0.2	8.5	\$154,763	\$12,889	16.08
Oswego	NY	12/31/2024	0.3	0.5	\$703,057	\$41,242	68.39
Emporia	KS	12/31/2024	0.3	6.6	\$1,741,683	\$71,515	113.18
Blythe	CA	06/30/2024	0.4	1.7	\$158,722	\$8,891	
Claremont	CA	06/30/2025	0.5	21.9	\$2,784,756	\$77,057	33.74
San Dimas	CA	06/30/2024	0.6	23.4	\$634,179	\$19,023	9.17
Riverdale Village	IL	04/30/2024	0.7	0.0	\$77,737	\$7,592	20.42

Source: Merritt Research Services, an Investortools company. Data as of April 8, 2026. Scoring is based on the most recent fiscal year audit available. Cities using the Modified Infrastructure Approach are excluded from scoring. Any cities that did not capitalize specific core infrastructure assets are not included in the top or bottom ten rankings.

Highlights from Notable Cities

Detroit has initiated new outlays into its capital assets since it declared bankruptcy in 2014. However, the decline in the region's economy in the preceding decades has led to a steady deterioration in the overall capital assets of the city.

The percentage of capital assets spent, represented by accumulated depreciation, remains twice that of depreciable capital assets which still have useful service life. A high accumulated depreciation to net depreciable ratio raises the probability that deferred maintenance situations are embedded in the numbers. As mentioned earlier, deferred maintenance strongly suggests the likelihood that an asset could break down anytime, which would require an immediate cash outlay to fix the situation. Detroit's depreciable or unspent capital assets represent only 33% of its gross historical cost, which is low by national standards and is below its ten-year high of 38% in 2016.

Although its ICA Burden of \$4.5 billion is comparable to the median dollar amount for all big cities, it has a 23% higher per capita burden than other big cities. The ICA Burden is the highest of all the largest cities relative to the city's taxable property values, with a ratio of 13.4% of the full market value.

Consequently, Detroit faces severe headwinds as it endeavors to repair and replace the depreciated capital assets and infrastructure which remain on the books as in-service capital stock¹². After Detroit's Chapter 9 bankruptcy settlement, the magnitude of Detroit's ICA Burden has become the city's heaviest long-term funding commitment or "liability," higher than its existing tax-supported debt, pensions, and OPEB combined. While it may seem to be hidden on the balance sheet, the projected ICA Burden amounts to 3x the amount of its current share of the unfunded pension liability of all its plans, and 2.7x its total tax-supported direct debt.

According to Detroit's own estimates, the city projects its overall capital assets to have a shorter average lifespan than most cities, which increases the consumption speed of assets. However, the magnitude of Detroit's ICA Burden stands out relative to its taxable resources and its ability to resolve the problem. The tremendous shrinkage in its population base and business establishments have left large parts of the city vacant, stretching the efficiency of its original infrastructure blueprint. Based on the Merritt ICA Burden Fiscal Ability statistical model, Detroit's capacity to replenish its capital stock ranks it in the bottom one percent among all cities and last among the biggest cities groups.

Flint, MI, notorious among older rustbelt cities for its neglected infrastructure, does not find any relief when the spotlight focuses on its non-enterprise governmental capital assets. The deterioration of the city's once booming auto manufacturing plants led to the eventual collapse of its economy, tax base, and its once healthy blue collar income base. In line with the decline, Flint's failure to properly repair and upgrade its aging infrastructure—especially its lead pipe system—eventually led to the dangerous drinking water crisis. Although recent efforts to address its water problems have been reported, the city's overall governmental-asset ICA Burden—which encompasses roads, bridges, and other non-utility assets—ranks as the seventh weakest among all cities and is the second lowest within the 50,000 to 100,000 population group.

Flint's ICA Burden Fiscal Ability places it at the very bottom of all cities. The ranking is based on the city's weak fiscal and economic capacity to cover its long-term obligations and its implicit obligation to maintain its in-service capital assets. The consolidation of its ICA Burden plus its total direct debt, pension, and OPEB net liabilities amounts to an overwhelming 60.1% of its Estimated Full Market Value (national median ratio average is 5.8%), which is too high for taxpayers no matter which way you view it.

¹² Any capital assets that have been officially condemned, sold, or taken out of permanent service reduce the city's accumulated depreciation total and, in turn, lower the ICA Burden.

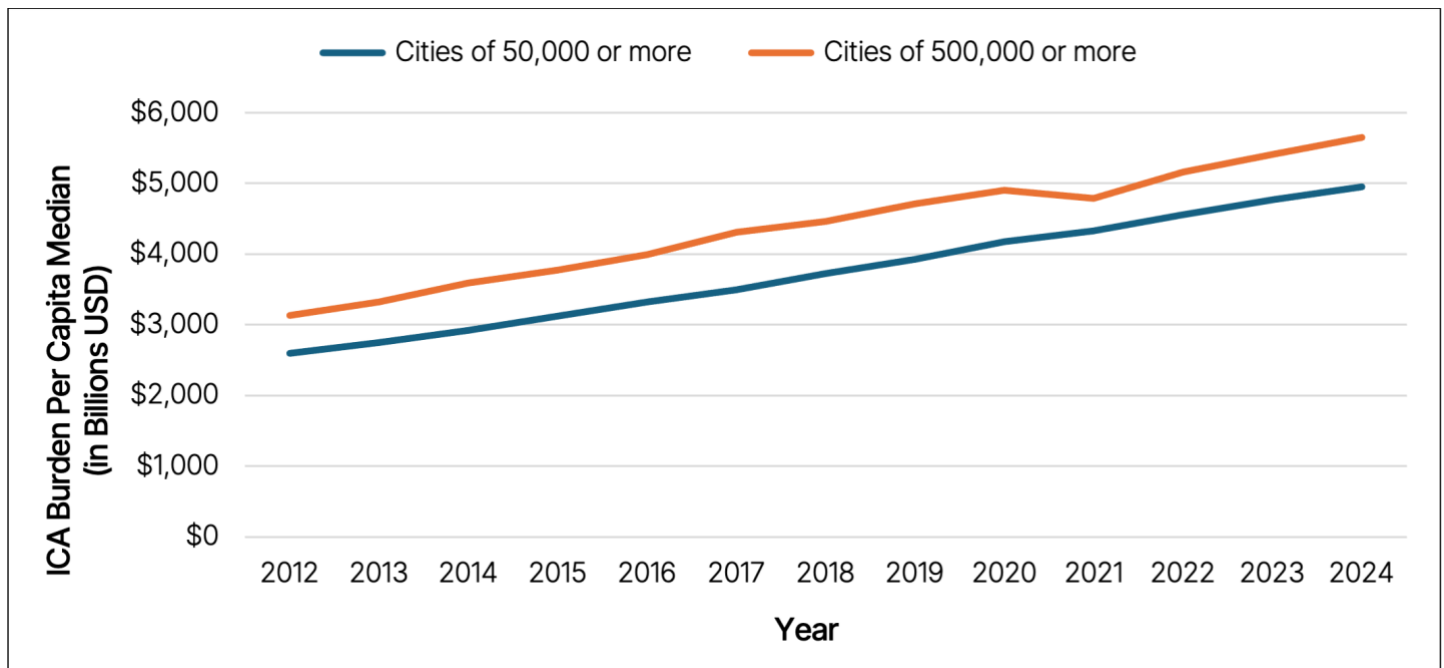
City Takeaways on Population

Small Cities Are Usually Better off than Large Cities: Smaller cities tend to show better ICA Burden percentile scores than larger ones over 250,000 people. One explanation is that the infrastructure and capital asset requirements for smaller cities are less demanding and complex. Many of these cities are in outer suburban rings of metropolitan areas that are growing in population and therefore have newer infrastructure. In a test, involving all cities, regardless of size, using the most recent audited financial statements available, smaller cities with populations of 50,000 or less performed the best. Their group median ICA Burden percentile ranking was 51.9, while cities in the two largest population groups (250,000–500,000 and 500,000 or more) had median scores in the 45% range. Similar results were seen when the same groups of cities were compared using only same-year audited financial statements (for example, FYE 2023, 2024 and 2025).

Large Cities Struggle Most to Afford ICA Burdens: The largest cities (population > 500,000) had the worst group median ICA Burden Fiscal Ability (32nd percentile), influenced by higher levels of long-term liabilities and weaker socio-economic statistics. Most of the nation’s largest cities have much older infrastructure and have experienced periods of decline following earlier eras of prosperity. Many are located in regions often negatively referred to as the “Rust Belt,” where industrial activity has diminished significantly over time.

10-Year Worsening Trend for All Cities: The median per-capita ICA Burden has been worsening for more than a decade for all cities. Notably, the nation’s largest cities have seen their per-capita ICA Burden worsen at an accelerating rate since 2022, after a short-lived improvement from federal appropriations for infrastructure tied to stimulus programs during the Covid period.

**Agging Governmental Infrastructure & Capital Assets Trendline:
ICA Burden Medians for Cities of 50,000 vs. Cities over 500,000 Population (2012 - 2024)**



Source: Merritt Research Services, an Investortools company. Data as of March 26, 2026.

Factors & Characteristics Associated with Best & Worst ICA Cities

The following table groups cities into three tiers by ICA Burden percentile ranking and reports median values for key characteristics within each tier.

Characteristics of Cities Based on ICA Burden Percentiles by Median Rankings

Factors	Highest ICA Burden Ranking (Top Third) ¹⁰	Medium ICA Burden Ranking (Middle Third)	Lowest ICA Burden Ranking (Bottom Third)
Infrastructure & Capital Assets Burden Rank Percentile	82.99	43.31	16.74
Capital Assets Fiscal Ability Rank Percentile	79.56	44.08	21.18
ICA Burden Estimated	101,570.84	207,134.67	281,947.94
ICA Est Burden as % of Full Market Value	1.93	3.73	6.84
ICA Est Burden Per Cap	2,995.09	5,282.16	7,619.35
ICA Est Burden to Tot Gov Assets	0.44	0.79	1.25
ICA Est Burden to Tot Unfunded Pensions	4.75	5.41	7.84
ICA Est Burden to Tot Debt	2.08	4.50	8.11
Total Direct Debt per Capita	1,328.6	1,185.4	1,021.7
Total Direct Debt / Estimated Full Value %	0.9	0.9	0.9
Tot Dir Debt & Unfd GT Pens & OPEBL% FV	1.88	2.07	2.47
Total Dir Debt + Net Pension Liab(All Plans) per Capita	2,076.4	2,261.3	2,165.3
Grand Total Funded Ratio % (Entity)	81.51	81.44	78.53
Unrst Net Assets (Gov) / Tot Exp (Gov) %	23.1	0.1	-15.3
Tot Tax Rev per Capita (Gov Activities)	992.4	1,045.0	969.0
Median Household Income	84,735	76,689	69,151
Median Housing Value	334,250	299,450	247,900
Median year structure built - Place	1986	1978	1975
Poverty Rate	9.5	11.6	13.9
Population 10 Yr % Chg	9.81	4.74	1.84
Population 20 Yr % Chg	26.98	11.73	4.93
Est Full Market Value 3Yr % Chg	32.88	28.04	25.42
Total % Pop - 65 Years & over - Place	14.7	16.2	16.7
BEA County All Industries GDP 10 Yr % Chg	71.89	60.24	56.73
Average Age of PPE (Gov Activities)	12.5	17.2	22.4
Est Useful Life of PPE (Gov Activities)	18.44	14.56	12.52
Depreciable PPE, Net Gov / Gross Depreciable PPE (Gov Activities)	59.10	45.98	36.37
Depreciable PPE, Bus Act/Gross Depreciable PPE (Bus Activities)	58.6	51.0	47.9
Acc Dep PPE Gov to Dep PPE Gov	0.69	1.17	1.75
Range Scoring Financial Score	1.58	1.79	1.97
CreditScope Rank	57.96	46.93	34.54
Moody's Credit Rating Value	1.67	2.00	2.00
S&P Credit Rating Value	2.00	2.00	2.33
Fitch Credit Rating Value	1.67	1.67	2.00

Group Ranking Source: Merritt Research Services, an Investortools company. Data as of April 8, 2026. Percentiles and Medians Based on Most Recent Audit Available (not earlier than 2023).

Observations about Cities in the Top Third with Lower ICA Burdens

1. Lowest ICA Burden Relative to Economic Resources

They have the lowest ICA Burden on an absolute basis as well as relative to their key economic resources -- population, full market value of their taxable property, and in relation to the total size of all Governmental Activities assets.

2. Lowest ICA Burden Relative to Other Long-Term Liabilities

They have the lowest ICA Burden versus other long-term liabilities, such as total tax-supported direct debt and the total of their share of net pension liabilities (i.e., unfunded pension liabilities). The ICA Burden for Top Third cities is 4.6x more than their share of net pension liabilities, while the Bottom Third (weakest) cities have ICA Burdens that are 7.9x more than their net pension liabilities. Top Third cities are double the level of their debt outstanding compared to the Bottom Third cities which show an ICA Burden that is 8.1x more than its outstanding current debt level. That means the amount of money needed to replenish the portion spent of their infrastructure is more than eight times the debt level they currently have outstanding.

3. Favorable Socio-Economic Characteristics

Cities ranked in the Top Third of the model have the most favorable socio-economic characteristics. They are more likely to possess population growth, higher wealth levels, younger populations, newer homes, and be situated in economically prosperous counties (measured by growth in county GDP). These advantages provide a greater ability and willingness to have newer and better maintained infrastructure and capital assets.

4. Top Third Cities Also Have Lower “Spent Ratios” For Their Business Activities

Top Third cities with lower Governmental Activities ICA Burdens have a propensity to have better Business Activities infrastructure and capital asset ratios. A good measure is the Depreciable PPE Business to Gross Depreciable PPE Business Activities ratio, which has a median ratio near the 59th percentile for its Governmental Activities infrastructure and capital assets. The lowest median ratios for both Governmental and Business are weakest in the Bottom Tier. Cities which do an excellent job of managing their governmental-purpose capital assets are more likely to be similarly aligned in managing their business assets. The only difference is that the median for this ratio in the Bottom Tier is only in the 36th percentile for Governmental Activities vs. the 48th percentile for business functions. The ratio shows that cities with the least consumed or worn-down business assets (on a median basis) are also among the Top Third of the governmental activities' capital asset rankings. That suggests an important distinction that fiscally challenged cities are more likely to defer road, building or government capital improvements than they are to neglect essential service enterprise infrastructure functions like water and sewer or airports. However, Flint, MI, and Birmingham AL are two examples in which Business Activities can still decline into perilous conditions whenever the overall fiscal environment is overly stressed.

5. Better Credit Quality and Ratings

Top Third cities tend to demonstrate correlation with credit quality and ratings despite the absence of any defined rating agency criteria associated with the ICA Burden analysis. Key credit ratios, like unrestricted net assets (position), pension funding ratios and debt ratios, are strong among the Top Third medians. In terms of overall metrics and ratings, there is plenty of statistical evidence that the “haves” do better on infrastructure than the “have nots.” Merritt

financial range scores and rankings¹³, which attempt to correlate with rating agencies on key statistical metrics, tend to show stronger ICA Burden ranking model medians in the Top Third and the weakest medians in the Bottom Third. On the other hand, the differentiation among the three largest rating agencies appears to be aligned with higher rated cities, but the statistical significance appears muted because the difference among the three tiers is small. All three of the largest public finance rating agencies had lower numerical median rating scores in the top tier grouping, which are aligned with median higher ratings¹⁴ in this analysis.

6. Conventional Average Age of Capital Stock Metrics Correlated to Tiers

It comes as no surprise that the conventional capital asset age metrics are in line with Top Third cities. Average Age of the capital assets (i.e., often referred in the corporate arena to the average age of property, plant, and equipment or PPE) for Governmental Activities, Remaining Estimated Useful Life, Depreciable to Gross Depreciation, and Accumulated Depreciation to Depreciable Capital Assets correlate as expected with the Top to Bottom Thirds infrastructure and capital asset rankings.

7. Slightly Behind Bottom Tier in Tax Revenue Per Capita

Top Third cities follow slightly behind the median of the Bottom Third cities when it comes to the median of total tax revenues per capita. There is no straightforward evidence that lower or higher taxes per capita is an advantage to achieving a better maintained infrastructure. We can speculate that cities with already high taxes may be more likely to defer infrastructure and capital asset maintenance due to the presence of budget squeezes caused by legacy liabilities, economic base shrinkage, wealth deficiencies, or failure to hold down operating costs. On the other hand, well-maintained infrastructure that does not lead to deferred maintenance is most likely less expensive to taxpayers in the long-term, especially when rebuilding the capital stock comes at a time in which the economy is no longer flourishing as it once did.

8. Higher Total Direct Debt Per Capita

The only data characteristic in the table in which the Top Third cities did worse than both the Middle and Bottom Third cities applied to their total direct debt per capita. A reasonable explanation for this is that higher ranking ICA Burden cities are able and more likely to issue debt to address their replenishment needs.

¹³ The Merritt financial range score is based on an aggregated multi-variate correlation of the three largest rating agencies using the weakest median for key credit quality metrics.

¹⁴ Based on credit rating equivalent scale, a rating agency score of “1” is the equivalent of a AAA. Higher range scoring numbers reflect lower ratings.

City Infrastructure & Capital Asset Rank Median by State

The following table groups cities by state according to their median ICA Burden model percentile scores.

State	Population	City Population 10 Yr % Change	Count	Infrastructure & Capital Assets Rank (City Median)	Infrastructure & Capital Assets Fiscal Ability-Affordability Rank (City Median)
IN	12	78,146	5.5	83.7	55.5
SC	23	38,158	19.3	82.2	75.0
GA	59	31,224	9.5	75.3	70.7
ND	8	44,234	14.7	75.3	49.2
NC	44	50,779	13.8	73.4	68.1
WI	67	25,329	1.9	70.1	64.4
UT	33	41,298	13.0	69.8	92.0
ID	12	57,478	28.0	69.3	93.5
AL	52	25,025	7.5	69.0	45.6
TN	39	41,051	15.7	66.9	76.7
NE	12	25,740	8.2	64.0	54.8
NV	8	196,617	19.1	62.3	52.7
CO	33	65,473	9.2	61.4	81.9
WA	46	51,908	11.4	60.5	82.0
MA	56	46,272	6.2	59.0	42.9
AR	8	45,465	3.8	58.6	46.4
IA	24	41,772	5.2	58.0	37.5
TX	205	36,479	12.3	55.6	57.5
MS	31	24,596	2.9	54.6	21.4
MD	13	34,667	4.2	54.2	68.8
FL	92	66,036	12.9	54.1	69.3
AZ	29	83,781	16.7	52.7	66.0
MN	72	26,815	5.2	52.5	69.9
ME	9	24,989	4.0	52.5	40.2
RI	8	61,601	4.4	50.0	16.1
NH	7	33,909	4.5	48.4	38.3
MT	7	57,106	11.4	45.1	64.6
CA	250	65,473	1.2	44.1	47.4
KS	20	32,683	6.4	43.6	35.4
VA	32	37,661	3.1	41.6	48.3
IL	169	25,469	-1.0	41.3	35.0
MO	52	25,417	4.7	40.7	46.5
OR	39	28,969	10.0	39.7	47.7
OK	19	49,824	5.0	38.4	41.1
OH	114	25,115	1.9	37.9	30.5
KY	24	28,804	5.6	36.7	24.6
CT	19	60,849	2.6	35.9	18.3
NY	61	25,718	2.4	32.9	17.9
PA	40	23,553	0.5	32.4	19.7
NM	9	47,402	0.5	32.1	23.3
LA	13	43,133	-5.6	18.9	17.9
MI	69	30,920	0.7	17.9	14.9

Data Source: Merritt Research Services, an Investortools company, as of April 9, 2026. Excluded states due to less than seven cities with qualifying factors for rankings: AK, DE, HI, NJ, SD, VT, WV, and WY.

Observations on ICA Burden Rankings by State

Cities in the state of Indiana had the best median ICA Burden among all states. Indiana's stronger showing may be due to the fact that smaller cities in the state are not required to use GASB GAAP standard of depreciating infrastructure. Indiana's reporting cities are mostly comprised of cities with populations between 50,000 and 125,000 experiencing some level of population growth over the past decade. Meanwhile, its midwestern neighbor to the north, Michigan, had the worst median ICA Burden, with many cities represented whose economies were tied to the state's once strong industrial orientation.

Over the past 10 years, top-ranking states (and their cities) have commonly experienced faster population growth and are located in strong economic regions of the country. States whose cities received weaker infrastructure and capital asset rankings were located in slower-growing regions.

States with less than seven cities that qualified for the ranking model in the analysis were not included. For example, no cities in New Jersey were eligible for rankings because state laws require them to use a statutory accounting method that does not provide depreciation of expense data in compliance with GASB reporting requirements.

Cities in states with better condition infrastructure and capital assets are more likely to have stronger fiscal ability and affordability rankings. Cities located in more challenging fiscal and economic environments are more likely to defer infrastructure maintenance.

Final Observations & Takeaways

The complications involved in estimating the dollar replacement value of the ICA Burden cannot be understated. But this difficulty should not deter analysts from attempting to monetize the approximate cost to replenish and restore a city's infrastructure and capital assets. Failure to incorporate a reasonable quantitative measure of capital asset burden leaves too big of a gap to properly assess credit quality and fiscal strength.

Quantifying the dollar commitment starts with focusing on the government's own reported capital asset depreciation and the city's own estimates of the normal useful lifespan of the capital assets placed in service. Using straight-line depreciation schedules, one can develop measures of accountability which provide for effective capital cost planning and maintenance. By doing so, analysts can estimate the cost of replacing the portion of capital assets already consumed and compare that burden to the government's current resources and fiscal capacity.

One of the most important inputs that determines the ultimate cost of replenishing consumed assets is an accurate projection of the estimated useful life of individual assets, as well as the aggregation of all depreciable capital assets. If original or revised estimated useful life span projections are generally accurate, the ICA Burden provides a reasonable gauge to assess the condition of depreciable capital assets.

Opportunities to improve the precision of the ICA Burden are reliant on improving the initial and ongoing estimated useful life span of the assets and the transparency of capital asset data within audited financial statements. Information required in financial statements under GASB standards often lacks the rigor, consistency, and detail needed to produce precise replacement cost estimates or to identify specific deferred-maintenance issues.

It is apparent from our research that cities do not appear to make regular periodic revisions to their categorical asset-type projections of expected useful life spans. Based on our 50-city examination of the useful life tables reported in their audited financial statement disclosures, cities tend to revert to customary estimations that generally apply to capital asset types, such as roads, buildings, equipment, vehicle fleets, and land improvements. The lack of ongoing and meaningful review of these useful life estimates, despite the encouragement in the GASB's standards and guidelines, weakens the capital planning process and the ability of elected officials, financial managers, and creditors (including municipal bond analysts) to provide more complete accountability.

Providing accurate estimations contributes to more precise measures of infrastructure and capital asset consumption levels. Estimates that predict shorter, safe, and effective life spans of an asset are more likely to have higher projections of depreciation, which determine the repair and replacement dollar cost burden that the city incurs. Entities that predict longer useful lives than what is warranted understate their burden implicit in the numbers. This factor is compounded by the fact that these depreciation schedules are major inputs into the average age equation that is used in this analysis to adjust for inflation.

Identifying situations in which governments have fully depreciated individual capital assets should be identified by type and in total. These numbers are currently not required to be reported in audited financial statements, but they should be since they highly suggest that deferred maintenance actively takes place. In this research and analysis, we have used a high ratio of accumulated depreciation to net depreciable capital assets as a proxy that signals the increased likelihood of deferred maintenance.

Two changes to governmental accounting standards or voluntary reporting that would go a long way to enhance the precision of quantifying deferred maintenance and the ICA Burden would be:

1. To provide data on fully depreciated infrastructure and capital assets
2. To require governments to keep and maintain an accurate record of both the historical cost of capital assets and the projected estimated useful life of each asset at installation. Annual revisions of estimates should be made if qualifying for major repairs, maintenance, or conditions extend or shorten the original useful lives of the assets. The holistic compilation of those numbers would improve the ability to make better comparisons that would provide useful information to assess a government's realistic view of estimated useful life schedules.

Since the estimated useful life numbers are the product of the city's own expertise and experience, they must take responsibility for the reasonableness of the numbers themselves. Whether the input comes from their engineers, consultants, or the finance office, it is in their best interest to prudently act in good faith, just as they would be required to do when determining key assumptions used for pension or OPEB funding, such as the mortality, discount, or investment return rates.

The rankings for this analysis did not include approximately 150 cities which used a modified infrastructure approach to account for all or a portion of their capital assets. This methodology, which is allowed under GASB standards, has merits, but it does not require capital assets that use this approach to account for depreciation expenses on their income statement. Essentially, the entity must do a rigorous evaluation of their assets and specify a maintenance plan that must be executed. Several major cities (e.g. Los Angeles, CA; Nashville, TN; and Kansas City, MO) used a combined (hybrid) approach which treats some of their assets under the modified standards. Since some of these cities used a hybrid approach (which used the modified method for a portion of the capital assets), we tested how they would fare in the rankings based on the depreciation expenses that they did report. Our analysis did not indicate an obvious bias that moves them either to the top or bottom of the rankings; however, insufficient research exploring the use of the modified approach was not undertaken in this analysis, so they were excluded from the model.

Now Is the Time to Identify Every City's Hidden Cost of Replenishing Infrastructure & Capital Assets

There is widespread evidence that America has neglected its primary responsibility to maintain the infrastructure that enabled its municipalities to grow, serve, and maintain their very existence. For too many cities, the tendency to defer capital maintenance deepens even more after their economic growth reaches its summit. At that point, the financial pressures of managing an expanded and often politicized operating budget make it easier to defer sensible capital improvement and maintenance programs.

Chronic underfunding of capital improvements is often hidden by the complexity and oblique disclosures in audited financial statements. Governmental entities would do well to develop systematic initiatives to improve the precision of capital asset accounting. This would ensure that the public and creditors can more effectively plan for and account for the financial commitments required to sustain the capital assets that support a government's primary and secondary infrastructure. Only after government officials, taxpayers, and creditors comprehend the eventual cost of replenishing consumed capital costs on existing assets can they accommodate and measure a city's ability to fund new capital investments that are needed now and, in the years ahead.

Once a rough estimated dollar value of depleted infrastructure and capital assets has been calculated, the amount can be viewed with a government's recognized long-term liabilities, such as debt, pensions, and OPEB. This helps form a holistic picture of a government's total obligations relative to its economic and tax resources, such as population and the full market value of taxable property. Although a true number representing urgent capital asset repair and replacement is not produced in this analysis, the relative proportions of deferred maintenance can be surmised based on information within the aggregate inputs used to develop our model of the ICA Burden. The danger of deferring infrastructure maintenance

has contributed to compounding replacement and repair costs. The result aggravates resolving the problem down the road.

Incorporating the estimated dollar cost to replace consumed capital assets, as outlined in this white paper, provides a meaningful starting point for assessing each government's full ICA Burden. This estimate reflects a hidden financial commitment that will eventually require funding. Credit analysts and government officials should pay close attention to these findings, as understanding the ICA Burden is essential to maintaining the fundamental foundation of the places taxpayers call home.

Acknowledgements

I would like to express my sincere gratitude to everyone at Investortools and its data and research unit, Merritt Research Services, for their unwavering support of this project.

I am particularly grateful to Jon Anderson, Co-CEO and Chief Product Officer of Investortools, for his vital role in the project's ongoing development and content, and to Joel Buursma, Vice President and Senior Software Architect, for his significant contributions to the complex mathematics required to build the ICA Burden.

Special thanks go to Michael Pagano, Ph.D., Dean Emeritus of the College of Urban Planning and Public Affairs at the University of Illinois Chicago, for his invaluable advice and career-long dedication to public infrastructure research. I also wish to recognize Can Chen, Associate Professor and Director of Ph.D. Programs in Public Policy at Georgia State University, for his input in the early stages of this project.

I am deeply indebted to the late Mark Ubelhart, former strategic consultant to Merritt Research Services. His 40 years of expertise as a global corporate financial data specialist provided inspiration and encouragement to launch this initiative.

I'd like to extend thanks to Application Developer Jane Pochervina for her development efforts, and to the entire Investortools software and editorial teams for their collaborative work in bringing this research project to completion.

Finally, I would like to recognize the entire Merritt Research Services team, led by Chief Operating Officer Troy Gerleman and Research Director Carrie Benjamin, whose meticulous attention to high-quality data made this work possible.

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