Chronic Underfunding for Transportation

New York State's Response to Local Infrastructure Needs

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Introduction

There has been a trend in New York State of chronically underfunding local infrastructure. That State continues to invest in high-profile mega-projects like the Tappen Zee Bridge, while smaller projects across New York go unfunded. The result is a network of locally-owned infrastructure that is in an alarming state of disrepair. It is estimated that over the next 20 years, the State's water infrastructure will require over 56.3 billion dollars in repairs.[1] Furthermore, across the state over 34% of the bridges and 40% of State-owned highways are rated deficient. Despite this well-documented need, State and Federal grants for investment in local infrastructure have been in steady decline.[2] At the same time, the State legislature has instituted a property tax cap which limits local governments' ability to fund these investments themselves. All of this has placed local governments in a bind; they have increased need for infrastructure investments, but few viable options to pay for them.

In this report, we examine the current state of New York State's local transportation infrastructure. In doing so, we document the trends both in need across the state and in the ways in which funding for the construction and maintenance of local infrastructure has declined. **Our primary recommendation to help address local governments' infrastructure needs is to increase state funding at the local level, possibly by rededicating the state's highway trust fund to grants for infrastructure-specific investments.** We offer a critique of the plan to create a state infrastructure bank, as it is at best only a limited tool for local governments. Finally, we find reasons for optimism in the effective use of cross-sectoral collaboration, like the Save the Rain project in Syracuse, to more efficiently address the infrastructure needs of financially constrained municipalities.

The Underfunded Infrastructure Network

The fundamental issue underlying the infrastructure crisis in New York is that infrastructure of all kinds is severely underfunded. This is compounded by the fact that the quality of individual infrastructure components can sometimes do little to enhance the effectiveness of the overall network. Furthermore, the problem of failing infrastructure is one that is very visible, yet most interested parties are attempting to avoid paying for its ongoing upkeep and provision.

Transportation infrastructure functions as a networked system. For the system as a whole to function properly, each component of the larger network must be maintained to some minimum level of functionality. Investing in an upgraded bridge is

[1] American Society for Civil Engineers. (2013). 2013 Report Card for America's Infrastructure, New York Overview. http://www.infrastructurereportcard.org/new_york/newyork-overview/

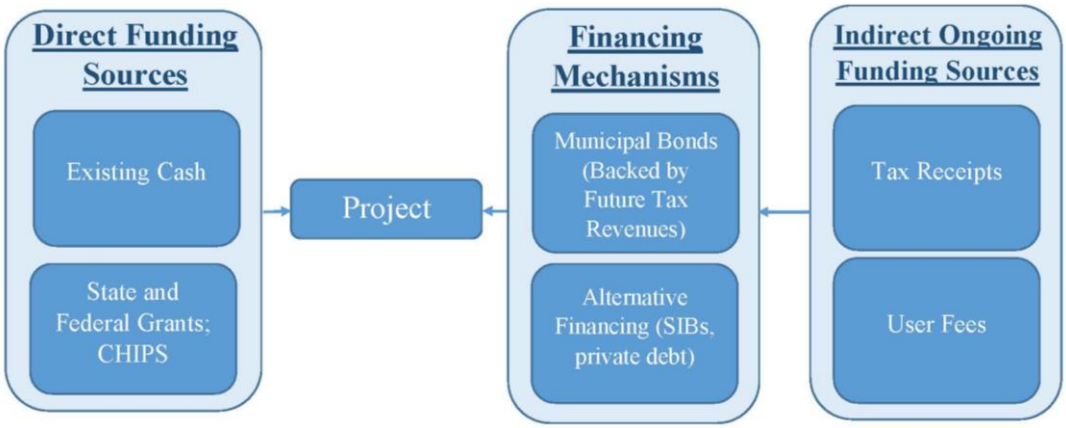
[2] The Economist. (2014). Infrastructure: Going Their Separate Ways. http://www.economist.com/news/united-states/21633848-states-and-cities-seize-initiative-transport-funding-going-their-separate-ways

likely to have little effect on the overall transportation infrastructure system if all other parts are in disrepair. This means that broad investment in infrastructure is required, on a scale much larger than current funding permits.

Failing infrastructure is a highly visible issue in local communities, and has a profound impact on the day-to-day lives of many citizens. Citizens, however, are not accustomed to directly paying for many forms of infrastructure (through higher taxes or user fees), and state aid is declining, indicating that the state is not willing to invest the necessary funds in local infrastructure assets. This means that local governments are facing an incredibly expensive problem, with an increasingly constrained ability to pay for it.

The way in which infrastructure is funded is of critical importance. Figure 1 shows various funding streams that are conventionally used for infrastructure funding, some of which are direct (meaning they are able to be injected straight into an infrastructure project upfront), and others that are indirect (meaning they must be leveraged as a series of payments over a long time-horizon by using a financing mechanism).

Figure 1: Funding and Financing Sources



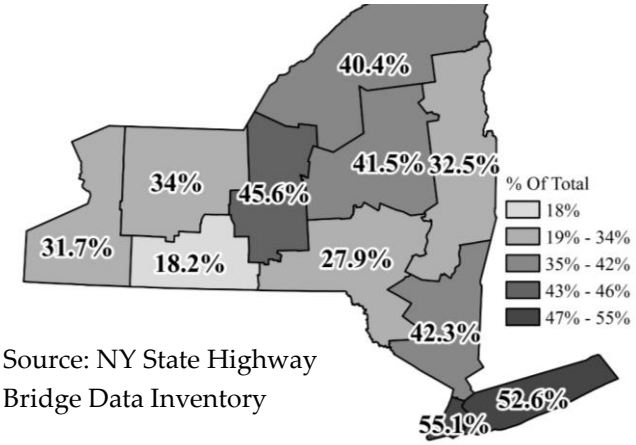
Direct sources of funding include own-source revenue (primarily cash that is currently held in either a general or dedicated fund), State and Federal grants, and Consolidated Local Street and Highway Improvement Program (CHIPs) funds. Indirect sources of funding include locally-generated taxes and user fees. As these funding streams are collected over time, they can be leveraged through a financing instrument such as a municipal bond or a loan to generate the required cash up front. This debt is then subsequently repaid over a longer period of time.

It is critical that the distinction be made between funding and financing when addressing the infrastructure crisis. **The fundamental problem in providing infrastructure at the local level is a lack of funding (state aid, local tax revenues, and user fees). The solution to the crisis requires increasing underlying funding, not creating new financing mechanisms (such as municipal bonds, loans, and state infrastructure banks).**

Infrastructure Conditions and Needs

New York State has an extensive transportation infrastructure network. There are over 115,000 centerline miles of roads in the state, over 87% of which are locally owned. In addition, there are over 16,000 bridges in the state, of which 52% are locally-owned.[3] The local nature of the infrastructure network means that local governments are responsible for the maintenance and construction of a large portion of the state's roads and bridges.

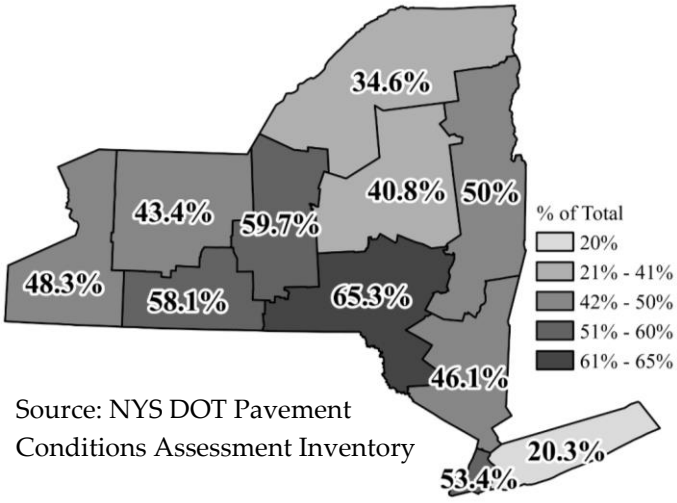
Figure 2: Percentage of Bridges Rated Structurally Deficient or Functionally Obsolete by NYSDOT Region in 2012



Source: NY State Highway Bridge Data Inventory

The chronic underinvestment in the state's transportation network is made clear by the current conditions of roads and bridges. Over 36% of the bridges in the state are rated either structurally deficient or functionally obsolete. When broken up by ownership, over 33% of locally-owned bridges currently have one of the two substandard ratings. While a state-level inventory of local road conditions does not exist, there is a database of pavement conditions for state-owned highways. According to this data, in 2012 40% of highways in New York State were rated as being in either

Figure 3: Percentage of State Roads in Fair and Poor Condition by NYSDOT Region in 2012



Source: NYS DOT Pavement Conditions Assessment Inventory

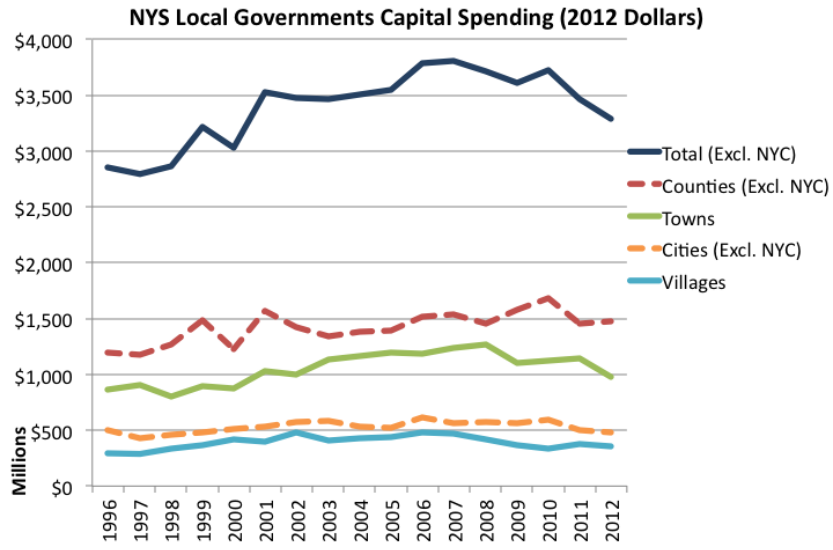
[3] Data provided by David Orr, Senior Engineer with the Cornell Local Roads Program, Ithaca, NY, November 2014.

poor or fair condition.[4] Furthermore, a third party organization, TRIP net, has estimated that as high as 47% of locally owned roads are also in need of rehabilitation and replacement due to excessive pavement wear.[5] Figures 2 and 3 show the geographic variance of road and bridge conditions across the state as broken down by state DOT region.

Decreasing Infrastructure Funding

There are a number of sources of funding for infrastructure projects, however the majority of these funding sources have declined in recent years.

Figure 4: NYS Local Capital Spending on Infrastructure



Data Source: Local Government and School Accountability, New York State Office of the Comptroller. (1996-2012). Local Government Finances Summary of Data. Accessed Sept. 2014 from: http://www.osc.state.ny.us/localgov/datanStat/findata/index_choice.htm

First, State and Federal grant funding has fallen significantly. While specific project grants are not a major source of funding for local transportation infrastructure projects, this decline has still meant that there is less money available for distribution to local governments. It also communicates a lack of commitment to support local infrastructure needs from higher levels of government, particularly from the state. **As can be seen in Figure 4, local government expenditure on infrastructure has been declining since the recession in 2009, while Figure 5 displays NYS's capital spending plan, which projects decreasing infrastructure funding for local governments into the future.**

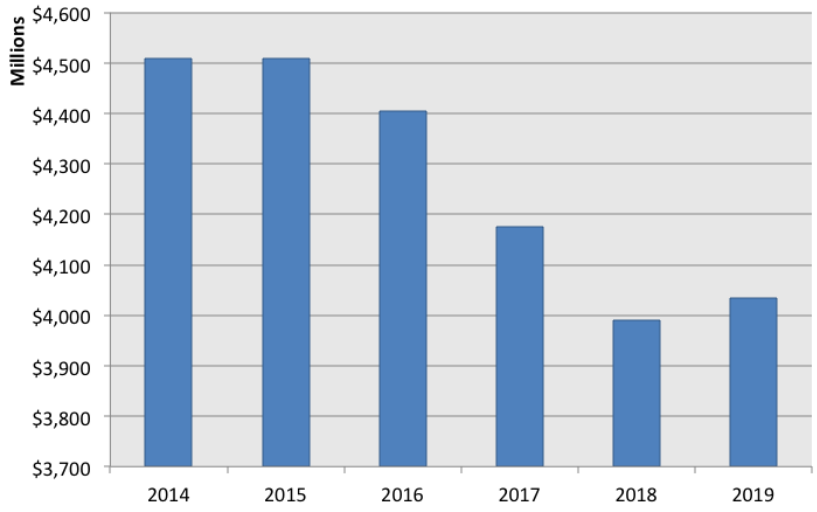
User fees are one source of funding that can be used to fund certain categories of infrastructure, however there is little funding available for transportation in the form of user fees (as local roads in the state are not tolled). Even where user fees can be used as a source of funding, such as in funding water and sewer infrastructure through the

[4] Shufon, John J. (2013). An Assessment of Local Jurisdictional Highway and Bridge Infrastructure Needs in NY State. *The NYS Association of Town and Superintendents of Highways.* http://www.nystownhwys.org/2013LocalNeedsAssessmentUpdate.pdf

[5] TRIP, A national transportation research group. (2014). The Condition and Funding Needs of New York States Roads and Bridges. http://www.tripnet.org/docs/NY_Local_Roads_and_Bridges_TRIP_Report_Oct_2014.pdf

collection of rates, this source is often inadequate to fund the total investment needed in these systems. Water infrastructure in particular is in a state of disrepair across NY. Over the next 20 years, it is estimated that an investment of over $38 billion will be required across the state; an amount significantly higher than what can be raised through user fees.[6] Unfortunately, as explained below, additional sources of revenue have been constrained at the local level.

Figure 5: Enacted NYS Capital Plan



Data Source: New York State Division of the Budget. (2014). *FY2015 Enacted Budget, Capital Program, and Financing Plan.* Accessed Sept. 2014 From: https://www.budget.ny.gov/budgetFP/FY2015EnactedCapitalPlan.pdf

One of the primary types of own-source revenue for local governments are property taxes. Tax receipts are generally used as an upfront cash injection into a project. For larger projects, however, future tax revenues can be leveraged to cover large upfront costs using long-term municipal bonds. Unfortunately, in 2012, New York State implemented a tax cap on local property taxes which pegs tax revenue growth at the lower of 2% or inflation each year. The result is that local governments are now significantly constrained in their options for raising their own revenue to directly fund the construction and maintenance of their infrastructure. There are very few exemptions to the NY property tax cap, and it requires a super-majority (60%) approval by the municipality's governing board to exceed the cap. In addition, Governor Cuomo has recently introduced incentives that reward local governments for adhering to the tax cap, adding an additional layer of complexity to the situation. **The property tax cap, which only applies to local governments outside of NYC, is one of the most critical issues facing local government financing of infrastructure, as property taxes have historically been one of the largest and most reliable funding sources for projects of this type.**

Finally, **of critical importance to local transportation infrastructure is the CHIPs funding that is allocated to local governments each year from the state.** CHIPs is funded through bonds issued by the NY Thruway Authority, and is allocated on a yearly basis by the state to municipalities for maintenance and capital expenditure on

[6] *Drinking Water Infrastructure Needs of New York State*. (2008) Department of Health. Accessed November 2014 from: https://www.health.ny.gov/environmental/water/drinking/infrastructure_needs.htm

local roads. While there has been an increase in overall CHIPs funding in recent years, it is not nearly enough to compensate for the funding constraints and reductions that have been implemented in other areas. Additionally, CHIPs funds are allocated based on the size of the local government and the total length of local road miles it is responsible for, rather than the overall state of the local road infrastructure and upfront investment needs. While population and network size is a reasonable proxy for investment needs, this may preclude some small local governments from obtaining the level of funding they need to repair or replace critical infrastructure assets. **CHIPs funding often accounts for a large proportion of local government spending on infrastructure, and is usually not sufficient to meet the municipality's needs.** This means that quick-fixes are often implemented that may be less-costly, but end up having high life-cycle costs. This prevents the use of best practices which cost more upfront, but produce savings over the life of the infrastructure.[7]

Local governments are facing funding constraints from all sides. Should both the poor condition of infrastructure across the state and funding constraints persist, NY will continue to face an infrastructure crisis for decades to come.

Proposed Solutions for Local Government

The most important option would be to spend the one-time bank settlement windfall on long-term investments in infrastructure. Any increase in funding to local governments for infrastructure investment should be accompanied by a fully-funded mandate to implement best-practices in construction and maintenance. This ensures that full life-cycle costs are considered in all investments.

Tax Reform and Innovation

According to the American Petroleum Institute, **New York State charges the second highest gas tax rate in the country**, only narrowly lower than California.[8] As gas taxes are the primary means of funding transportation projects in the United States, this might suggest that New York State has more funding available to maintain its roads and bridges. Unfortunately, as Comptroller Thomas DiNapoli has revealed, **only 22% of the funds raised by NYS's gas tax go towards capital improvement of roads and bridges**, with the bulk going instead to everything from debt servicing to road salt to DOT staff salaries.[9] While Governor Cuomo supports the use of the fund for these non-capital expenditures, **a bipartisan group of legislators have proposed increasing**

[7] Data provided by David Orr, Senior Engineer with the Cornell Local Roads Program, Ithaca, NY, November 2014.
[8] American Petroleum Institute. (2014). Gasoline Taxes: Combined Local, State And Federal (Cents Per Gallon) Rates, Effective 10/01/2014 http://www.api.org/oil-and-natural-gas-overview/industry-economics/~/media/Files/Statistics/Gasoline-Tax-Map.pdf
[9] DiNapoli, T.P. (2014). The Dedicated Highway and Bridge Trust Fund: A Shrinking Investment in New York's Future. *The New York State Office of the Comptroller.* http://www.osc.state.ny.us/reports/trans/dhbtf020413.pdf

funding for transportation infrastructure by re-dedicating the Dedicated Highway and Bridge Trust Fund.[10] In re-dedicating the fund, more direct grant funding should be allotted to local governments, perhaps through the existing CHIPS program.

Gas tax revenues are becoming a less reliable source of funding for infrastructure because of improvements in automotive technology and new environmental regulations.[11] When planning for the future, New York State should consider changing the gas tax to a vehicle miles traveled (VMT) user fee.[12] Oregon State is leading in this type of innovation, developing a program that will gradually move drivers voluntarily to the new taxation system that more equitably distributes costs, continues to protect privacy, and grants the ability to more easily introduce new taxation models such as congestion or weight-based pricing.[13]

Reforming the gas tax can only go so far to improve funding availability for local infrastructure. **Localities need more control over their own-source revenue.** Georgia's Special Purpose Local Option Sales Tax (SPLOST) is an example of one such mechanism. Georgia law allows counties, cities, and school districts to develop a prioritized list of capital needs and then present to voters a referendum to levy a 1% sales tax for five years to exclusively fund these projects.[14] Unlike existing general revenue sales taxes, this puts local control, public voice, and transparency into the infrastructure funding process.

Most immediately, the State should grant exemptions to the tax cap for spending after natural disasters and unfunded policy mandates. Should a major piece of vital infrastructure suddenly fail, local governments are restricted from levying higher property taxes, their main revenue source, even temporarily to pay for unforeseeable costs. This could begin a vicious cycle, in which failing infrastructure drives away economic investment, reducing tax revenues and ultimately hurting communities. The state has the ability to improve local funding for infrastructure by

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[10] Spector, J. (2014). NY Raids Highway Tax and Fee Fund. *Rochester Democrat and Chronicle.* http://www.democratandchronicle.com/story/news/local/2014/02/05/ny-raids-highway-tax-and-fee-fund/5227871/

[11] Committee for the Study of the Long-Term Viability of Fuel Taxes for Transportation Finance. (2006). The Fuel Tax and Alternatives for Transportation Financing. *Transportation Research Board of the National Academies, Special Report 285.* http://onlinepubs.trb.org/onlinepubs/sr/sr285.pdf

[12] Slone, S. (2009). Vehicle Miles Traveled Fees: A Trends in America Special Report. *The Council of State Governments*. http://www.csg.org/policy/documents/TIA_VMTcharges.pdf

[13] Oregon Department of Transportation (2013). Road Usage Charge Pilot Program 2013 & Per-Mile Charge Policy in Oregon. http://www.oregon.gov/ODOT/HWY/RUFPP/Road%20Usage%20Charge%20Program%20Documents/RUCPP%20Final%20Report.pdf

[14] Association County Commissioners of Georgia (2013). Special Purpose Local Option Sales Tax: A Guide for County Officials, 5th Edition. http://www.claytoncountyga.gov/pdfs/SPLOST/ACCG%20SPLOST%20Guidebook%205th%20Edition%202013.pdf

allowing exemptions for disasters, debt payments, or other infrastructure-related needs when calculating the property tax cap.

Cross-Sectoral Collaboration

One way that local governments can innovate without waiting on changes in State policy is to alter the way infrastructure projects are approached. Instead of thinking of each type of infrastructure—like water, roadways, or fiber optic—as a separate entity funded separately, projects of various types can be combined under an umbrella-vision, such as sustainability or public health. By streamlining projects across departments and administrative boundaries, costs can be reduced to accomplish more with the same amount of funding, while helping to leverage larger grant opportunities that might otherwise not be available.

One such example is the Save the Rain project, Onondaga County's award-winning initiative to improve the water quality of Onondaga Lake. The County has advanced more than 175 distinct green infrastructure projects on both public and private property, across local governments in the county through this program. While the overarching goal is an environmental initiative, the program is implemented between multiple departments, including health, public works, and transportation. The projects cited in figure 6 help illustrate a few types collaboration this program encourages.

In these projects, a holistic vision brings different agencies together – allowing the planner access to different revenue sources and grant programs. This, in turn, helps to pool investment from different sources, distributing the overall burden of infrastructure development. For example, the Connective Corridor project aims to create a city-wide urban transformation through an urban landscape project that includes a complete overhaul of its street-scape. In this project, the City of Syracuse, in partnership with Syracuse University, secured $42.5 million in external funding. The overall funding package includes: $20 million NYS funds (ESD and DASNY), $10 million federal TIGER grant, $2 million Onondaga County green infrastructure funds, $1 million from National Grid, $4.9 in federal funds, as well as support from Syracuse University. The external funding has already generated nearly $200 million in additional private investments in major downtown projects.

While the exact form of cross-sectoral collaboration must be unique to the specifics of each project, the Save the Rain effort highlights a few key strategies that can contribute to individual project success, including:

- Encouraging inter-departmental and inter-jurisdictional cooperation.
- Pool investments from disparate sources (city, town, state, federal, and private) alongside targeted grants to reduce the fiscal pressures on local governments.

- Create long-term action plan that weaves in multiple smaller projects – a comprehensive vision helps to create partnerships and generates collaborative efforts.
- Use State-level grants around health and lifestyle to build or co-fund infrastructure that supports the socioeconomic health of the community
- Encourage cooperation with citizens, non-profits and private entrepreneurs who have an interest in helping the community prosper is important. Involving citizen volunteers and non-profits can increase the number of stakeholders.

Figure 6: Examples from Syracuse's 'Save the Rain' Project

Project	Collaboration	Description
The Oneida Street Road Reconstruction Project (2013)	The City of Syracuse and Onondaga County	This project provided an underground infiltration trench system at the time of road reconstruction. The city's contractor carried out the construction, providing cost savings for both the city and the county.
The Connective Corridor	City of Syracuse, Syracuse University, and Onondaga County	Overarching goal to improve the quality of infrastructure and the downtown experience. It adds upon a needed public-works project to improve a heavily-trafficked transit corridor.
Green Improvement Fund	Public-Private Partnership	Used funding from non-profits and private investors to create a complete infrastructure loop in collaboration with citizens groups.
Source: *2014 Green Infrastructure Projects. (2014). Onondaga County Save the Rain. http://savetherain.us/2014-green-projects/*		

State Infrastructure Bank (SIB)

Governor Cuomo recently announced in his policy vision for his second term that he will use a portion of the bank settlement windfall to capitalize a state infrastructure bank for New York.[15] While it still remains to be seen if this plan will precipitate actual policy, we are concerned that it will be of little value to local governments. As we have mentioned up to this point, the primary challenge facing local governments' ability to address their infrastructure needs is a lack of funding. **A SIB is not a funding solution**. It is instead a debt financing mechanism that would

[15] Cuomo 2014. (2014) *Moving The New New York Forward.* Accessed October 2014 from: http://www.scribd.com/doc/244154184/Moving-the-New-NY-Forward-by-Andrew-M-Cuomo-pdf

provide low-interest loans to infrastructure projects. Even with low interest rates, the debt produced by a SIB loan must be repaid; repayment that is difficult for local governments if nothing is done to address underlying infrastructure funding shortages.

To date, there are 33 SIBs that have received capitalizing grants from the federal DOT. In fact, New York State received $12 million of federal funds for this purpose in 1997. Due to a lack of continued funding, however, the state's first attempt at a SIB quickly ran out of lending capital and stopped making loans.[16] SIBs that receive federal funding must comply with DOT lending guidelines. Some states have also created SIBs without federal funds (or, as is the case in Florida, created two separate banks, one using federal funds and another capitalized exclusively with state money). In total, the 33 SIBs have received only around $600 million in federal money, a paltry sum compared to the federal government's $40 billion annual expenditure on road and highway infrastructure projects.[17]

Figure 7: Florida and Ohio SIB Case Study Data

	Florida	Ohio
Year Established	1997	1996
Total Federal Capitalization	$101,065,437	$87,000,000
Total Loan Volume	93	155
Federal Loans---	38	155
State Loans---	55	--
Total Loan Value (000s)	$1,380,536	$264,083
Federal Loans---	$422,706	$264,083
State Loans---	$957,830	--
Average Interest Rate	1.37%	3.03%*
% of Loans With 0% Interest	49%	0%*
Average Loan Size	$14,844,473	$2,337,018

*Includes only active loans.

Source: http://www.dot.state.fl.us/officeofcomptroller/PFO/sib.shtm; http://www.dot.state.oh.us/Divisions/Finance/Pages/StateInfrastructureBank.aspx

We analyzed loans made by the Florida and Ohio SIBs, two of the largest such banks currently in operation. Regardless of whether federal restrictions apply, SIBs have a significant amount of discretion in setting the terms of their loans. Federal enabling legislation grants SIBs the authority to set the rates and terms and also allows SIB capital to be used as alternative credit tools, such as loan guarantees. Figure 7 shows the summary of loans made by these two SIBs. Despite being two of the largest SIBs, the Florida and Ohio banks have made only $1.3 billion and $264 million in loans respectively in two decades of operation. The rates, while lower than commercial debt, still average 1.37% and 3.03% respectively; not significantly lower than municipal bond rates. SIBs are, however, able to make zero-interest loans. Of the 93 loans made by the Florida SIB, 49% carry no interest, while interest is charged on all loans made by the Ohio bank. While zero-interest loans would be an attractive financing tool for local

[16] Christman, A. & Riordan, C. (2011). State Infrastructure Bank: Old Idea Yields New Opportunity for Job Creation. NELP Briefing Paper. New York, NY: National Employment Law Project. http://www.nelp.org/page/-/job_creation/state_infrastructure_banks.pdf?nocdn=1

[17] Shirley, C. (2011) Spending and Funding for Highways. CBO Economic and Budget Issue Brief) Washington DC: Congressional Budget Office. http://www.cbo.gov/sites/default/files/01-19-highwayspending_brief.pdf

governments, if made too often without commensurate capital infusions to the banks, they can quickly deplete a SIB's lending capital.[18]

While a more efficacious solution for local governments is an increase in infrastructure funding, we believe if structured correctly, a SIB could prove to be a useful, if limited, financing tool to local governments. **Our primary recommendation is that SIB debt payments should be exempted from the state's property tax cap**. Since SIB loans are debt, not grant funding, provisions that allow local governments to raise revenue to repay their infrastructure investments themselves is key. **We also recommend that SIB loans be made available to smaller projects, like local road maintenance and reconstruction, not just mega projects**. Large projects are already financed through bond markets which ensure low interest rates. SIBs could be used as similar tool for small local governments for whom access to municipal debt represents a more significant bureaucratic challenge. **Finally, loans made by a SIB should establish infrastructure investment and operation standards to encourage local governments to make investments which, while more expensive, have a longer life-span.** SIB loans should encourage best practices in local infrastructure investment.

Conclusion

Local transportation infrastructure is easy for politicians to underfund. Unlike mega-projects like the Tappan Zee Bridge, investments in local roads and bridges generally go unnoticed by a majority of the public. Smart construction and maintenance investments payoff over long periods of time; often far longer than the tenure of any politician. This infrastructure is, however, incredibly important not just to the communities that use it every day, but to the functioning of the state's overall network. **The current level of disrepair of local transportation infrastructure in the State is not adequate to ensure future economic development.** In this report, we have documented the misguided policies and funding trends that have led to the current crisis in local infrastructure.

Because local transportation infrastructure is underfunded, one can be pessimistic about finding solutions that counter the trend in chronic underinvestment. We do, however, find promise in policies that directly increase funding to local governments.

[18] Puentes, R. & Thompson, J. (2012). Banking on Infrastructure: Enhancing State Revolving Funds for Transportation. Brookings-Rockefeller Project on State and Metropolitan Innovation. Washington DC: Brookings Institution.
http://www.brookings.edu/~/media/research/files/papers/2012/9/12%20state%20infrastructure%20investment%20puentes/12%20state%20infrastructure%20investment%20puentes.pdf

- **One solution is to dedicate a larger portion of the state's highway trust fund for local infrastructure projects.** This money could be used to increase CHIPs grants to local governments that would provide a steady, recurring funding stream for local infrastructure investment.
- **Another option would be to dedicate the bank settlement windfall monies to infrastructure.** We do not recommend using this windfall on the Tappan Zee Bridge, a project that could be funded with tolls, but rather using this to support infrastructure network throughout the state.
- Increased funding alone is not enough, as local governments also require technical training to ensure that their investments represent best practices in constructing and maintaining infrastructure systems.
- **We are more critical of plans that require local governments to fund a larger portion of their investments with debt, as would be the case with a state infrastructure bank.**
- Finally, **we see promise in examples of innovative, cross-sectoral infrastructure delivery, like the Save the Rain project in Syracuse**.

While the solutions we propose are not quick or easy fixes, we are hopeful that if implemented in concert, they can give local governments the ability to respond to their transportation infrastructure needs.