"On the American Jobs Plan: A Five-Part Response from Strong Towns"

— Charles Marohn

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I. The American Jobs Plan Will Make Our Infrastructure Crisis Worse

"Like great projects of the past, the President's plan will unify and mobilize the country to meet the great challenges of our time: the climate crisis and the ambitions of an autocratic China."

— The American Jobs Plan

A decade ago, in the wake of the housing crisis, there was one of those news cycles where seemingly every major outlet ran a story about Chinese "ghost cities": places that had been fully built only there was nobody living there. I'll admit being fascinated by these cities full of skyscrapers, parks, transit systems, and all the elements of place, often with pretty good design, that had a surreal vibe because of the lack of humans.

Ghost city in the Chenggong district, Kunming, Yunnan. Image via Wiki Commons: https://commons.wikimedia.org/wiki/File:Chenggong,_Kunming,_Yunnan_province,_China.jpg.

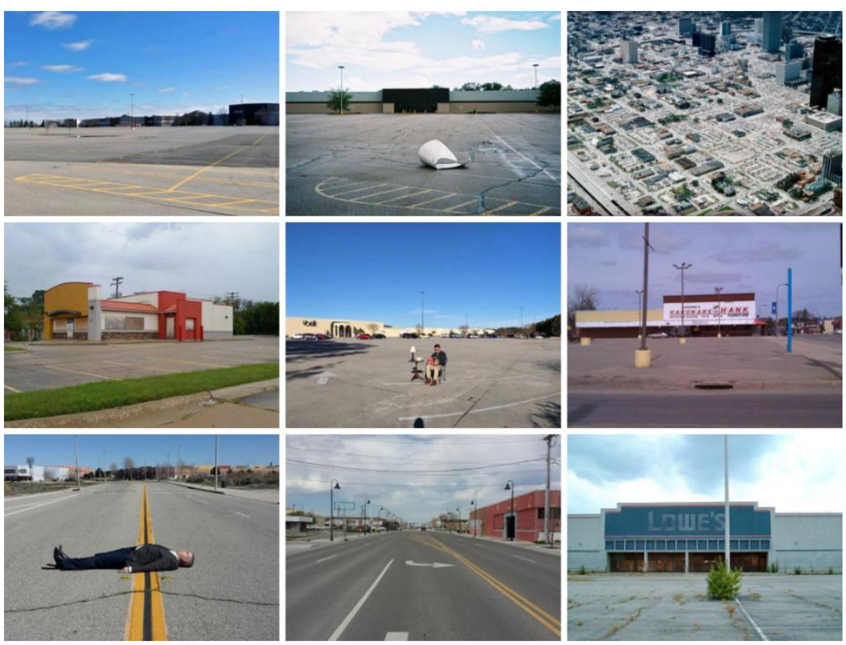
Part of the narrative was the gross inefficiency of China's autocratic system. Only in a country without market feedback mechanisms, one where party bosses and their cronies controlled and directed the country's capital, would resources be wasted so spectacularly. Or so the story went. From ABC News:

> Dinny McMahon, author of China's Great Wall of Debt, explained the driving force behind the new construction projects, seemingly built for no-one.
>
> "The phenomenon very much has been driven by the debt splurge that really kicked into gear after the global financial crisis," Mr [*sic*] McMahon said.
>
> "Local governments around the country tried to juice and stimulate their economies by building more infrastructure and stimulating the property market."[1]

This seemingly wasteful construction is carried out by both state-owned firms and private companies.

I think this analysis was largely accurate, although missing some critical insights. Autocratic systems do lack the type of direct feedback and local empowerment that makes good use of resources, but this is true of all centralized systems, not merely autocratic ones. When the well-connected direct a country's capital, it should surprise nobody when the projects they prioritize also make them and their friends personally wealthy, within China and elsewhere.

And is there anyone here in the United States who can honestly evaluate the waste of a Chinese ghost town—a vacant yet fully functional city in a country that nets 8 million new people a year—and suggest that somehow the American approach makes more productive use of resources? Surely no one who has been to places like these:[2]



[1] "China's eerie ghost cities a 'symptom' of the country's economic troubles and housing bubble," by Tracey Shelton, Christina Zhou, and Ning Pan, *ABC News* (June 2018).
[2] Upper right image via Streetsblog (https://usa.streetsblog.org/2019/03/26/parking-madness-houston-vs-boston/), lower right via ILSR (https://ilsr.org/big-empty-boxes/). All other images from Strong Towns.

I read the Fact Sheet for the American Jobs Plan recently released by the White House and found it difficult not to feel depressed by the approach. As advertised, it is bold, but when it comes to spending on infrastructure that boldness lies in its size, not its vision. It reflects the Washington consensus that more roads with more lanes are good, that when we fix bridges we should also expand them, that transit investments should primarily serve auto-based development patterns, and that simply building more is the path to making us richer.

In other words: no difficult choices. No meaningful reform. Nothing that is going to substantively change the trajectory of the North American development pattern.

My friends, none of that is a criticism but merely an observation. I wasn't expecting anything different and neither should you have. This approach would be no different (and potentially worse) with a Republican Senate or even a different president. This is the moment we are in and the approach we were always going to take, it was just a matter of degrees. We're going to run this experiment until we no longer can, fulfilling Churchill's observation that America will always do the right thing but only after we have exhausted every other option.

The American Jobs Plan posits a dichotomy between the United States approach to infrastructure and that of the Chinese, setting up our approach as rivalrous to theirs. According to the plan, it will "position the United States to out-compete China." It will prevent us from "falling behind countries like China." I find these assertions bizarre.

Today, ABC News focuses on the political battle between Democrats and Republicans when discussing the American Jobs Plan, but here is how soberly and clearly they reported on Chinese Ghost Cities:

> Mr [*sic*] McMahon said he believed ghost cities were a "symptom of the problem" of how the Chinese economy worked, where growth was driven by debt.
>
> "We're now in a position in the Chinese economy where so much debt has been accumulated in the interest of building an incredible amount of waste, whether it be empty housing, empty factories, infrastructure in cities where the local authorities can never repay it...that sort of model of economic growth cannot continue," he said.
>
> "Everybody knows it. The officials in Beijing know it and have been trying very aggressively to both wean the economy off debt and try and come up with a new driver of growth."[3]

If true, perhaps that is the most glaring difference between the two approaches. Chinese leaders are trying to "wean the economy off debt" and "come up with a new driver of growth." Meanwhile, our leaders are embracing debt throughout all of society—for governments, for corporations, and for families and small businesses—and the idea that the most important thing we can do right now is to go

[3] "China's eerie ghost cities," by Shelton, Zhou, and Pan.

big on building infrastructure, ignoring how we got to such a massive infrastructure backlog in the first place.

I agree that we should be thinking big, and I agree that we are going to have to spend significantly more on infrastructure, but we first need to come to grips with what infrastructure spending is supposed to do.

Create jobs? Yes. Grow the economy? Yes. Add to our overall capacity? Yes. These are the things that economists cite and they are all important, but they are easy. Too easy. So easy that an autocratic government can do it by building ghost cities. So easy that a democratic government can put people to work short-term building frontage roads, interchanges, commuter trains, and big box stores and see gross domestic product increase. None of this is hard.

What is difficult, but what is essential that we do, is make sure these investments are *productive*. Our investments in infrastructure must be more than a transaction. More than a GDP blip. They actually have to make us better off, creating far more long-term wealth than they create in future obligations.

The first threshold for a productive investment is that it needs to pay for itself. The revenue the government receives as a result of the investment must cover the cost of the investment, otherwise it's not an investment. It's just consumption. That is the first threshold, and the easiest one, yet we rarely meet it.

After generating enough revenue to cover its own cost, an infrastructure investment must then create enough financial productivity to pay for its ongoing operations and maintenance. That is a cost generally born by local communities, so the burden here is even more urgent. If the infrastructure investment does not cross this threshold, it's a bad investment, and it will make the community poorer, regardless of what it does for GDP and unemployment in the next quarter.

The third threshold is that the infrastructure investment must create enough wealth that can be taxed so as to pay for the eventual rehabilitation or replacement of that infrastructure. In the 2010 stimulus package, my community received millions for a new road. Guess what? That gave us some short-term construction jobs, but now my community has a new overengineered, overbuilt road to maintain. Forever. This is what infrastructure is: a forever obligation.

If an infrastructure investment can meet all three of these thresholds, it still can't be called an "investment" unless it meets a fourth: It has to create enough wealth—enough ongoing revenue—to make our communities more prosperous than they are now. There has to be a real financial payoff, something that justifies taking on the risk and making a forever commitment. If that isn't there, then we're just building infrastructure to build infrastructure, which is the kind of thing ABC News scoffs at China for doing (and rightly so).

This is what it means to make a productive investment in infrastructure. With the financial returns from the investment, we:

1. cover the costs of the infrastructure investment,
2. pay for the ongoing operations and maintenance of that infrastructure,
3. create enough wealth to ultimately pay for the rehabilitation and replacement of that infrastructure, and
4. provide a return so that our communities can increase their consumption (i.e., improve their quality of life).

We need to be obsessive about this, particularly at the local level, because we need to improve our quality of life. Many things that are in the American Jobs Plan are not infrastructure, but rather consumption. Still, they are worthy of our spending. If we want the resources to do them, not just in a one-time blowout but in an ongoing manner, then we need a real financial return on our infrastructure investments.

If we want to spend $10 billion establishing a Civilian Climate Corps, we have to make our investments in infrastructure financially productive.

If we want to spend $100 billion on public schools and $12 billion on community colleges, we need our infrastructure investments to have a positive return on investment.

If we want to spend $25 billion on child care, $400 billion on care for the aging and people with disabilities, and expand long-term care under Medicaid, we can't make infrastructure investments that make our cities poorer.

If we want to spend $15 billion eliminating racial and gender inequities, $40 billion on job training, and $48 billion on workforce development and worker protection, then we can't allow our federal infrastructure investments to continue to induce, everywhere across this continent, the American version of the Chinese Ghost City.

In the next section, I'm going to explain how the plan misdiagnoses the underlying cause of why we struggle to maintain our infrastructure (hint: it's not a lack of spending) and, in doing so, sets the stage for further American decline. In later sections I will detail what we should be doing instead and, in the absence of reform, how local leaders can position themselves to succeed regardless of what happens in Washington D.C.

II. The Half-Truth on Infrastructure at the Heart of the American Jobs Plan

"Public domestic investment as a share of the economy has fallen by more than 40 percent since the 1960s."

— The American Jobs Plan

There is a near-universal consensus among policymakers, pundits, and professionals that the United States has long underfunded infrastructure. It is the prevailing narrative throughout dominant media outlets (*The New York Times, The Washington Post, The Wall Street Journal, CNN*). It is the established sentiment among industry professionals (ASCE, AASHTO, ARTBA, APTA). And it is difficult to find a prominent economist who doesn't reflexively extol the virtues of infrastructure spending.

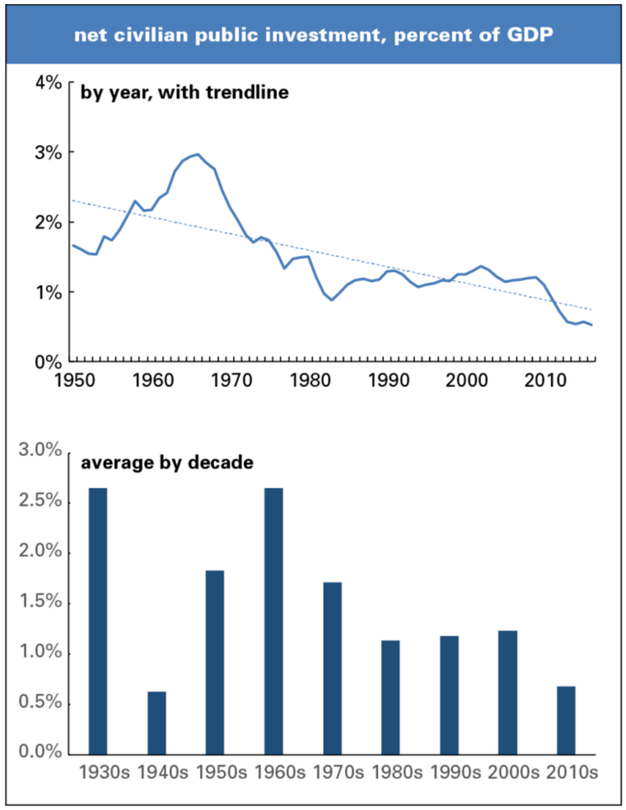
Here's a quiz to test your understanding: The American Jobs Plan states that "public domestic investment as a share of the economy has fallen by more than 40 percent since the 1960s." Does this mean:

a. The U.S. spends less money on infrastructure today than it did in the 1960s.
b. When adjusted for inflation, the U.S. spends less money on infrastructure today than it did in the 1960s.
c. The U.S. spends more money on infrastructure today than it did in the 1960s, even when adjusted for inflation, but that amount has not kept up with the size of the economy.
d. The U.S. spends more money on infrastructure today than it did in the 1960s, even when adjusted for inflation, even as a portion of the size of the economy, but all that old infrastructure is depreciating more quickly than we are increasing new infrastructure spending.

The answer is *d*, which is likely to surprise most people who consider themselves informed on this issue. Overall, the U.S. spends more money on infrastructure today than we did in the 1960s. That is true even when adjusted for inflation. And the U.S. overall is even spending far more on infrastructure as a percent of GDP than it was in the 1960s. So what's going on?

Below is a chart[4] of the data that the American Jobs Plan is referencing when suggesting we are spending less now than in the 1960s. I wrote about this in a 2017 article[5] and again in my book, *Strong Towns: A Bottom-up Revolution to Rebuild American Prosperity*. The common use of this chart by proponents of more infrastructure spending is deceiving—some might even say deceptive.

[4] Image via "Why the United States Is Falling Apart," by Doug Henwood, *Jacobin* (September 2017).
[5] "Everything that's wrong with America in two charts. Yeah, right," by Charles Marohn, *Strong Towns* (September 2017).



Images like this are powerful because they are easy to interpret. Without much effort, we see that public investment peaked in the 1960s and is at its lowest level since then. That's what we see, but that is wrong.

What you are seeing here is NET public investment. For those of you who don't routinely deal with budgets and finance, a "net" number is always the difference of two other numbers. For example, net revenue (also commonly called "profit") is the difference between gross revenue and expenses. Net public investment is the difference between gross public investment and depreciation.

I'm going to simplify this way down, to the point where I might be accused of oversimplification. In my defense, I am not going to oversimplify this nearly as much as the American Jobs Plan has, and I'm going to do it in a way to help you understand what is really going on, not obscure reality with a clever truth (or half-truth, if you prefer).

Every year we invest in infrastructure. That is our gross public investment. Every year some of our infrastructure falls apart. That is our depreciation. The net of those two numbers, investment minus depreciation, is what has been falling relative to GDP.

There are two ways for this number to fall. The first is if we are spending less on infrastructure than in prior years. That is what the half-truth seems to suggest, an impression that is viral because it is not only repeated everywhere without context, but it comports with what many of us see and experience. When things in your community are falling apart, it's not a leap to conclude we're cutting back on spending, especially when someone credible seems to suggest it.

The other way for the net number to fall is for depreciation to rise. Said another way, if a whole lot of stuff is falling apart, it's going to make our net spending look small even when we're spending a lot. This is what is actually happening: we've built a ton of infrastructure, almost all of it with very poor financial returns, and now even though we keep increasing spending, it's a financial hole we just can't fill.

Imagine one of those jesters who spins plates. They start out with one plate spinning. Then another. Then another. It's really impressive because at some point they have this bizarre number of plates in the air, all spinning, and it's hard to fathom how it's even possible.

The way you and I would describe the extent of this feat is by counting the number of plates spinning. The way the American Jobs Plan describes the trick is by counting the number of new plates being added relative to the number of plates already spinning. *Sure, you have 20 plates in the air, but you just added two new plates and that's only a 10% increase, which is far lower than the 100% increase back when you went from two plates to four. So, not impressed.*

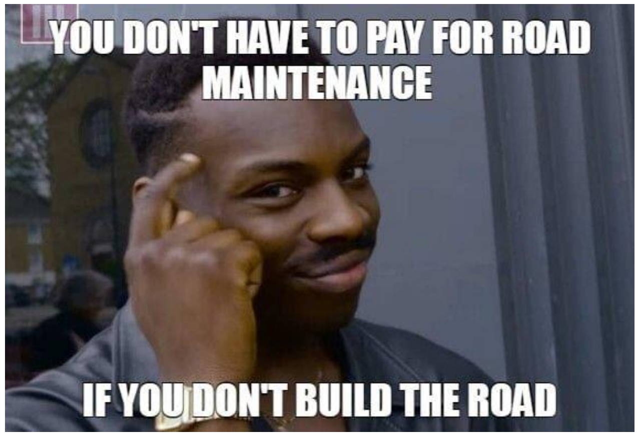
To keep the analogy going, the reality is we have 20 plates spinning. Six of them fall and break, but we add eight more, so we end up with 22. This is looked at as insufficient by the American Jobs Plan because it is only 10% growth while back when we were starting out, we were able to double the number of plates (100% growth) from two to four.

The math is true, but the core tension is that we have too many plates in the air, not that we are not adding plates quickly enough. And understand that those six plates that broke represent failing infrastructure that serves real people—their homes, their businesses, their hopes for the future all in decline—and that is a real failure to meet our public obligations. The eight new plates we add might represent new growth, but it is largely for corporations and franchises plugged into the centralized growth machine our economy has become. This is what makes the sales job here so seductive. The distress is real and the response can look like progress, if only the cure wasn't also the disease.

The problem we're struggling with today is not how little we're spending, it is how much we built and now have to maintain, and how little we got for those investments. We're struggling with how many plates we have in the air.

Consider this statement from the American Jobs Plan:

> "After decades of disinvestment, our roads, bridges, and water systems are crumbling."



We're meant to read these shortcomings as a consequence of disinvestment. They're not. They are a consequence of overinvestment, of decades of unproductive infrastructure spending accumulating to crowd out good investments today. It's true that you don't have to pay for road maintenance if you don't build the road, but once you build the road, you are committed. Forever.

More money is needed, but more money alone won't fix this. We need a new approach to infrastructure, one that doesn't just create financial transactions but builds lasting wealth and prosperity within our communities.

The financial hole we have dug is so big we can't fill it in, but the American Jobs Plan, by its own admission, doesn't even try. That is what I'm going to show you in the next section.

III. When it Comes to Infrastructure, the American Jobs Plan is Business as Usual

"The President's American Jobs Plan is a historic public investment – consisting principally of one-time capital investments in our nation's productivity and long-term growth."

— The American Jobs Plan

The unifying theme of the American Jobs Plan and the proponent's rhetoric surrounding it is clear: Go Big! To make up for decades of disinvestment (the half-truth I discussed in the previous section), we need to do something bold and historic. For people who reflexively believe in the redemptive power of infrastructure spending—a group I have dubbed the Infrastructure Cult—as well as those who simply applaud government action, this approach feels affirming.

Critics have focused on the size of the bill and the "go big" mentality as problematic. I largely tune this criticism out, not only because of its hypocrisy (*deficits are okay for my priorities but for your priorities they will cause a financial catastrophe* is not a serious position to hold) but because it presents no credible alternative.

The reality is that we have grown ourselves into a position where we must spend a lot more on infrastructure. A LOT MORE! So, the spending itself is not the problem, and I want to make that clear from the outset today because I am a critic of the American Jobs Plan, just not the kind of critic you are likely to hear from elsewhere.

My core argument is where I ended in Section II: The financial hole we have dug with our past infrastructure spending is so big we can't fill it in. The American Jobs Plan pretends to try and fill it in. It's big! It's bold! It's historic!

No, it's more of the same, and it's only going to make the hole bigger.

For example, the Plan says that:

> One in five miles, or 173,000 total miles, of our highways and major roads are in poor condition, as well as 45,000 bridges.

Over the next decade, this bold and historic plan will "modernize" 20,000 miles of roads. It will repair 10,000 bridges. I read this and just shake my head. This is not a serious plan.

First off, 20,000 miles of repair is less than 12% of the roads currently in poor condition. What happens to the other 88%? This spending is going to occur over a decade, so what happens to the 153,000 miles of highways and major roads that are already in poor condition and will miss out on the spending? What will they look like a decade from now?

Moreover, how many of the remaining four out of five miles of existing roads will deteriorate into the "poor" rating over the next decade? Since deterioration of a roadway is a rapid process once maintenance is shorted, it will certainly be more than 20,000 miles. So, despite this bold and historic amount of spending, we are certain to have more miles in poor condition a decade from now, not less.

These appropriations will run through the standard process we have in place for prioritizing spending, which now includes the return of earmarks by acclimation of both major political parties. I've worked with cities on the receiving end of this largess and what it means is that states and localities are typically offered money for projects they themselves don't prioritize, but their congressional delegation does. To qualify for this money, there is a local match, which means diverting funds from maintenance and more urgent needs so as not to miss out on the once-in-a-lifetime opportunity for a major capital investment.

This is part of the crowding out that digs the hole deeper.

Now let's focus on the word "modernize," which, I am assuming based on past practice and the absence of meaningful reform in this plan, is the latest euphemism for expansion. We modernize highways and major roads by adding more lanes, widening shoulders, providing turn lanes, adding interchanges and overpasses, and maybe we'll even throw in a bike lane so we can claim some credibility on climate change. Modernizing is simply business as usual.

The approach to bridges is even more incoherent. Here's what the Plan says:

> [The American Jobs Plan] will fix the ten most economically significant bridges in the country in need of reconstruction. It also will repair the worst 10,000 smaller bridges, providing critical linkages to communities.

It's not clear where the numbers 10 and 10,000 come from—they have a pulled-out-of-a-hat kind of feel to them—but it seems more than strange. If we have economically significant bridges, investments that are so important we could put a toll on them and then retire the cost of the project in a reasonable amount of time, why not fix them all? Why stop at 10?

Even stranger is the notion that, with 45,000 bridges in poor condition, we should focus on 10,000 "smaller" bridges. I've worked on a number of small bridges, federally-funded spans that allowed wealthy lake property owners to reach their vacation homes. None of these should have received federal funding, but they did because there is a federal program for bridges in poor condition. Why is this a priority over the 35,000 larger bridges?

In 2015, I did an event with the then Iowa DOT chief Paul Trombino, who said that Iowa's transportation system was going to shrink.[6] It would start with small, remote bridges, some of which had already been closed. These are difficult yet prudent decisions being taken by responsible leaders across America; do

[6] "Iowa DOT Chief: The system is going to shrink," by Charles Marohn, *Strong Towns* (July 2015).

we now give them matching dollars to backtrack from those hard choices? How does this not undermine their future decision making?

I'm all for taking incremental steps and recognizing the power of small projects, but small is not a virtue unto itself.

There is a lot of cheering for the Plan's focus on public transit, but even there the plan falls far short of its ambition. The American Jobs Plan asserts that:

> Our current transit infrastructure is inadequate – the Department of Transportation estimates a repair backlog of over $105 billion, representing more than 24,000 buses, 5,000 rail cars, 200 stations, and thousands of miles of track, signals, and power systems in need of replacement.

I think the $105 billion estimate is low but, much like highways and bridges, it doesn't matter. We're not going to tackle it. The American Jobs Plan spends just $85 billion over the next decade to "spend down the repair backlog," although even that is a euphemism, since the repair backlog is going to continue to grow.

The Plan has an additional $80 billion to 1) address Amtrak's repair backlog, 2) modernize the high-traffic Northeast Corridor, 3) improve existing corridors and connect new city pairs, and 4) enhance grant and loan programs that support passenger and freight rail safety, efficiency, and electrification. That's a long list of objectives for a short stack of cash, especially when you recognize that the first item, Amtrack's repair backlog, is already half of the proposed funding (and growing).[7]

No matter. If the federal government is paying, Amtrak is "ready to build."[8] As I've written before, it's appalling to me that the greatest wealth multiplier in our cities, public mass transit, is funded like a charity and forced to serve as a lesser appendage to our auto-based transportation model when it could be—should be—the heart of every local wealth-building strategy. The American Jobs Plan significantly increases transit funding while also keeping transit in its place as a servant to the auto-based development pattern.

The American Jobs Plan spends $25 billion on airports, which is comparable to the $25 billion in grants and $35 billion in subsidized loans that airlines received in the first round of bailouts in March of 2020.[9] I realize these are two different expenditures made for very different purposes, but when there are reports of our nation's newest major airport spending billions on expansion while falling far behind on

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[7] "Ready to Build: A Need to Invest in Infrastructure—Now," Amtrack site, accessed April 21, 2021: https://nec.amtrak.com/readytobuild/.
[8] "Amtrack is Ready to Build," by Amtrack, *YouTube*. https://www.youtube.com/watch?v=35_5rh5c2ZM&ab_channel=Amtrak.
[9] "Crippled Airline Industry to Get $25 Billion Bailout, Part of It as Loans," by Alan Rappeport and Niraj Chokshi, *The New York Times* (March 2021).

maintenance, it fits a pattern we see everywhere that matching dollars for expansion and upgrades are deployed.[10]

The American Jobs Plan also has "$56 billion in grants and low-cost flexible loans to states, Tribes, territories, and disadvantaged communities across the country" for upgrading and modernizing water and wastewater systems, drainage systems, clean water, and contaminant cleanup.

Again, this is work I used to do and I've written numerous times about how these projects "gift" disadvantaged communities more pipes and systems than they can maintain, let alone make productive use of, robbing them of future resources and capacity in the name of helping them out today. Even so, my home state of Minnesota's share of this spending would be, if ratios hold, about $1 billion, which is slightly more than the current backlog of just the water projects on the state's project priority list.[11] Just another example of the problem being dwarfed by resources proposed to address it.

It feels like I'm starting to pile on here, but the point that the American Jobs Plan is business as usual is perhaps most represented in the section on broadband infrastructure. Here is how that issue is presented:

> Generations ago, the federal government recognized that without affordable access to electricity, Americans couldn't fully participate in modern society and the modern economy. With the 1936 Rural Electrification Act, the federal government made a historic investment in bringing electricity to nearly every home and farm in America, and millions of families and our economy reaped the benefits. Broadband internet is the new electricity.

This is certainly one way of interpreting history. It is the way I was taught the 1936 Rural Electrification Act, along with other New Deal programs, back in high school. *Poor, rural people couldn't afford to have access to electricity and so the federal government made an investment and brought power to every farm. Then we all benefitted.* It's very affirming of a certain worldview.

Another interpretation is that Americans were developing low-energy appliances as well as distributed energy production to fill demand for these new technologies from farmers and those living in rural areas. By stepping in during the 1930s, the federal government crowded out those innovations, kicking off a lot of economic growth as farmers increasingly found it more lucrative to sell their properties for suburban development—enabled by, among other things, low-cost distributed electricity—than continue to farm.[12]

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[10] "DIA has fallen behind on maintenance even as it's poured billions of dollars into expansions," by John Murray, *The Denver Post* (January 2021).
[11] "Minnesota Drinking Water Revolving Loan Fund 2020 Project Priority List," *Minnesota Department of Health* (October 2019).
[12] "Short- and Long-Run Impacts of Rural Electrification: Evidence from the Historical Rollout of the U.S. Power Grid," by Joshua Lewis and Edson Severnini, *Journal of Development Economics* (December 2017).

There is some sad irony in the American Jobs Plan seeking federal investments in clean energy, which are modern derivations of the same technology used on rural farms almost 80 years ago, technology made non-competitive then by New Deal investments in infrastructure. Either way, today there are 19 million Americans without access to broadband at threshold speeds, roughly 7.6 million households.[13] The American Jobs Plan proposes $100 billion for this effort over the next decade.

$100 billion for 7.6 million households is $13,160 per household. SpaceX's Starlink service costs $500 for hardware and then $99 per month for high-speed broadband. At this point, we should all be able to imagine the bold and historic spending package proposed by some future administration to modernize broadband systems that have been inadequately maintained.

None of this is to suggest that broadband isn't important. It is. So are roads and bridges. So is transit. So are water, wastewater, and drainage systems. These things are important, but they aren't important in and of themselves. They are only important to the extent that they are a platform for growing our local wealth, capacity, and prosperity.

For the past many decades, spending on infrastructure has not built our local wealth, capacity, and prosperity. It has, like the American Jobs Plan would do, provided us an injection of spending, a fiscal sugar high—followed by a hangover of commitments we are systematically unprepared to meet.

In that way, the American Jobs Plan is simply business as usual.

In the next section, I am going to get into how we create systems that make us wealthier and grow our capacity.

[13] "Eighth Broadband Progress Report," *Federal Communications Comission*, accessed April 21, 2021: https://www.fcc.gov/reports-research/reports/broadband-progress-reports/eighth-broadband-progress-report.

IV. The American Jobs Plan Delays Necessary Infrastructure Reform

"These are investments that leading economists agree will give Americans good jobs now and will pay off for future generations by leaving the country more competitive and our communities stronger."

— The American Jobs Plan

In 2014, I was part of a forum on transportation put on by *The Washington Post* titled, "America Answers: Fix My Commute."[14] It featured some of the biggest names in transportation and infrastructure including Anthony Foxx, the Secretary of Transportation, one of his predecessors in the job, Andrew Card, former Pennsylvania Governor Ed Rendell, and the vice president of the United States at the time, Joe Biden.

To say I was an outlier in this group was an understatement, not only due to my unknown status but also because my views were the antithesis of those presented throughout the day. Vice President Biden gave a rousing performance, without any notes or teleprompter, speaking passionately about the benefits of infrastructure investments, culminating with this classic line familiar to any Strong Towns Podcast listener:

> It all comes back to the oldest story in the history of this country. Build, build, build, build. That's the story.

I agree that is the story, but it's not a story to automatically be proud of. It's a story of might and resources elevated over brains and tactics. It's a story of working twice as hard to achieve half as much. Of squandering a great endowment and having not nearly enough to show for it.

There is a noble story of boldness and innovation buried in that narrative, but it's not rooted in "build, build, build, build." That version feels like an extension of the insecurity and anxiety from the Cold War, the unchecked momentum of a great rivalry with the Soviet Union—an experience not shared, and thus unfamiliar, to half of today's Americans. "Build, build, build, build," feels like an old story, one inherited and then adopted by a now receding generation. What is the next story?

English physicist Ernest Rutherford is said to have told his colleagues during World War II, "Gentlemen, we've run out of money. It is time to start thinking." It's fair to suggest that they might have reached this conclusion sooner had they not all been men, but regardless, it is a reminder that a lack of resources, not an abundance, is what spurs innovation in complex systems. This is especially true when those systems are mature, where the momentum of past decisions can make the present paradigm seem self-evident, even when it is a massive experiment being tested on us in real time.

In our case, scarcity has driven innovation, but our new ideas have mostly come in the realm of financialization, modernizing age-old schemes that increase the supply of currency and make it feel like we can get something for nothing. There is no need to reform anything when you can access all the

[14] "America Answers: Fix My Commute," *Washington Post Live* (July 2014).

capital you need to allocate toward fixing your prior mistakes. If you believe infrastructure spending is about capital flow and the velocity of money instead of making high-returning investments to build wealth and prosperity, then why labor over changing the system? It already works perfectly for your needs.

For that group of infrastructure advocates, there are plenty of things in the American Jobs Plan that look like reform. There is the emphasis on union jobs and on addressing racial injustice, neither of which require significant changes to programs, funding formulas, or the types of projects built, but they sure make the lack of substantive reform in the American Jobs Act easier to market.

Then there is the commitment to electrifying vehicles which, again, is very marketable, but in practical terms is a lot like switching from Coke to Cherry Coke as part of a weight loss plan. We're not destroying the environment simply because our cars spew carbon; we're destroying the environment because it requires a significant car trip for modern Americans to do things our ancestors could do with a five-minute walk.

Some may argue that the American Jobs Plan does contain some Strong Towns provisions, such as creating a competitive grant program for ending minimum lots sizes, eliminating mandatory parking requirements, and rolling back prohibitions on multi-family homes. This grant program affirms support for local initiatives already being implemented around the country, but the thimble of resources for such reform is overwhelmed and undermined by the oceans of spending on old-school infrastructure programs.

For example, here's a recent news report out of Pennsylvania (a state that leads the nation in having the greatest number of deficient bridges), reacting to the American Jobs Plan by highlighting plans to widen 100 miles of highway:

> A recent PennDOT study shows a $15 billion need in infrastructure improvements. One major problem is the state has just short of $7 billion in its coffers.
>
> "This is a transportation hub here in Pennsylvania and South-Central Pennsylvania," [Chris] Drda [Acting District 8 Executive for PennDOT] said.
>
> To highlight the amazing cost of doing infrastructure business, take Interstate 81. The cost of widening a 100-mile stretch of the road from the Maryland line to Interstate 78 is $3 billion. In comparison, the annual statewide program budget is only $1.9 billion.
>
> "There is a significant delta between the available funding and the need," said Drda.[15]

[15] "Transportation experts eye cash influx with Presidential plan," by Michael Gorsegner, *CBS 21* (March 2021).

A small grant encouraging cities to enact local zoning reform—changes our leading cities are already taking—is no compensation for the affirmation the American Jobs Plan delivers to state departments of transportation, as well as others who are wired to undermine these reforms.

Nowhere is the tension over reform more evident than in funding for safety initiatives. Throughout the American Jobs Plan, some version of the word “safe” or “safety” is used 35 times, including in this section about safety for road users:

> The plan includes $20 billion to improve road safety for all users, including increases to existing safety programs and a new Safe Streets for All program to fund state and local “vision zero” plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians.

I have expressed frustration over vision zero programs—or, as my state DOT calls it, Towards Zero Deaths, as if it is merely a New Year’s resolution and not the primary justification for their existence. The amount of effort put into shaming pedestrians and cyclists for being distracted by their phones or not wearing bright enough clothing is disgusting. It’s a small pittance, however, compared to the vision zero money routed to traditional stuff like police enforcement, emergency response, and building auto-focused speed enhancements like median barriers, rumble strips, and roadside shoulders.

And this brings me to my core frustration with the American Jobs Plan: the things we most urgently need to do not only don’t require more money, a wave of federal funding run through these legacy programs makes local reform more difficult to accomplish.

For example, in terms of safety, the most important thing we can do is to stop over-engineering local streets. We have witnessed, during the pandemic, how removing the traffic calming of congestion causes more death. Our local streets are overbuilt and designed to be dangerous. The way to fix this is to spend less on each project, not more.

Narrower lanes, no turn lanes, no shoulders, less asphalt, less aggregate, less area to drain all mean lower costs. Cities need lower costs because they are insolvent, because they can’t afford to maintain all the streets they were already induced to build. Local leaders are figuring this out. We should get out of their way and let them fix it instead of giving them more money, with more minimum construction standards, that require them to build deadly streets.

Local street in Brainerd, Minnesota, over-engineered for high speeds to comply with state and federal funding requirements.

The second most important thing we can do to improve safety is to stop increasing the amount that people drive. Every time we turn a walking trip into a driving trip, we make things more dangerous. Every time we turn a short driving trip into a long driving trip, we make things more dangerous. There is no long-term advantage to our economy—and an overwhelming amount of damage—to continued horizontal expansion of our cities. Why are we sacrificing lives by expanding automobile travel when it also harms our economy? It's nonsensical.

This is why the idea of "fix it first" should just be shortened to "fix it" and not expanded to "fix it right" (merely another euphemism for expansion), as the American Jobs Plan does. It is unfathomable that we should build another lane of highway, another bridge, another overpass, or any other infrastructure system when the most profligate infrastructure spending bill ever doesn't even tackle 20% of the backlog of existing road maintenance.

What is missing here is the establishment of any rational feedback loop that would get our infrastructure crisis under control. How do we stop states and localities from taking this surge of spending and using it to build more stuff, which is not only what PennDOT is planning to do, but what every state DOT and most local engineering departments are planning to do? How do we balance supply and demand when the current demand doesn't come close to paying for the current supply, and nobody in the system seems to care—they just want more?

There was a hint of someone caring when Transportation Secretary Pete Buttigieg, whom I've said I really like, went on CNBC and suggested that a mileage tax was on the table[16], a mechanism that not only funds transportation but establishes a feedback loop to balance demand with available supply. There are all kinds of great reasons why a mature transportation system like ours should switch to these kinds of user fees, whether they come in the form of mileage taxes, tolls, or other use-based charges. However, they are not part of the American Jobs Plan. This plan is about "build, build, build, build," and so Secretary Buttigieg ultimately walked back his earlier mileage tax suggestion.

Where is the urgency for cities and states to lead on this when reforms are difficult, and the federal government routinely shovels you cash through legacy programs to keep things staggering along?

The same runs true for transit, with even graver consequences. The theory of the American Jobs Plan seems to be that investing in transit for commuters, while also expanding highways, bridges, and interchanges, will somehow reduce congestion. Nowhere has this phenomenon ever been observed in real life, despite billions having been spent in its pursuit.

Transit is the prime accelerator of neighborhood wealth creation. While I recognize there are dreams for high-speed rail and other large transit investments (we have our big project wish list here in Minnesota just like everywhere else), these visions are built on the chassis of the automobile transportation system and the disastrous concept of corridor development. Instead, they should be built on a vision of serving

[16] "Buttigieg says no gas or mileage tax in Biden's infrastructure plan," by Caroline Kelly, *CNN Politics* (March 2021).

neighborhoods as places, providing great transit within these places (streets) and then high-speed connections between them (roads).

Again, on a project basis, spending less would do more. The way to address congestion is to build neighborhoods, not lane miles. Thickening up existing neighborhoods is how cities are going to address their insolvency issues. It is how they will build the capacity to maintain their critical infrastructure, not to mention improve the quality of life for residents. This is starting to happen, but the American Jobs Plan puts the brakes on that momentum. The spending recommits us to the auto-based corridor model, despite some of the marketing.

I could go on this way for a long time. I haven't even talked about stroads yet and the federal responsibility to tame this monster they created. For now, though, let me summarize in this way: Top-down, centralized systems are great at doing the same thing over and over again, at scale. If you want an intercontinental railroad or a national system of waterways and canals, you need some type of coordinated federal approach. If you want to build an interstate system across an entire continent in a generation, you need a federal program. If you want to get millions of American families into a suburban home in a decade or two, you need federal leadership.

Top-down, centralized systems are good at doing these things, but not so good at changing course. They are not good at receiving and responding to feedback because the feedback loops—the distance between the cause of the problem and the pain that is felt—are distant and diffuse. These systems are not great at nuance. At fine-grained action. They are good at standardization, efficiency, and one-size-fits-all. That's not automatically a bad thing, but it's not what we need right now.

We built the interstates. We built bridges and interchanges and frontage roads. We built sewer, water, and drainage systems everywhere. We built airports and canals, ports, and landings. We built all of these things, but we now lack the money to maintain them. That is not because we're not spending enough, it is because we are not making productive use of what we have built. We're not getting enough of a return out of our investments.

Instead of expanding, our cities need to thicken up. They need to mature to match the level of infrastructure investment they have. Parking lots need to disappear and be replaced with stores and homes. Single-family neighborhoods need to become neighborhoods of duplexes and triplexes. Streets need to be narrowed and speeds slowed to make it easier for people to bike and walk. Neighborhood transit systems, walking, and biking need to replace automobiles as the dominant way of getting around within a place.

All of these things need to happen, but all of them involve difficult, local, nuanced decisions that will vary in scale, intensity, and timing from city to city, from neighborhood to neighborhood. The federal government can be a partner in this, but not by pouring billions into legacy programs. Not before dramatic reform to its own approach.

The next generation of urban development needs to be bottom-up. It needs to be led from our neighborhoods, and oriented toward the day-to-day experiences of people and their urgent needs. The American Jobs Plan not only delays needed reforms, it puts systems ahead of people and politics ahead of place.

In the next section, I will share my advice for local leaders trying to make their communities into strong towns. There is a lot to do, but it starts with creating a strategy now before the wave of money hits your shores.

V. How Local Leaders Should Adapt to the American Jobs Plan

"The American Jobs Plan will invest in America in a way we have not invested since we built the interstate highways and won the Space Race."

— The American Jobs Plan

One of my best friends, Joe Minicozzi of Urban3, lives in Asheville, North Carolina, a city that went into massive debt just prior to the Great Depression and then spent generations digging itself out of that financial hole. In many of Joe's presentations, he shares photos of Asheville during this decline phase.[17] They are really painful to see.

And striking. In contrast, today Asheville is one of the nicest cities in North America. It has a pleasant scale, great ambiance, and just the right mix of funky and historic. It is a tremendous draw, not only for tourists but for people seeking to relocate to a better quality of life.

The story of Asheville's renaissance is multifaceted, but two components stick out. First is the heroic efforts of Julian Price to invest in the core downtown when nobody else would.[18] Second is the absence of the standard federal government interventions that were supposed to bring prosperity but ended up destroying the heart of many U.S. cities: tearing down buildings with Urban Renewal dollars, running highways through the middle of the city, encouraging the removal of historic neighborhoods through mortgage financing regulations, etc....

As Joe says, "We were too poor to tear anything down." So the city just sat there, in its historic form, missing out on the wave of public dollars spent "revitalizing" cities in the 1950s, '60s, and '70s. What was a curse then is a blessing today, as these neighborhoods are the foundation of Asheville's wealth and prosperity. So many places—including mine—would give up anything to go back to the city they had before all this federal assistance. Sometimes it is better to be lucky than good.

For local leaders today facing a new wave of public spending meant to help their communities, the lesson from Asheville should be this: first, do no harm. Don't let the American Jobs Plan take your focus off of the work you are doing to make your city stronger and more prosperous. Don't let the potential for a big project or instant transformation seduce you away from the block-level, human-focused work your community urgently needs.

If you are a local leader (inside or outside of the local government, as both are important) and you have been with us for a while, you've likely read our "Local Leaders Toolkit: A Strong Towns Response to the Pandemic."[19] In that, we previewed—way before the 2020 election—what to expect from an infrastructure bill and how to get your community ready:

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[17] See: "Free Webinar: The Economics of Development 101 with Joe Minicozzi," by Strong Towns, *YouTube*. https://www.youtube.com/watch?v=TgwrsRzdNQ8&ab_channel=StrongTowns

[18] "Julian Price - Asheville's Original Angel Investor," *The Community Foundation of Western North Carolina*, accessed April 21, 2021: https://cfwnc.org/stories/donors/julian-price-ashevilles-original-angel-investor.

[19] See: "The Local Leader's Toolkit: A Strong Towns Response to the Pandemic," *Strong Towns* (May 2020).

It is likely that local governments will be offered some form of recovery assistance from the state and/or federal governments. In advance of these funds being offered, be proactive in having a discussion about how to respond.

In 2009, most local government recovery aid came in the form of infrastructure money targeting "shovel ready" projects. While some of these projects were beneficial, many of them were projects that had been put on the shelf for good reasons. They were not high-priority investments. Few of these projects responded to the immediate urgency experienced within the community.

Infrastructure spending is popular for state and federal officials because it creates immediate jobs and the potential for long-term growth. For local governments, new infrastructure has some of those same benefits, but also the additional long-term liability of now having to service and maintain that infrastructure. Over time, these hasty transactions rarely work out well for local communities, most of which are already burdened by years of deferred maintenance.

Have the discussion ahead of time. Focus that conversation on your people and their needs, not on the programs or systems and what they can provide. That is one of the leadership traits of a Strong Town, another recommendation found in the Toolkit:

Orient Horizontal, Not Vertical. Firmly ground yourself in representing the people in your community. Orient yourselves to zealously serve their needs, particularly in the face of established top-down systems that are not.

Be ready to accept what you can but also to reject, or at least not chase after, the things that you shouldn't. Be focused. The Strong Towns approach to capital investments will help.[20]

In early 2017, I was asked by officials with the incoming Trump administration to provide input on how the new administration should approach infrastructure. We shared my response as an open letter, which included recommendations for reform.[21] A year later when a plan was leaked, I responded to the few scant details available by reiterating the same talking points.[22] Those recommendations also made it into the Local Leaders Toolkit as the following advice:

If the only form of assistance provided to local government ends up being an infrastructure appropriation, take steps to focus those funds. You want to select projects with the most upside benefit and the least additional long-term commitment. When considering projects:

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[20] See: "The Strong Towns Approach to Public Investment," by Charles Marohn, *Strong Towns* (September 2019).
[21] "A letter to POTUS on infrastructure," by Charles Marohn, *Strong Towns* (January 2017).
[22] "A Review of the White House Infrastructure Plan," by Charles Marohn, *Strong Towns* (January 2018).

- Prioritize maintenance over new capacity. With such a massive backlog of basic maintenance needs, it's irresponsible to build additional capacity. If you can use assistance dollars to fix critical infrastructure, make that the priority.
- Prioritize below-ground infrastructure over above-ground. Many of our sewer and water systems are approaching 100 years old. When these core pipes fail, the problems cascade throughout the system. It's possible market shifts or even technology may dramatically change how we use roads and streets, but water and sewer will still flow through pipes as it has for thousands of years. If given the chance, target your assistance spending underground.
- Prioritize neighborhoods that are more than 75 years old. The firm Urban3 has modeled hundreds of cities across the country. In every one, the neighborhoods with the highest financial productivity are the ones that existed before World War II, even when they are occupied by the poorest people within the community. These are traditional neighborhoods but today they still have the greatest capacity to adapt to new realities. Investments in stabilizing these neighborhoods have the greatest potential to pay off.

Do no harm. You are least likely to do harm, and most likely to do good, if you can position your community to direct its share of federal infrastructure funds for projects that focus on: 1) maintenance, 2) underground pipes, 3) old neighborhoods.

Fix pipes in old neighborhoods. So not glamorous. So not sexy. You are so not getting a statue of you placed in the town square. Get over it, because that's what leadership looks like today. That's what you are called to do. If you care about your community, use this money to fix pipes in old neighborhoods. It is really hard for that to mess things up, no matter what comes next.

For those communities further down the path of becoming a Strong Town—places already disciplined to work incrementally with what they have, places like Lockport, Illinois, the 2021 Strongest Town winner—there might be a chance to support an existing bottom-up initiative. Those opportunities will not be the default, but maybe you can change one of your stroads to be more of a street, repair some sidewalks, add protected bike lanes, replace some buses, or fix a critical piece of infrastructure.

Resist the temptation to pull that old project off the shelf: the one you put together with good intentions but then gave up on because you didn't have the funding.

Resist the siren call to build that new road, add that new interchange, put in another bridge. Don't be suckered into annexing new land, running new pipes, and expanding your reach.

Don't be tempted into doing the big, transformative project just because the money is now flowing freely.

The federal government owns no infrastructure. Whatever they pay to build, they are paying it for someone else to own and maintain. Whatever you build, your community will own it. Your community will have to maintain it. This isn't a gift and it isn't assistance—it's them creating an obligation for you.

It's not a transaction, it's a commitment. It's not a date, it's a marriage. Make sure it works for you, not just today, but decades from now. Make sure it pays off.

I'll close this series with some advice we gave to local leaders during the early days of the pandemic:

> When making infrastructure investments, the more you can let a neighborhood assessment of urgent needs guide your priorities, the more effective your efforts will be. Ground yourself in your people and places. The less time you spend chasing the shiny object or projecting theoretical new growth opportunities, the more likely your investments will help the community prosper.

Building a Strong Town starts with people and place, not systems and programs. Put your people and their needs at the heart of your approach, center your actions on using the resources you have to respond to their urgent struggles, and you will be well on your way to building a stronger town, no matter what happens in Washington, D.C.

To Learn More:

- Sign up for our infrastructure email list at **www.strongtowns.org/email-infrastructure.**
- Take our course, "Aligning Transportation with a Strong Towns Approach" at **www.academy.strongtowns.org**.
- Pre-order Charles Marohn's upcoming book, *Confessions of a Recovering Engineer: A Strong Towns Approach to Transportation* at **www.confessions.engineer**.