

# ONCE IN A GENERATION Infrastructure Funding

Breaking down the United States Infrastructure Bill

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It is probably not news to you that on November 15, 2021, the president signed into law H. R. 3684, the \$1.2 trillion bipartisan Infrastructure Investment and Jobs Act. What you might not know is why this is being hailed by many as a historic bill and once-in-a-generation funding. To understand that, we first need to look back at funding in the United States, then understand what \$1.2 trillion can build and finally see how the funding will be allocated and how it might affect our work as infrastructure real estate professionals.

Infrastructure funding in the United States is primarily funded annually focused on maintenance of infrastructure with sporadic funding of expansion and improvements. To the right, you'll see a table of some of the largest fundings of the last 70 years and how they compare to our total economy or gross domestic product (GDP).



Title	Year	Billions of Dollars	% of GDP
Federal-Aid Highway Act	1956	\$25	0.06%
Actual funding of Interstate Highway System Construction	1956-1992	\$114	0.13% (average per year)
SAFETEA-LU (Bush Transportation Bill)	2005	\$244	1.9%
ARRA portion on Infrastructure	2008	\$120	0.8%
<b>Infrastructure Investment and Jobs Act</b>	<b>2021</b>	<b>\$1,200</b>	<b>5.2%*</b>

\*estimated based on Bureau of Economic Analysis (bea.gov) growth through 3rd quarter

Only time will tell how many years the funding will be spread over, but at an authorization of 5.2 percent of our GDP, even spread over many years will likely make it the highest spent on infrastructure each year since WWII. For Americans under 65 years, this will mark the most funding toward infrastructure improvements and expansions we will have seen in our lifetimes.

## Putting \$1.2 Trillion Into Perspective

So — \$1.2 trillion. We hear huge numbers like this more and more when Congress is passing funding, such as the \$1.4 trillion government funding package passed last year, which covered the lack of tax income by local governments during lockdown. Hearing these numbers, you can't help but wonder what can \$1.2 trillion build. To answer that, let's look at a few infrastructure projects to put some numbers in perspective, including one of the largest recent projects from my hometown of Denver, Colorado:

### • Project: I-70 Central Project

- ▷ Cost: \$1.2 billion
- ▷ Construction: 10 miles of at least 10 lanes of Interstate with 20 bridges including structure to support a 4-acre park over the highway
- ▷ Jobs supported: 4k to 5k

### • Project: Smaller transportation project sample

- ▷ Cost: \$4.6 million
- ▷ Construction: Ramp widening and metering
- ▷ Jobs supported: 20 to 30

### • Pipelines:

- ▷ Cost: \$5 to \$6 million per mile (24" and larger diameters)
- ▷ Construction: varying sizes above 24" diameter of raw water, sanitary sewer, and petroleum product pipelines
- ▷ Jobs supported: about 500 per 100 miles

### • Dams (two recent projects considered):

- ▷ Cost: \$100 million
- ▷ Construction: raw water storage reservoir and hydroelectric generation dam
- ▷ Jobs supported: ~350

Even just using these projects as rough forecasting numbers we could see hundreds of \$1 billion+ transportation projects, thousands of miles of pipelines, dams, treatment plants, etc., amounting to millions of jobs supported. The White House fact sheet estimates 2 million jobs per year over the next decade. Given above as some sample projects, here's what the funding might be able to support for just a few of the industries supported:

- 300+ similar large-sized transportation projects in nearly every major metropolitan area
- 14,000+ small- to mid-sized transportation projects
- Hundreds of water storage projects
- Over 23,000 miles of lead pipe replacement
- 1,000-2,000 treatment plant improvement projects
- Thousands of miles of water supply pipelines
- Plus many additional communication, transit and other projects

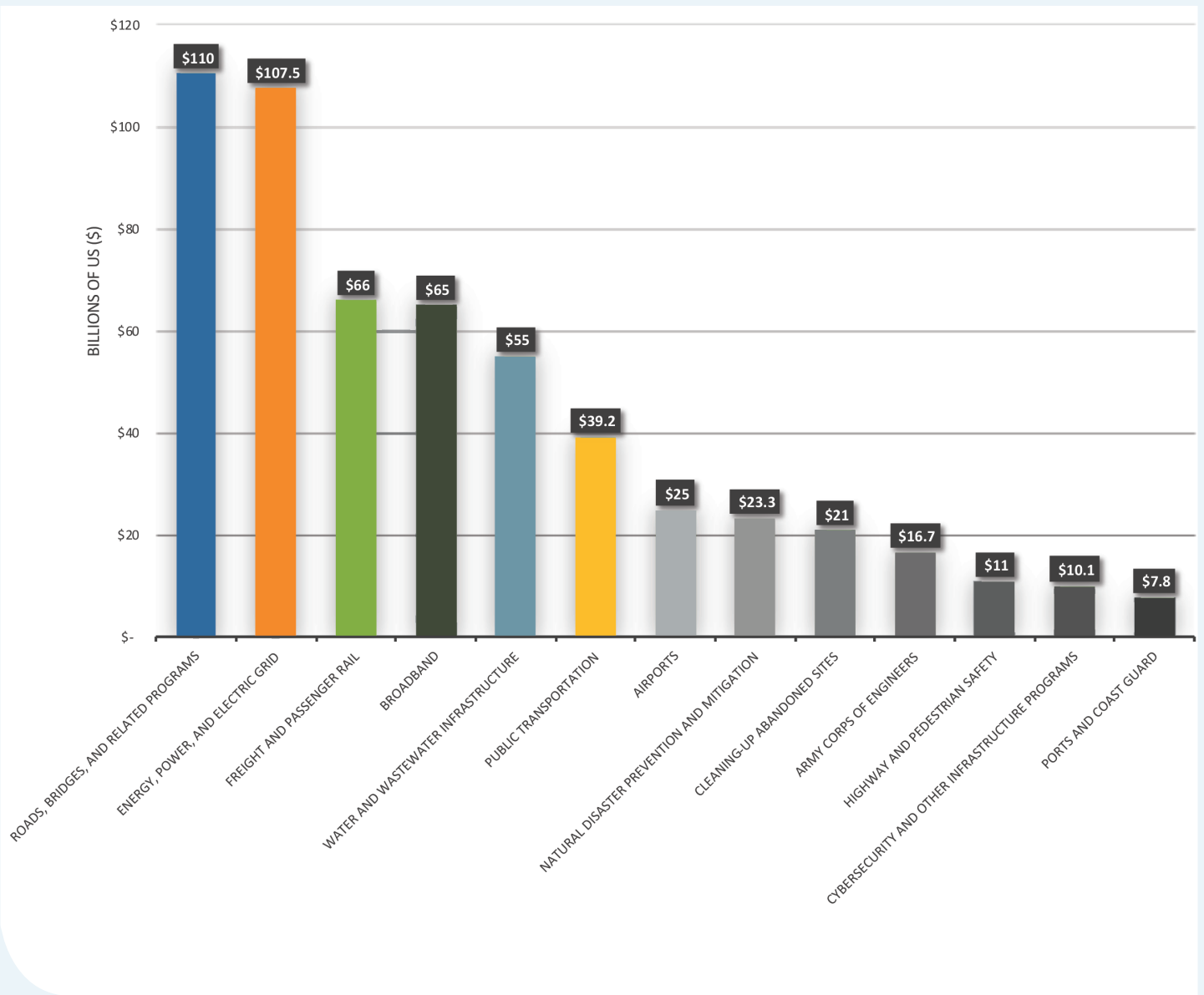
*\* the numbers above are based on rough early allocation estimates projected by DOT and DOI.*

But wait, you are probably thinking, "Didn't I hear that the bill really only includes \$559 billion in new spending?" Yes, that is correct — there is slightly more than half allocated to highways and other infrastructure that is part of normal federal agency funding and programs. These programs include items like funding the Highway Trust Fund (\$300 billion) for the next five years, which was forecasted to have a \$100 billion funding gap. \$90 billion is included for public transit. Other funds include the Inland Waterways Trust Fund, Transportation Emergency Relief Funds, The Airport & Airway Trust Fund, The Harbor Maintenance Trust Fund and other infrastructure funds. Contrary to some social media posts, this doesn't include any social programs or any non-infrastructure funding. The more important question is, "Will this funding benefit real estate professionals who support infrastructure projects?" The answer is most definitely yes, as these funds will continue to fund our federal, state and local agencies and their contractors.

# The Breakdown

The \$559 billion is for new funding and programs. Let's take a look at how this is allocated and how some of these may benefit our industry. Also noted on the next page are the American Society of Civil Engineers' report card grades for each of these categories. You can find more detailed reports on their website at [infrastructurereportcard.org](http://infrastructurereportcard.org).

## Allocation of New Funding





## Roads, Bridge and Related Programs: \$110 Billion

Roads report card:

**D**

Bridges report card:

**C**

The largest portion of the new funding program, roads, bridges and related programs will receive \$110 billion.

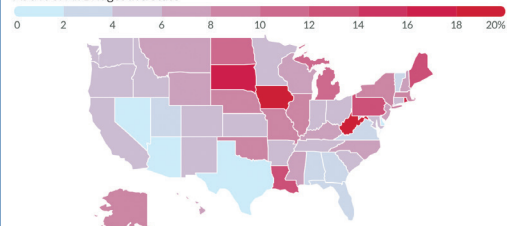
\$36.7 billion will be allocated to a new bridge investment program. This is a key component together with the States' own efforts (many already underway) to getting on track, as there is an estimated \$125 billion in backlog of bridge repairs needed in the U.S.

We won't know for sure how the remaining funds will be allocated for months to come as states apply for funding. That said, the additional funding, well above baseline federal budget, may allow difficult, complex approved and struggling projects to achieve funding.

### A few other interesting tidbits:

- \$100 million per year for Wildlife Crossings
- \$250 million per year for Rebuilding Rural Bridges
- \$500 million in fiscal 2023 for Gridlock Reduction Programs these might include ITS system expansions and Signalization projects
- \$250 million per year for Commercial Motor Vehicle Parking

States Have Varying Exposure to Bridges in Poor Condition  
As a % of All Bridges in a State



Source: Fitch Ratings, Federal Highway Administration.

FitchRatings

## Energy, Power and Electric Grid: \$107.5 Billion

Energy Report Card:

**C-**

While many of the clean energy measurers were cut in order to achieve a bipartisan result, the bill includes a \$107.5 billion investment to help upgrade the national grid. This includes of high-capacity transmission lines, which will likely be used to support the transmission of power from highly productive renewable energy-producing states to states without those resources. Also included is smart-grid technology, a critical component to economical charging of electronic vehicles, carbon capture, hydrogen, direct air capture and funding of projects from the bipartisan Energy Act of 2020 and the Advanced Manufacturing Tax Credit. Also included is \$7.5 billion for the construction of electric vehicle charging infrastructure along designated alternative fuel corridors.

Upgrading the electric grid is a key piece of the legislation that focuses on solving the problems faced by natural disasters such as wildfires and hurricanes. This may include funding for construction of new lines if it can be demonstrated that the existing line is at risk and upgrades unlikely to mitigate the risk.

Likely the biggest impact to our profession will be to the many real estate managers working for the power suppliers and distribution companies and cooperatives as well as the employees and consultants that will acquire right of way for the interstate transmission lines.



## Freight and Passenger Rail: \$66 billion

Rail Report Card:

**B**

Transit Report Card:

**D-**

The \$66 billion earmarked for high-speed rail, safety, Amtrak and modernization of the Washington D.C. to Boston, MA, route does little to improve the United States failing grade for transit and yet is the largest investment in passenger rail since the creation of Amtrack in 1971. A good portion of this funding is targeted toward the northeast corridor to address needed repairs after Hurricane Sandy.

## Broadband: \$65 billion

**Broadband Report Card: N/A**

In addition to 2020's funding in the American Rescue Plan, the new bill adds broadband infrastructure improvements and one in four households expected to be eligible for a \$30 per month subsidy to pay for internet access. \$42.4 billion will be overseen by the Commerce Department and its telecom division, likely distributed to states through grants. Several other programs will expand access in underserved rural and tribal communities.

Hard to say at this point what the impact will be to our industry, but we are likely to see many new lines constructed and new easements that will need to be acquired.



## Water and Wastewater Infrastructure: \$55 billion

**Drinking Water Report Card:**

**C-**

**Stormwater Report Card:**

**D**

**Wastewater Report Card:**

**D+**

This bill includes the largest federal investment in clean drinking water ever; \$15 billion will be dedicated to replacing lead pipes, \$10 billion for removal of contaminants and funding likely to be distributed through State funds and bonds for a variety of water and wastewater needs.

## Public Transportation: \$39.2 billion

**Transit Report Card:**

**D-**

One of the areas receiving heavy criticism within the new law, the allocation to buses, passenger rail and ferries will do little to improve the lack of access to public transit that 45 percent of Americans have. The expected backlog per ASCE is \$176 billion and expected to grow to \$270 billion through 2029. Much of the funding in the bill is focused on replacement of buses and trains with better access for the elderly and people with disabilities and zero-emission busses and ferries. Existing facilities are also a focus of funding for repairs and modernization.

While there may be some transit authorities that will be able to use the funding to help authorize new rail corridors under separate funding mechanisms, the bill is unlikely to directly fund projects that benefit real estate professionals.



## Other Categories

Other categories may have a variety of projects with real estate needs and modifications. Some highlights:

- Airports — increases funds for the improvement grand program for runways, gates and taxiways and creates a new Airport Terminal Improvement program. Air traffic control infrastructure is also included which often requires easements and land for off-site communication lines and facilities.
- Natural Disaster Prevention and Mitigation — this fund covers many of our industries including water, wastewater, dams and other projects
- Expands the Superfund program managed by many real estate managers of bases, ammunition depots and former warehouses, smelters, etc.
- United States Army Corps of Engineers (USACE) has an estimated \$109 billion shortfall in funding of projects which this bill will assist in, most of which involve flood mitigation projects and studies.
- In light of the Colonial Pipeline hack, one of the few portions of the bill cut during partisan negotiations was the cybersecurity section. It is likely to fund new communication line construction to improve IT systems and cyber resilience where current infrastructure, such as aging radio-based SCADA systems, are weak points for hacker access.



## In Conclusion

While it is difficult at this point to judge the full effect on the real estate professionals in the infrastructure industry, we do know that the number of real estate professionals in government employment has increased every time new funding for infrastructure has been passed, according to the Bureau of Labor Statistics. IRWA membership expanded rapidly in response to funding of the Interstate Highway System, and membership and education participation all increased after passage of the transportation funding in 2005 and 2008. This was remarkable, given 2008's "shovel-ready" requirement that precluded funding of many projects with real estate acquisition requirements and showed our DOTs' savvy in shifting funding and creative accounting of bonds to use authorized projects under new funds to free up funds to authorize other projects. Given the once-in-a-generation increase in funding for infrastructure, it stands to reason our industry in the United States will see even greater growth in surveying, acquisition, appraisal, relocation and land management employment and contracts.



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