

Infrastructure Investment and Jobs Act (IIJA): Implications for Smart Mobility Infrastructure Management

WHITE PAPER

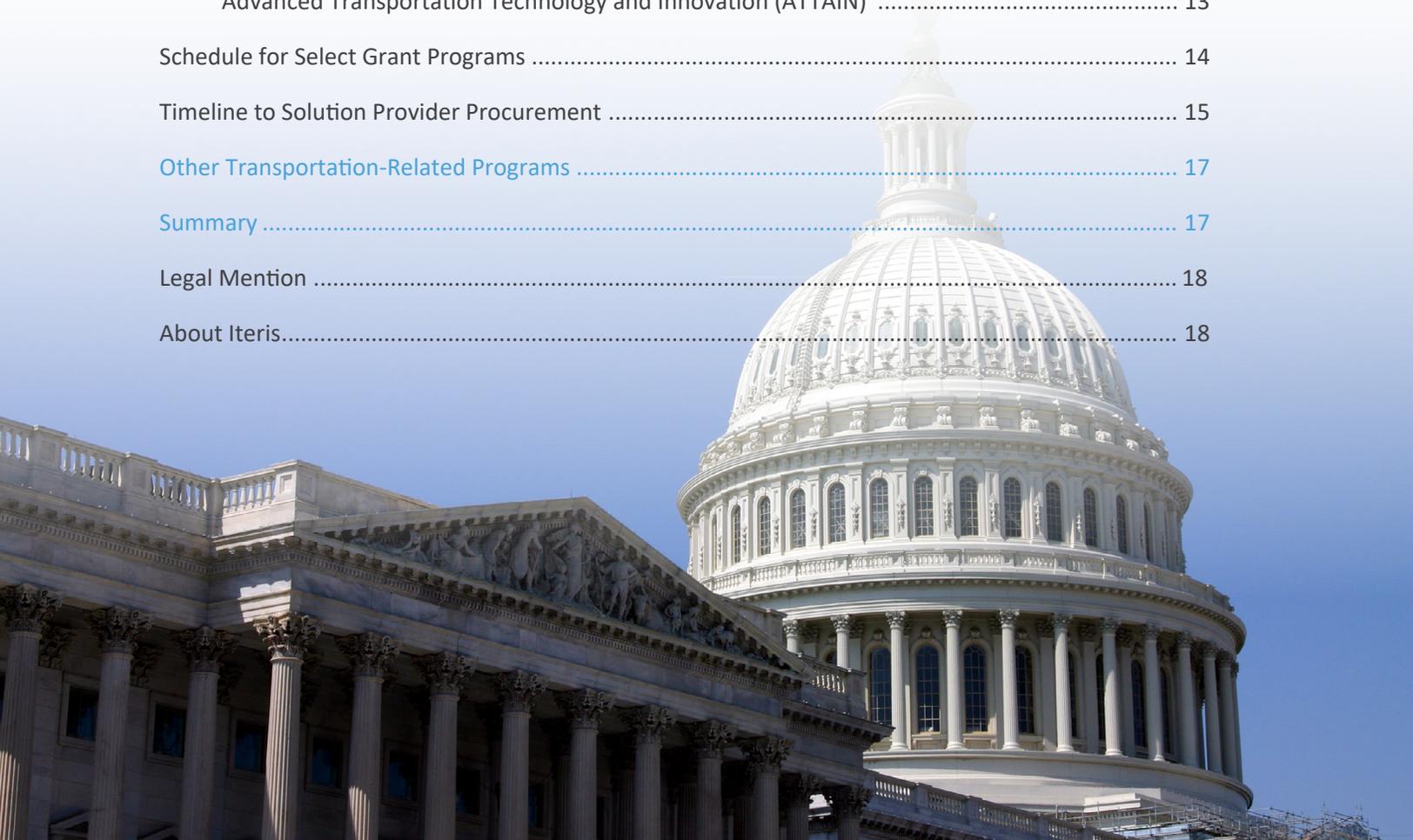


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Contents

IIJA Overview – Background Information	3
Purpose, Scope	3
Budget Structure	4
IIJA Funding Mechanisms	7
Smart Mobility Infrastructure Management Funding	8
A Closer Look at Formula and Discretionary Grant Programs	9
Formula Grants	9
Timeline to Funds Availability	11
Discretionary Grants	11
Safe Streets and Roads for All (SS4A)	12
Strengthening Mobility and Revolutionizing Transportation (SMART)	12
Advanced Transportation Technology and Innovation (ATTAIN)	13
Schedule for Select Grant Programs	14
Timeline to Solution Provider Procurement	15
Other Transportation-Related Programs	17
Summary	17
Legal Mention	18
About Iteris	18



IIJA Overview – Background Information

Purpose, Scope

The Infrastructure Investment and Jobs Act (IIJA) authorizes \$1.2 trillion in funding to the U.S. Department of Transportation (USDOT) and other federal departments to improve public transit, roads and bridges, other public works, supply chains, and carbon emissions. Also known as the Bipartisan Infrastructure Law, the IIJA represents the largest investment in transportation, broadband, clean energy, and water in United States history.

The IIJA was signed into law by President Biden on November 15, 2021, after being approved by Congress earlier that month. It follows the Fixing America’s Surface Transportation (FAST) Act that was signed into law by President Obama in December 2015, and allocates additional funding above the FAST Act baseline funding levels. Involving over a dozen federal departments and agencies, the IIJA provides funding for over 350 distinct programs.

The IIJA authorized hundreds of billions of dollars to be distributed by the USDOT to states in the form of formula or mandatory grants, as well as discretionary or competitive grants. States may use the formula grants to fund improvements in safety, congestion, and air quality. The discretionary grants will be distributed to states and other local entities (e.g., cities, tribal governments, and metropolitan planning organizations (MPOs)) to achieve various desired outcomes, such as a reduction in deaths and serious injuries on roads and streets, commonly referred to as Vision Zero initiatives.

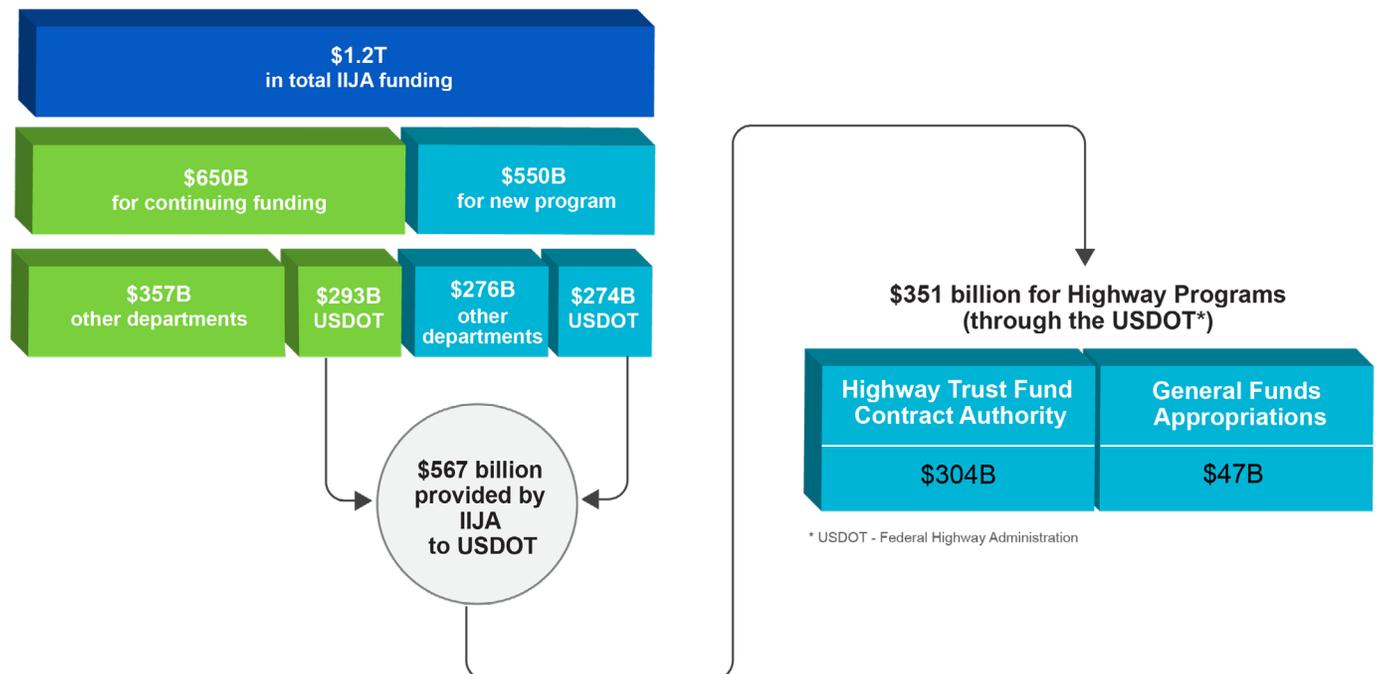
Both formula and discretionary grants are discussed in more detail below.



Budget Structure

Congress authorized federal departments to direct the \$1.2 trillion in IIJA funding to transportation, broadband, clean energy, and water investments. As shown below, of the total \$1.2 trillion, about \$650 billion will provide continued funding, usually at a level above the historical level, to existing federal programs. Historically, the federal government has funded about 20% of the total annual national spending for transportation infrastructure operations, maintenance, and modernization. The remaining \$550 billion in IIJA funding will be distributed to net new projects that, by definition, are not part of the federal government’s historical baseline infrastructure spending.

Congress designated about \$567 billion or 47% of the total \$1.2 trillion to the USDOT. Of the \$567 billion, \$274 billion will be distributed to net new projects. As a result, the USDOT will receive about 50% of the total \$550 billion in funding designated for net new projects. In addition to the sum of continuing and net new project funding directed to the USDOT, some portion of the IIJA funding directed to other agencies, such as the Department of Energy, will be applied to transportation-related or transportation-adjacent initiatives, such as electric vehicle charging stations.



Source: Federal Highway Administration; ENO Center for Transportation

Of the \$567 billion designated for the USDOT, about \$351 billion is focused on highway programs. These programs address the construction, maintenance, and operations of 3.9 million miles of the nation’s highway network, which includes both primary highways and secondary local roads (e.g., arterial roads). Local governments (e.g., counties, cities, and other local public agencies) own and operate roughly 2.9 million miles or 75% of the nation’s entire highway network. About \$216 billion, representing the difference

between the total \$567 billion designated to the USDOT and the \$351 billion in highway programs, is designated for other modes of transportation such as aviation, rail, and maritime.

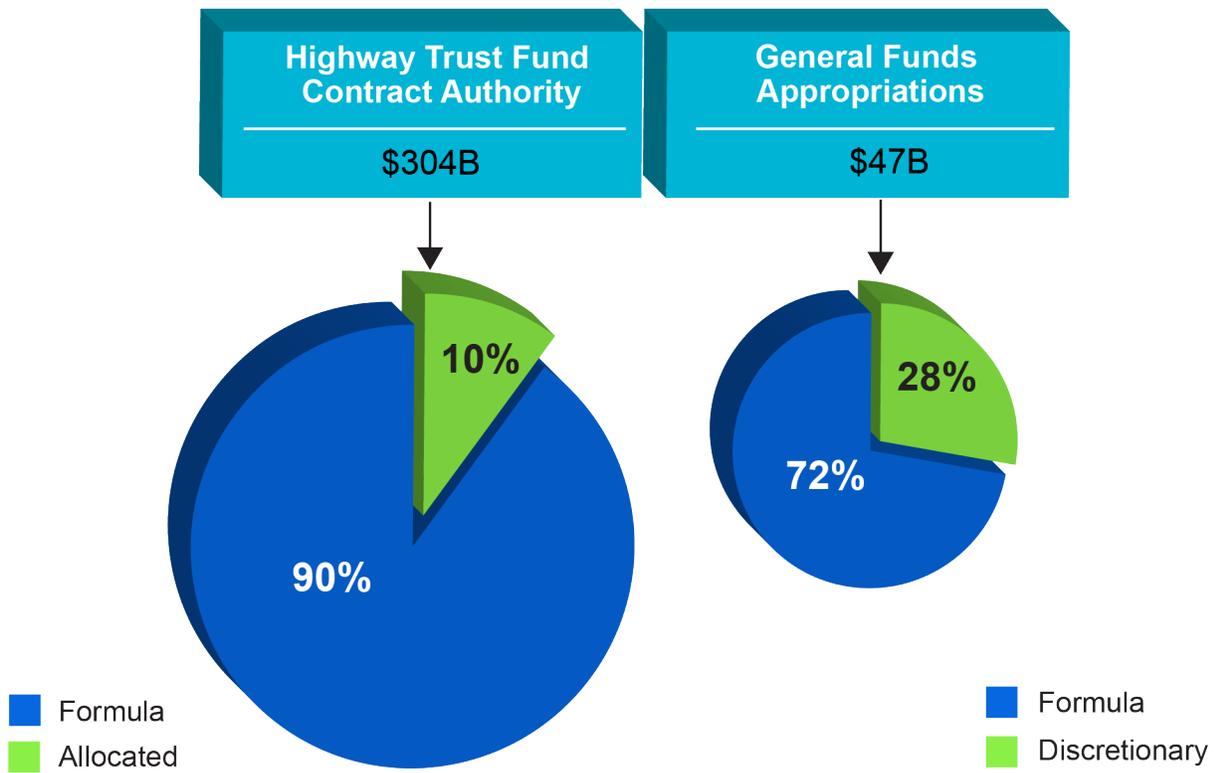
The USDOT’s Federal Highway Administration (FHWA) will distribute the \$351 billion in highway program funds through the Highway Trust Fund (HTF) and through general funds, both of which are described in the table below.

Budget Vehicle	Description
Highway Trust Fund (HTF)	The HTF was created by the Highway Revenue Act of 1956. The act was set to expire in 1972, but it has been extended several times by subsequent legislation. The HTF finances most federal government spending for highways and mass transit. Historically, revenues for the HTF have come from transportation-related excise taxes, primarily federal taxes on gasoline and diesel fuel. However, in recent years, the HTF has needed significant transfers of general revenue to remain solvent. HTF disbursements are intended to save lives and prevent serious injury on all public roads. Additionally, eligible uses include transportation projects that reduce congestion and mobile source emissions.
General Funds	General funds, which reflect cash activity for all federal activities, record appropriation authority based on congressionally issued legislation that provides that authority to agencies. General funds are distinct from revolving funds, management funds, and trust funds such as the HTF. General funds may be obligated for a single year or multiple years. In the case of the IJIA, most general funds were obligated for multiple years, but some general funds must be appropriated annually. General funds are backed with taxpayer dollars, but they are not earmarked for a specific purpose. General fund disbursements are intended to drive various policy objectives, including safety.

As presented in the figure below, 90% of the HTF disbursements will be made for formula or mandatory grants, and 10% of the HTF disbursements will be made in the form of specific program allocations. About 72% of general funds will be disbursed

for formula or mandatory grants, and 28% of general funds will be disbursed for discretionary or competitive grants. A small fraction of the HTF and general funds will be disbursed in the form of loans.

\$351 billion for Highway Programs (through the USDOT*)



* USDOT - Federal Highway Administration

IIJA Funding Mechanisms

The following table describes, at a high-level, the basic mechanics of formula grants, discretionary grants, and loans. For more information about these funding mechanisms, see an [Overview of Funding and Financing at USDOT | US Department of Transportation](#).

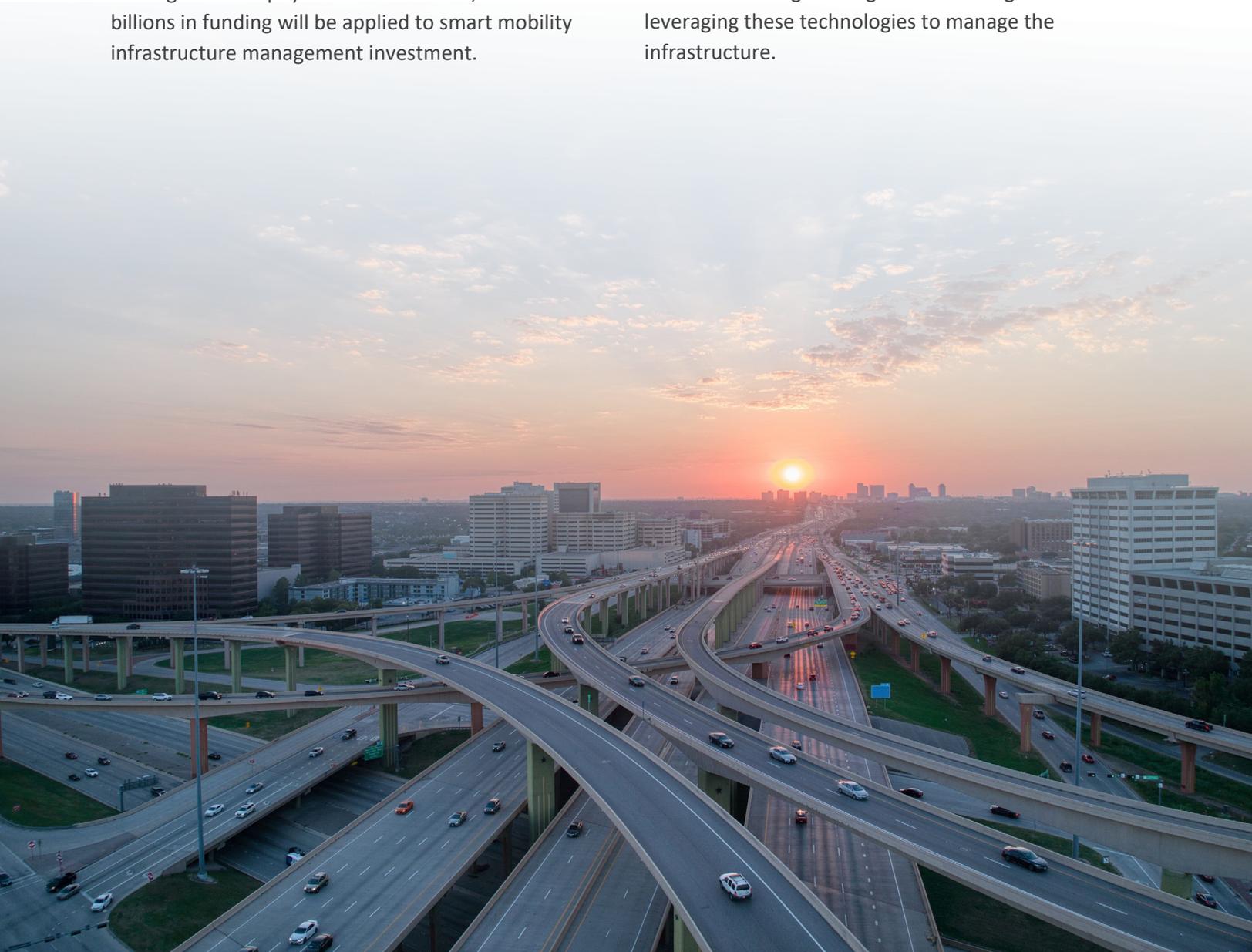
Funding Mechanism	Description
Formula Grants	<ul style="list-style-type: none"> • Formula grant programs allocate funding to recipient agencies based on formulas set by Congress. USDOT distributes these funds to states, federally-recognized tribal recipients and transit agencies. The funds may be further allocated to localities at state, tribal or agency discretion. • Formula grants provided by the federal government typically require some level of fund matching from the recipient local agency. • Examples include the Federal-aid Highway Program and the Urbanized Area Formula Grants.
Discretionary Grants	<ul style="list-style-type: none"> • The USDOT administers and offers competitive discretionary grant programs. For each program, the USDOT solicits applications and selects projects based on program eligibility, evaluation criteria, and departmental or program priorities. • Discretionary grants provided by the federal government typically require some level of fund matching from the recipient local agency. • Examples include the Advanced Transportation Technology and Innovation (ATTAIN), Strengthening Mobility and Revolutionizing Transportation (SMART), and Safe Streets and Roads for All (SS4A) grant programs. • For a complete list of all available DOT programs visit: DOT Discretionary Grants Dashboard US Department of Transportation.
Loans	<ul style="list-style-type: none"> • The Build America Bureau manages USDOT’s financing programs and makes available different funding options to attract private and other non-federal co-investment for transportation projects. These can take the form of secured (direct) loans, loan guarantees, and lines of credit.

Source: [Overview of Funding and Financing at USDOT | US Department of Transportation](#)

Smart Mobility Infrastructure Management Funding

The smart mobility infrastructure management market, in which Iteris participates, is a subset of the larger transportation infrastructure and intelligent transportation systems (ITS) markets. The smart mobility infrastructure management market, which includes dozens of distinct product categories, focuses on the application of advanced technologies (e.g., cloud-enabled software, smart sensors, and data analytics) to improve the safety and efficiency of transportation networks. While the majority of the \$351 billion in USDOT highway program funding is designated for physical infrastructure, tens of billions in funding will be applied to smart mobility infrastructure management investment.

Technologies in this category include roadway sensors, connected vehicle communications, and traffic analytics and asset management software. Likewise, smart mobility infrastructure management may include the provision of secure, standardized, and scalable mobility data ingestion, authentication, processing, and publication to public agencies, private enterprises, and the traveling public. Funds are also available for consulting services related to the evaluation, selection, integration, and implementation of advanced technology in the physical infrastructure, as well as for engineering and consulting services leveraging these technologies to manage the infrastructure.



A Closer Look at Formula and Discretionary Grant Programs

Formula Grants

As indicated in the previous section, almost 90% of federal highway assistance is historically distributed to the states by formula, which is based on a complex set of calculations that are periodically revised by Congress. Like past transportation bills such as the FAST Act, the majority of IIJA funding will be distributed through formula grants.

Most federal highway assistance is disbursed through the HTF, which has been funded traditionally by a variety of federal excise taxes levied on motor fuel, rubber products and heavy vehicles. Each state is guaranteed an apportionment equal to at least 95% of the amount it pays into the HTF. Therefore, the largest, most populous states (e.g., California, Texas, New York, and Florida) will receive the largest portions of formula grants.

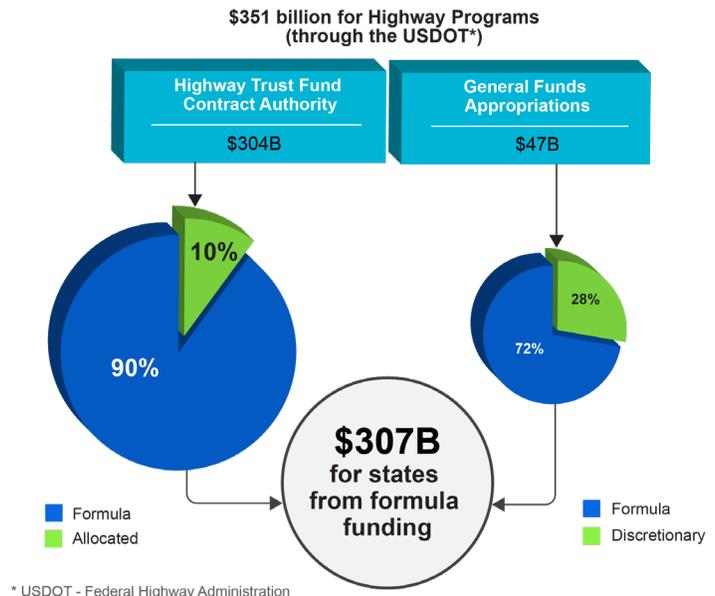
Formula grant awards are also based on a performance-driven process that identifies and analyzes highway safety programs and advances highway safety improvement projects that have the greatest potential to reduce fatalities and serious injuries.

Within the formula grant category, there are several core highway-focused programs that are administered by the FHWA. Two notable programs that were extended through the IIJA are the National Highway Performance Program (NHPP) and the Highway Safety Improvement Program (HSIP), both of which are described below.

	National Highway Performance Program (NHPP)	Highway Safety Improvement Program (HSIP)
Primary Program Goal	Supports the improvement and maintenance of the National Highway System (NHS), which includes the most important and strategic highways in the country. The NHS includes major interstate highways, certain non-interstate freeways and expressways, and other roads critical to the nation's transportation network.	Supports infrastructure projects and other initiatives that have the potential to significantly improve safety and reduce the number of roadway-related injuries and fatalities.
2022-2026 Funding Total	\$148 billion	\$16 billion
Year Created	2015	2005
Links to more information	NHPP - Federal-aid Programs - Federal-aid Programs and Special Funding - Federal Highway Administration (dot.gov)	Highway Safety Improvement Program (HSIP) FHWA (dot.gov)

How Much Will States Receive from Formula Funding?

Out of the \$351 billion available for highway programs, \$307 billion will be distributed to states through formula, which is also known as apportionment. Given that most formula funding requires local agencies to match a portion of the funds they are allotted, the total amount of money for highway projects will in fact surpass the amount provided by the federal government.



The top 10 beneficiary states will receive \$144 billion, representing 47% of the total \$307 billion to be distributed. The table to the right presents the planned IJIA formula funding through 2026 for each of the 10 states and the percentage of total formula funding for each state.

State	2022-2026 Estimated Apportionment	Allocation as % of Total Formula Funding
California	\$30B	10%
Texas	\$28B	9%
New York	\$14B	4%
Florida	\$14B	4%
Pennsylvania	\$13B	4%
Illinois	\$11B	4%
Ohio	\$10B	3%
Georgia	\$9B	3%
New Jersey	\$8B	3%
Michigan	\$8B	3%

Source: American Association of State Highway and Transportation Officials (AASHTO)
 Note: Amounts have been rounded to nearest decimal.

Timeline to Funds Availability

Some programs are already authorized and appropriated through IIJA, whereas others still require further appropriation within each fiscal year’s budget cycle. Therefore, the timeline for the USDOT to allocate funds to state and other local agencies will vary depending on (1) the appropriation status for the specific program and (2) the funding vehicle that is used for the funds disbursement (e.g., formula or discretionary grant).

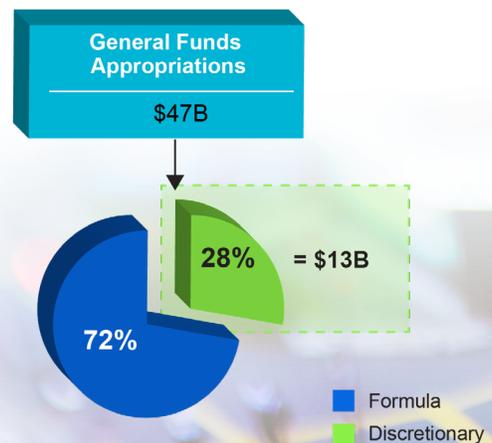
Formula grant funding, once appropriated, is available to recipient states within the most logical fiscal year, so states are now receiving IIJA-related formula grant funding. However, it is difficult to determine

how much formula grant funding is contributed to any specific transportation initiative because appropriations are authorized for non-specific purposes and often comingled with other funding sources from a budget management perspective. By contrast, discretionary grant funding, which represents only a small fraction (e.g., 4%) of the total highway program funding authorized through the IIJA, will take substantially longer to be disbursed for reasons described below. That said, once distributed, it is easier to attribute discretionary grant funding, as opposed to formula funding, to specific transportation initiatives.

Discretionary Grants

As directed under the IIJA, the USDOT will distribute out of the non-formula pool of funding a total of \$13 billion through various discretionary grants for highway programs. Three of these grant programs place a notable emphasis on smart mobility infrastructure management—in particular, on the innovative use of technology to improve safety, modernize intersections, and accelerate the adoption of connected and autonomous vehicles. As with formula funding, most discretionary grant programs require that local agencies provide a minimum level of matching funds for specific projects to be approved, therefore increasing the total pool of funding that will be used at the local level.

\$351 billion for Highway Programs (through the USDOT*)



* USDOT - Federal Highway Administration

Safe Streets and Roads for All (SS4A)

<https://www.transportation.gov/grants/SS4A>

This new grant program supports local and regional initiatives to prevent death and serious injury on roads and streets (the previously mentioned Vision Zero program). The SS4A program is reserved for counties, cities, and townships. In other words, state departments of transportation are not eligible for SS4A grants. According to the USDOT, 90% of SS4A projects will improve pedestrian safety, while 80% will improve bicyclist safety. The USDOT is expected to distribute a total of \$5 billion in SS4A grants over five years. SS4A grants will account for almost 38% of the total \$13 billion in discretionary grants awarded by the USDOT from IIJA funding.

SS4A funds are disbursed through two types of grants: Action grants and Implementation grants. Action grants, which are also known as planning and demonstration grants, provide funding to develop, complete, or supplement a comprehensive safety action plan. Implementation grants provide federal funds to implement projects and strategies identified in an action plan. As a result, the value of Implementation grants is typically larger than the value of Action grants. In 2022, \$800 million was awarded to regional agencies through 473 Action grants representing \$213 million, and 37 Implementation grants representing \$590 million. Based on the success of Action grants, the number of Implementation grants is expected to increase over the next four years.

Strengthening Mobility and Revolutionizing Transportation (SMART)

<https://www.transportation.gov/grants/SMART>

This new grant program will provide grants to states, tribal governments, public transit agencies, tolling authorities, and MPOs to use smart community technologies to improve transportation efficiency and safety. This program also distributes funds in two phases; (1) Planning and Prototyping and (2) Implementation. Successful grant applications will demonstrate purpose-driven innovation to build data and technology capacity and expertise. Additionally, the USDOT requires that proposed projects involve coordinated automation, connected vehicles, intersection sensors, systems integration, delivery and logistics, or smart grid technologies. The USDOT is expected to distribute a total of \$500 million in SMART grants over five years. SMART grants will account for 4% of the total \$13 billion in discretionary grants awarded by the USDOT from IIJA funding.



Advanced Transportation Technology and Innovation (ATTAIN)

[Bipartisan Infrastructure Law - Apportionment Fact Sheet | Federal Highway Administration \(dot.gov\)](#)

This revamped grant program, which is also known as the Advanced Transportation Technologies and Innovative Mobility Development (ATTIMD) program, provides competitive grants to deploy, install, and operate advanced transportation and congestion management technologies to improve safety, mobility, efficiency, system performance, intermodal connectivity, and infrastructure return-on-investment. More specifically, ATTAIN grants will help recipients implement technologies to improve emergency evacuation, integrate corridor management systems, adopt advanced parking reservation or variable pricing systems, enhance high occupancy vehicle toll lanes or congestion pricing, and/or retrofit dedicated short-range communications (DSRC) technology to cellular-vehicle-to-everything (CV2X) technology. The USDOT is expected to distribute a total of \$300 million in ATTAIN grants over five years. ATTAIN grants will account for about 2% of the total \$13 billion in discretionary grants awarded by the USDOT from IIJA funding.

As can be seen in the table below, the new SS4A and SMART programs add over \$5.5 billion in new funding to implement technology to improve road user safety, above and beyond existing core programs such as ATTAIN. The total amount of money that will ultimately support new projects is larger than the total federal funding for these programs, when considering the requirement that local agencies provide additional matching funds.

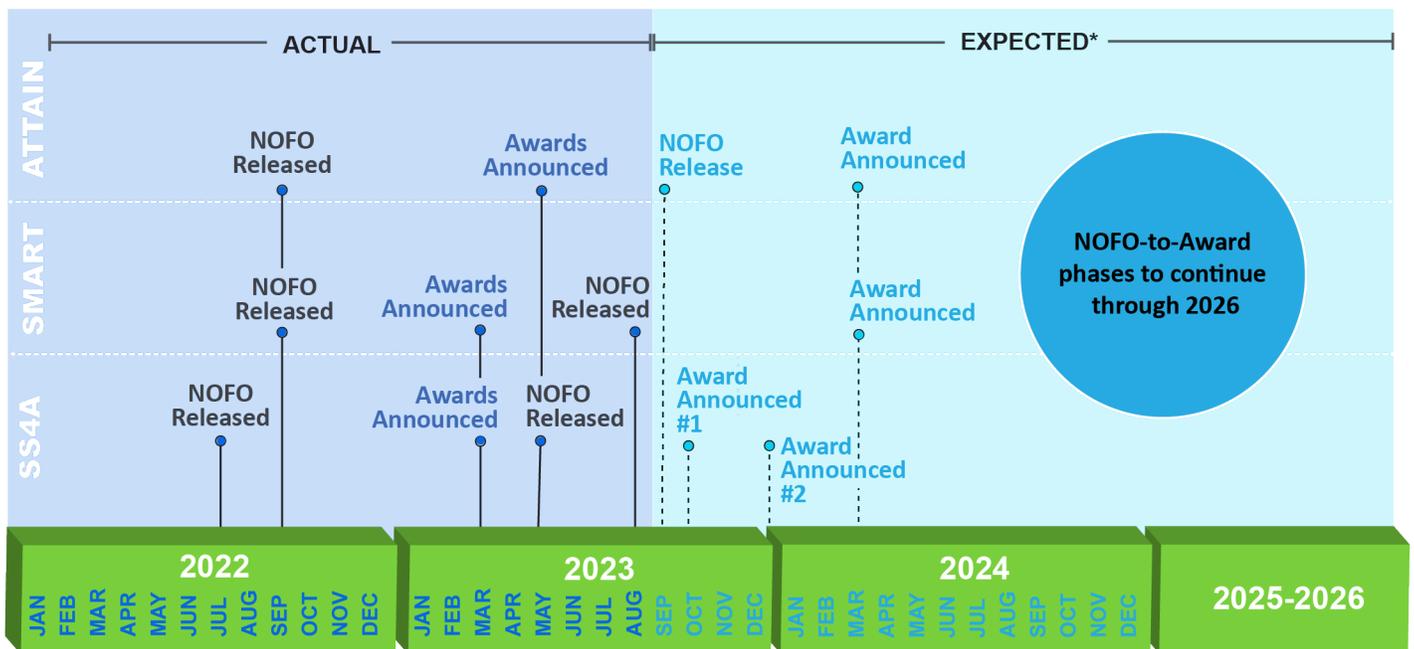
	SS4A	SMART	ATTAIN
Program Type	New	New	Extension
Total \$ thru 2026	\$5B	\$500M	\$300M
Annual \$	\$1B	\$100M	\$60M
Local Fund Matching Requirement	Yes (20% minimum)	No	Yes (20% minimum)
Funded Project (\$) in 2022	\$800M	\$95M	\$52M
Funded Projects (#) in 2022	510 (localities)	59 (localities)	8 (states)

Source: [Bipartisan Infrastructure Law - Fact Sheets | Federal Highway Administration \(dot.gov\)](#)

Schedule for Select Grant Programs

Though funding timelines can vary significantly between different discretionary grant programs, over time it is possible to perceive interval patterns for the major grant-award phases—notice of funding opportunity (NOFO), proposal evaluation, and grant awards. Typically, all awards for a given grant program will be announced at the same time. To date, the interval timing for the SS4A, SMART, and ATTAIN grants has followed the interval patterns presented in the timeline below. **Please note that timelines are subject to change, and that future dates are provided only for illustrative purposes.**

Selected Grant Program Timelines



* Timing uncertain and subject to change by FHWA

Timeline to Solutions Provider Procurement

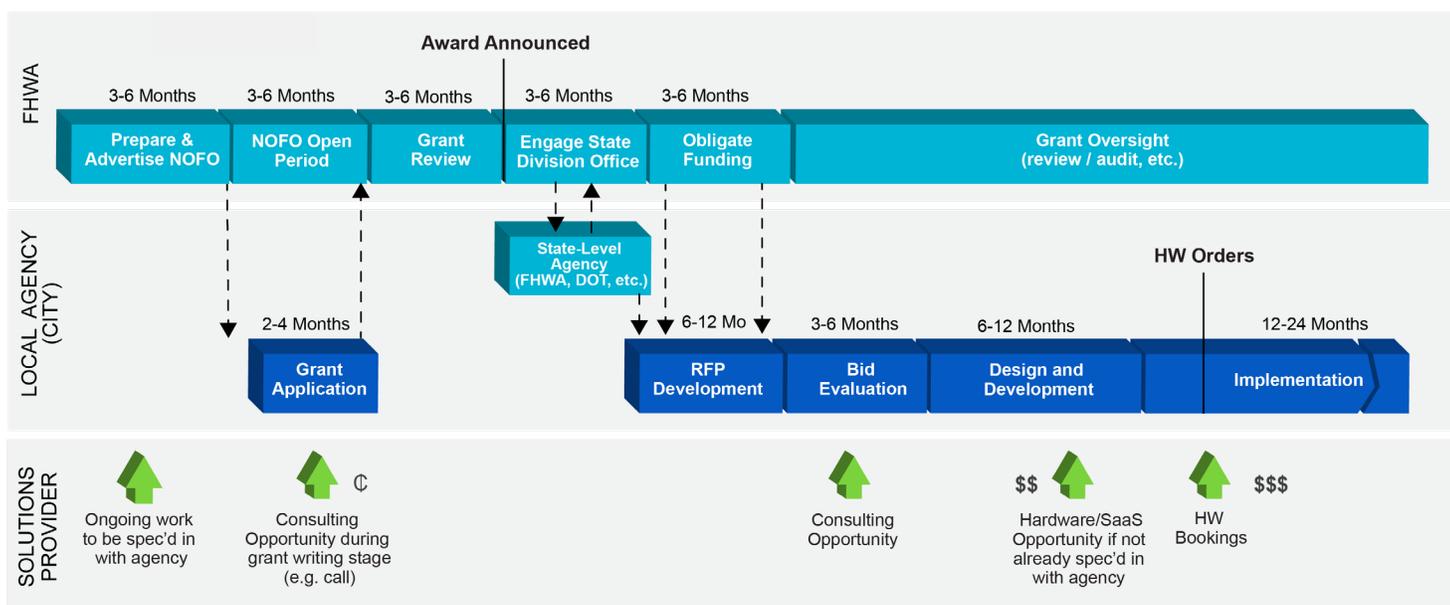
Historically, the USDOT offers a variety of discretionary grant programs to fund various types of transportation projects and activities. Under the IIJA, the pool of grant money and the portfolio of grant programs has been greatly expanded. These grant programs are available to a wide range of applicants, including state departments of transportation, MPOs, and local governments. The grants are administered by several different offices within the USDOT (e.g., the Office of the Secretary, the FHWA, and the Federal Transit Administration).

Depending on the office administering the grant program, the type of grant, and the grant recipient, the timeline from the initial NOFO to the completion of the final contract with solutions providers, such as Iteris, can vary significantly. In general, after an agency receives a grant award, it will take a

minimum of 12 months to receive a task order for consulting services and a minimum of 24 months to receive a purchase order for IoT devices (e.g., roadway sensors).

To understand the sequence of events that drive the timeline for funds to flow from the USDOT to a solutions provider, see the diagram below. It presents an example of the FHWA issuing a NOFO, which allows for a three- to six-month open application period prior to requiring grant applications to be officially submitted. During this period, a window of opportunity opens for a consultant to help local agencies with their grant applications. If the agency allows a consultant to assist with this activity, the effort may or may not be compensated for by the local agency. Often, any assistance will be provided informally.

Illustrative Example of Timing from Grant Funding to Solutions Provider Procurement



Notes:

- NOFO: Notice of Funding Opportunity
- Timeline and steps vary based on grant type, administering agency and grant recipient type.

After receiving the grant application, the FHWA would complete a three- to six-month process to review all grant applications and select a subset of grant applications for award. Based on prior experience, the FHWA would make awards to about 10% of the agencies submitting grant proposals. After announcing the grant awards, the USDOT's relevant regional offices will coordinate with the respective local agencies to start the process to obligate funds to the award recipients. This process may take up to one year.

Upon receiving the grant funding, the local agencies would often initiate a procurement process to select a program manager to refine the concept described in the grant application and provide program management support. If the procurement process includes a formal request for proposal, it could take up to six months to select a consultant. After selecting a consultant, it could take up to one year for the consultant to refine the project concept, develop the project approach, and obtain sign-off from executives at the respective agency. In some instances, the program manager who performs this activity may be prohibited from participating in the subsequent implementation activity. Therefore,

solutions providers, such as Iteris, are selective about whether to provide concept refinement and program management services or pursue project design, deployment, implementation, and integration services.

After the agency refines the project concept and develops the project plan, the agency would initiate a second procurement process, which would often include another request for proposal, to obtain engineering services support for the detailed design and project implementation phase. If the relevant technologies (e.g., sensors and software) that are required to implement the project concept are already specified by the agency, the engineering services providers would include those technologies in the detailed design and implementation. If not, the agency may task the engineering services provider to conduct a technology evaluation, which may or may not result in a separate bid process. Ultimately, the engineering services provider will integrate and deploy the technologies. Typically, the lapsed time to complete the entire detailed design and project implementation phase would be a minimum of 24 months.



Other Transportation-Related Programs

In addition to the initiatives funded through the USDOT’s FHWA to improve highway and secondary road infrastructure, the IIJA includes transportation-related funding for public transit, port authorities, electrification and other infrastructure activities that may require the deployment of smart mobility infrastructure management technologies. Such prospects include the design of ITS and vehicle-to-infrastructure (V2I) systems for port authorities,

as well as 511 mobile applications for city or county EV charging, rail-crossing warnings or pedestrian safety.

The total authorized funding for these activities is approximately \$216 billion, which will be distributed across six agencies within the USDOT, as well as the U.S. Department of Energy.

Summary

The IIJA has been rightly touted as an unprecedented federal investment in transportation and infrastructure. The law provides for many transportation funding opportunities beyond those associated with previous legislative efforts, including the Fixing America’s Surface Transportation (FAST) Act.

The combined formula- and discretionary-grant funds designated by the IIJA offer a unique opportunity for the implementation of a wide array of smart mobility infrastructure management projects, including in nascent product categories, such as infrastructure-to-connected-vehicle communication. Indeed, the universe of over a thousand smart mobility infrastructure management solutions providers, which includes Iteris, should benefit from up to tens

of billions of dollars in formula funding and \$5.8 billion in discretionary funding through the IIJA over a period of several years.

Formula funding is already flowing through the system, and beginning to accelerate various projects that were already on the drawing board, but not fully funded. Going forward, IIJA funding should enable agencies to deploy more innovative technologies than they would without the infusion of federal investment.

As discretionary grant funds start to flow through the system, the adoption of innovative technologies should further accelerate. Thus, the greatest impact of the IIJA is likely to be the resulting durable technology transformation that it ignites.

Legal Mention

Statements in this White Paper that refer to future plans or expectations are forward-looking statements. These statements are based on current expectations and involve many risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements. Further information on Iteris, Inc., including additional risk factors that may affect our forward-looking statements, as contained in our Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K, and our other SEC filings that are available through the SEC's website (www.sec.gov).

This White Paper is intended to provide general information about the Bipartisan Infrastructure Law and its related program, benefits, and potential opportunities to help investors familiarize themselves with it. No further publication or commercial use may be made of this White Paper without the express written permission of Iteris, Inc. Third-party links to third-party websites in this document are provided solely for your convenience. This White Paper should not be relied upon as guidance about the Bipartisan Infrastructure Law.

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About Iteris

Iteris is the world's trusted technology ecosystem for smart mobility infrastructure management. Delivered through Iteris' ClearMobility® Platform, our cloud-enabled end-to-end solutions monitor, visualize and optimize mobility infrastructure around the world, and help bridge legacy technology silos to unlock the

future of transportation. That's why more than 10,000 public agencies and private-sector enterprises focused on mobility rely on Iteris every day.

Visit www.iteris.com for more information

Sources:

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ENO Center for Transportation: [The Eno Center for Transportation – The National Leader in Policy and Professional Development for the Transportation Industry \(enotrans.org\)](#)

FHWA: [Bipartisan Infrastructure Law - FHWA | Federal Highway Administration \(dot.gov\)](#)

American Association of State Highway and Transportation Officials (AASHTO): [AASHTO - The home of transportation professionals](#)

Tax Policy Center (TPC): [What is the Highway Trust Fund, and how is it financed? | Tax Policy Center](#)

