



May 2023

HIGHWAY INFRASTRUCTURE

Better Alignment with Leading Practices Would Improve DOT's Reconnecting Communities Pilot Program

GAO Highlights

Highlights of [GAO-23-105575](#), a report to congressional committees

Why GAO Did This Study

Federal funding helped build a national network of highways, producing economic and mobility benefits. But some of these highways divided neighborhoods. The Infrastructure Investment and Jobs Act enacted in 2021 required DOT to establish the Reconnecting Communities Pilot program to “restore community connectivity” through activities such as highway removal or capping.

The act and House Report 117-99 included provisions for GAO to review aspects of federally funded highway removal and capping projects. This report addresses: (1) highway removal and capping projects that received federal funds from 2012 through 2021; (2) key considerations for effective planning of selected projects; and (3) how the Reconnecting Communities Pilot program aligns with leading practices.

GAO reviewed relevant statutes and regulations and DOT data on federal highway funding, and interviewed state and local stakeholders for eight projects selected for a range of goals. GAO also reviewed DOT pilot program documents and compared them with leading practices for pilot program design that GAO previously identified.

What GAO Recommends

GAO is making three recommendations to DOT on the Reconnecting Communities Pilot program: (1) establish performance measures for objectives, (2) assess data and evaluate pilot program results, and (3) identify a means to make scalability decisions. DOT concurred with GAO’s recommendations.

View [GAO-23-105575](#). For more information, contact Elizabeth Repko at (202) 512-2384 or repkoe@gao.gov.

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What GAO Found

In recent years, some localities have removed highways or built structures known as “highway caps” over sections of highways to repurpose the land for community or economic development. GAO identified 21 projects to remove or cap highways that received federal funding from fiscal years 2012 through 2021, the most current data available at the time of our review. Because there is no statutory or regulatory definition of a highway removal or highway cap, these projects can take many forms. For example, a highway removal project could downsize a highway to a boulevard or remove and rebuild a highway in another location. Officials from the Federal Highway Administration (FHWA) told GAO that, consistent with statute, these projects must have a transportation nexus to be eligible to use federal-aid highway formula grants. Further, officials said that FHWA makes eligibility decisions on a case-by-case basis according to project circumstances. These projects may also be eligible for certain DOT discretionary grants.

Through a review of eight selected highway removal and capping projects, GAO identified five key considerations to inform project sponsors’ effective planning of such projects: (1) establishing goals that reflect community and transportation objectives, (2) analyzing potential project effects to weigh alternatives, (3) planning for the equitable use of project land, (4) conceptualizing removal and capping projects to engage stakeholders and address concerns, and (5) developing measures to assess community goals and other project outcomes.

While the Department of Transportation (DOT) made substantial progress implementing the first of five funding rounds of the Reconnecting Communities Pilot program, GAO found that the program does not fully align with GAO’s leading practices for effective pilot program design. According to DOT officials, they faced time constraints in setting up the program and awarding initial funding, which hindered DOT’s ability to fully meet all leading practices by the first round. In February 2023, DOT announced 45 projects would receive \$185 million in first year awards. By taking steps now to fully align with these leading practices, DOT will be better positioned to improve future funding rounds and assess whether the pilot program is meeting its objective of reconnecting communities.

Alignment of Department of Transportation’s (DOT) Reconnecting Communities Pilot Program with GAO’s Leading Practices for Pilot Program Design

Leading practice	Description of leading practice	Alignment
Stakeholder communication	Appropriate two-way stakeholder communication and input should occur at all stages of the pilot.	● Aligns
Measurable objectives	Establish well-defined, appropriate, clear, and measurable objectives.	◐ Partially aligns
Assessment methodology	Articulate a data gathering and assessment methodology that details the type and source of the information necessary to evaluate the pilot and methods for collecting that information, including timing and frequency.	◐ Partially aligns
Evaluation plan	Develop a plan that defines how the information collected will be analyzed to evaluate the pilot’s implementation and performance.	◐ Partially aligns
Scalability criteria	Identify criteria for identifying lessons from the pilot to inform decisions on whether and how to integrate pilot activities into overall efforts.	○ Does not align

Source: GAO analysis of DOT information. | [GAO-23-105575](#)

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Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ARRA	American Recovery and Reinvestment Act
BUILD	Better Utilizing Investments to Leverage Development
DOT	Department of Transportation
FHWA	Federal Highway Administration
HPP	High Priority Projects
INFRA	Nationally Significant Multimodal Freight and Highway Projects (known as Infrastructure for Rebuilding America)
MnDOT	Minnesota Department of Transportation
NHPP	National Highway Performance Program
NYSDOT	New York State Department of Transportation
OST	Office of the Secretary of Transportation
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
state DOT	state department of transportation
STIP	statewide transportation improvement program
TIGER	Transportation Investment Generating Economic Recovery
WSDOT	Washington State Department of Transportation

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May 24, 2023

Congressional Committees

The development of the U.S. Interstate System in the 1950s and 1960s produced significant economic and mobility benefits for the nation but also negatively affected neighborhoods where highways were constructed. Using the unprecedented amounts of funding authorized by the Federal-Aid Highway Act of 1956, federal and state governments undertook a massive investment in building a national network of highways designated as the U.S. Interstate System.¹ The Interstate System connects major cities, allows movement of goods and services, and serves the national defense.² Some highways were constructed through existing communities to prioritize commuter travel, goods movement, and suburban access to cities. In some cases, this construction displaced communities and created barriers dividing neighborhoods and separating them from business districts or other areas of economic development. Some studies have found that highway construction disproportionately affected Black or African American neighborhoods, displacing homes, churches, schools, and businesses.³ In other cases, urban highways were constructed along city waterfronts, limiting the use of these waterfronts for economic development.

Some of these highways are near the end of their useful lives and require investments to improve their condition, presenting states and localities

¹States first began receiving federal funding specifically for the construction of the Interstate System under the Federal-Aid Highway Act of 1952, which authorized \$25 million annually for this purpose for two fiscal years. See Pub. L. No. 82-413, § 2, 66 Stat. 158, 159 (1952). The Federal-Aid Highway Act of 1956 provided a monumental increase in this funding, authorizing \$1 billion for fiscal year 1957 alone to expedite the construction, reconstruction, or improvement of the Interstate System, including any extensions of it through urban areas. The act authorized greater amounts of funding for subsequent fiscal years for the same purpose. Pub. L. No. 84-627, tit. I, § 108, 70 Stat. 374, 378 (1956).

²This U.S. Interstate System is a 49,000-mile network of highways designed and constructed with mobility and long-distance travel in mind. This system is part of the National Highway System, which consists of approximately 220,000 miles of public roads, which also includes non-Interstate highways, state routes, and other roadways.

³Deborah N. Archer, "White Men's Roads through Black Men's Homes: Advancing Racial Equity Through Highway Reconstruction." *Vanderbilt Law Review*. 73, no. 5 (2020): 1264-1265. Federal Reserve Bank of Philadelphia, "Research Department: Freeway Revolts!" (July 2019).

with the choice of reconstructing the roadways or considering other alternatives for the roadways to address community concerns. For example, some localities have removed highways to repurpose the land for economic development and reconnect local streets and neighborhoods. In other cases, localities have built platforms or “highway caps” over sections of highways and established greenspace or other amenities on top to reconnect communities, reduce noise, and decrease air pollution from the underlying highway. While there is emerging interest in highway removal and capping projects, some congressional committees have sought additional information on the definitions, benefits, and effects of these types of projects.⁴

Enacted in 2021, the Infrastructure Investment and Jobs Act authorized and appropriated a total of about \$540 billion in funding for fiscal years 2022 through 2026 for surface transportation purposes, including infrastructure and highway safety. For example, the Federal Highway Administration (FHWA), within the Department of Transportation (DOT), provides more than \$52 billion in funding annually to state departments of transportation (state DOT) through eight federal-aid highway programs.⁵ While primarily used for highway and bridge construction and preservation, some states and localities have demonstrated interest in using federal funding to remove or cap highways. In addition, the act required the Secretary of Transportation to establish the Reconnecting Communities Pilot program, through which it may award competitive grants to eligible entities for projects to “restore community connectivity” through activities such as highway removal or capping.⁶ The act authorized \$500 million in funding and appropriated another \$500 million for this pilot program for fiscal years 2022 through 2026, for a total of \$1

⁴For example, the House Committee on Appropriations directed the Federal Highway Administration to analyze and report on the benefits of highway cap parks. This directive is in House Report 116-452, which was incorporated by reference into the explanatory statement accompanying the Consolidated Appropriations Act, 2021. Pub. L. No. 116-260, 134 Stat. 1182 (2020); Explanatory Statement on the Consolidated Appropriations Act, 2021, 166 Cong. Rec. H8812 (Dec. 21, 2020); H.R. Rep. No. 116-452, at 44 (2020).

⁵See Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 11101(a)(1), 135 Stat. 429, 443 (2021) (specifying amount of funding authorized for each fiscal year and the eight programs).

⁶Infrastructure Investment and Jobs Act § 11509 (codified at 23 U.S.C. § 101 note). What entities are eligible to apply for and receive grants under this pilot program depends on the type of grant. The two types of grants that may be awarded through this pilot program are planning and capital construction.

billion.⁷ In addition, the Inflation Reduction Act of 2022 authorized the Neighborhood Access and Equity Grant Program and appropriated over \$3 billion for fiscal year 2022 certain transportation projects, including those that may reconnect communities.⁸

The Infrastructure Investment and Jobs Act and House Report 117-99 included provisions for GAO to identify and review certain aspects of federally funded highway removal and capping projects.⁹ This report addresses:

- the number of projects that sponsors, such as state DOTs or local governments, have undertaken to remove or cap highways from 2012 through 2021, and the number that have received federal funding;
- key considerations for effective planning of highway removal and capping projects from selected projects implemented; and
- the extent to which DOT's Reconnecting Communities Pilot program design aligns with leading practices for pilot program design.

To determine the number of highway removal and capping projects undertaken, we assembled a list of projects from fiscal years 2012 through 2021, the most current data available at the time of our review, through background research and by reviewing FHWA data. We also conducted interviews with stakeholders including representatives from the American Association of State Highway and Transportation Officials (AASHTO), and others. To confirm and expand the list of projects, we provided it to FHWA officials, who reviewed the list based on their knowledge and records of these projects. We chose this 10-year period to identify a range of recent projects implemented, including projects from the most recently completed fiscal year at the time of our data collection.

⁷Specifically, the Infrastructure Investment and Jobs Act authorized \$150 million and appropriated \$100 million for planning grants and authorized \$350 million and appropriated \$400 million for capital construction grants. The \$500 million appropriated for this pilot program is available until expended. Infrastructure Investment and Jobs Act § 11101(d)(3); Infrastructure Investment and Jobs Act, div. J., tit. VIII, 135 Stat. 1427.

⁸Pub L. No. 117-169, § 60501(a), 36 Stat. 1818, 2080 (2022) (codified at 23 U.S.C. § 177).

⁹Infrastructure Investment and Jobs Act § 11509(e)(2) (highway removal). House Report 117-99 was incorporated by reference into the explanatory statement accompanying the Consolidated Appropriations Act, 2022. Pub. L. No. 117-103, 136 Stat 49 (2022); Explanatory Statement on the Consolidated Appropriations Act, 2022, 168 Cong. Rec. H3028 (Mar. 9, 2022); H.R. Rep. No. 117-99, at 44 (2021) (highway capping).

To determine the number of these projects that received federal funding, we asked DOT to identify the funding amounts that had been obligated for these highway removal and capping projects from fiscal years 2012 through 2021, as of November 2022. In response, FHWA officials compiled data from FHWA's Financial Management Information System, which tracks information on the federal funding sources and amounts obligated for highway projects. We determined that this approach was sufficient for our purposes of reporting the federal-funding sources used for the highway removal and capping projects, as reported by FHWA.

We are not reporting the specific amounts obligated for the highway removal and capping projects we identified. In some cases, these projects were only one component of a larger highway project, and the amounts obligated for the removal or capping component were not distinguished within the overall amounts obligated for the larger project. Consequently, we are not reporting the overall costs of the projects we identified because this information may not provide an accurate picture of the costs of highway removal and capping projects, which may also include other project elements. The projects we identified and their federal-funding sources are listed in appendix I.

To determine key considerations when planning highway removal and capping projects, we selected eight of the projects from the list of identified highway removal and capping projects discussed above. We selected these projects to reflect a range of project characteristics, including an objective to reconnect communities, federal funding received, and geography. In addition, we sought projects undertaken from fiscal years 2012 through 2021 so we could meet with stakeholders involved in these projects about the issues considered in planning the selected projects. Selected projects included two planned removal projects, two planned capping projects, two completed removal projects, and two capping projects completed during the 10-year timeframe. The projects we selected were:

1. Interstate 81 (I-81) Viaduct Project planned highway removal (Syracuse, New York);
2. Interstate 375 (I-375) planned highway removal (Detroit, Michigan);

-
3. Interstate 70 (I-70) planned highway cap, part of the Central 70 project (Denver, Colorado);¹⁰
 4. Interstate 94 (I-94) planned highway cap, known as the Rondo Land Bridge (St. Paul, Minnesota);
 5. State Route 99 (SR-99 or Alaskan Way Viaduct) completed highway removal (Seattle, Washington);
 6. State Route 940T (SR-940T or east segment of Inner Loop Expressway) completed highway removal (Rochester, New York);
 7. State Highway Spur 366 (Woodall Rodgers Freeway) completed highway cap, known as Klyde Warren Park (Dallas, Texas);
 8. Interstate 579 (I-579) completed highway cap, known as Frankie Pace Park; previously the I-579 Urban Connector (Pittsburgh, Pennsylvania).

We interviewed project stakeholders for each of the eight selected projects including state departments of transportation, local government agencies, metropolitan planning organizations, and other organizations representing transportation interests (such as trucking associations or port authorities) and community interests (neighborhood groups or park foundations) as applicable.¹¹ We selected these organizations to reflect a variety of perspectives on the projects and based on recommendations from the project sponsors. From these interviews, we identified key considerations that could inform the effective planning of highway removal and capping projects.

We then confirmed the key considerations with stakeholders for each project by sending a web survey to the 32 stakeholders we interviewed. This survey included a summary of the key considerations and asked stakeholders to indicate whether or not they concurred that the key consideration applied to their respective project. The survey also gave survey respondents an opportunity to provide additional information regarding each of the identified considerations. We received responses from 20 stakeholders, including all eight project sponsors. Our findings

¹⁰At the time we selected the Central 70 project, the I-70 highway cap portion of this project was planned. The highway cap was completed in 2022 while our work was in progress.

¹¹Metropolitan planning organizations are designated policy boards responsible for carrying out the transportation planning process in urbanized areas, which are areas with a population of 50,000 or more, as determined by the Census Bureau. A metropolitan planning organization must be designated for each urbanized area within a state. 23 U.S.C. § 134(b), (d).

are not generalizable to all highway removal or capping projects but could provide examples to state and local entities and aid them in planning future projects. The stakeholder organizations we interviewed for each of the eight selected projects are listed in appendix II.

To examine the extent to which DOT's Reconnecting Communities Pilot program aligns with leading practices for pilot program design, we reviewed DOT documents and interviewed DOT officials. We assessed DOT's design of the program based on our review of program documentation, public webinars, and interviews with program officials. We compared GAO leading practices for effective pilot program design against the design practices used by DOT to inform future decisions to identify areas of alignment and gaps, if any.¹²

For all objectives, we reviewed applicable statutes and regulations. We interviewed a non-generalizable selection of organizations knowledgeable about highway removal and capping projects including the Association of Metropolitan Planning Organizations, the Congress for the New Urbanism, and the American Trucking Association, among others. We selected these organizations based on our background research and past GAO reports. In addition, we reviewed relevant DOT documents. We also interviewed DOT officials from the Office of the Secretary of Transportation and FHWA about how they administered federal funds that have been used for highway removal and capping projects.

We conducted this performance audit from December 2021 to May 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹²GAO, *DATA ACT: Section 5 Pilot Design Issues Need to Be Addressed to Meet Goal of Reducing Recipient Reporting Burden*, [GAO-16-438](#) (Washington, D.C.: Apr. 19, 2016).

Background

Federal and State Roles in Highway Projects and Federal Funding Sources

The federal role in highway projects is primarily to administer funding for these projects to states and to provide oversight and technical assistance. Congress passes legislation that authorizes and appropriates funding for each fiscal year for highway and bridge projects, and FHWA generally administers the distribution of this funding to states.¹³ As part of its oversight role, FHWA also reviews and approves each state's statewide transportation improvement program (STIP), which identify the projects selected by states for federal funding, and is responsible for a program to monitor the effective and efficient use of the funding it administers.¹⁴

The design, construction, and preservation of highway and bridge projects are led by state and local governments, with financial and technical assistance from FHWA through the federal-aid highway program. Most roads and bridges are locally or state owned and operated. States select which eligible projects will be federally funded and are generally responsible for overseeing project development and construction to ensure they comply with applicable statutes and regulations.

Enacted in November 2021, the Infrastructure Investment and Jobs Act authorized and appropriated funding totaling about \$350 billion for fiscal years 2022 through 2026 for federal highway programs, including the federal-aid highway program.¹⁵ FHWA provides most of the federal-aid highway program's funding through formula grant programs, meaning it apportions (distributes as prescribed by statutory formula) the funding to the states. According to DOT, the Infrastructure Investment and Jobs Act provided over \$110 billion for discretionary grant programs for fiscal years 2022 through 2026 to fund transportation infrastructure, such as

¹³We use the term "states" throughout, because for the purpose of FHWA-administered funding, a "state" is defined as any of the 50 U.S. states, the District of Columbia, or the Commonwealth of Puerto Rico. 23 U.S.C. § 101(a)(28).

¹⁴Only projects in an approved STIP are eligible for FHWA-administered funds, subject to limited exceptions. 23 C.F.R. § 450.222(a). FHWA's oversight program must include annual reviews addressing state DOT's financial management systems, as well as reviews addressing elements of states' project delivery systems. 23 U.S.C. § 106(g).

¹⁵For the purposes of this report, the federal-aid highway program is an umbrella term for the programs through which funding is provided to states and other entities under 23 U.S.C. Chapter I, and is generally administered by FHWA.

highways, bridges, and ports, among others.¹⁶ Some of these programs are part of the federal-aid highway program and others are not.¹⁷

- **Formula grants.** The Infrastructure Investment and Jobs Act authorized approximately \$273 billion for federal-aid highway formula grant programs for fiscal years 2022 through 2026.¹⁸ These programs include the National Highway Performance Program, the Surface Transportation Block Grant Program, the Highway Safety Improvement Program, and the Congestion Mitigation and Air Quality Improvement Program, among others. The National Highway Performance Program is the primary source of federal-aid highway program funding to support the condition and performance of highways and bridges on the National Highway System, including the Interstate System.
- **Discretionary grants.** DOT administers discretionary grant programs to fund various types of transportation projects and activities. Through discretionary grant programs, states or other eligible entities apply for project funding and DOT evaluates applications through a competitive process to award funds to applicants. DOT bases its award decisions on selection or evaluation criteria established by statute and in public notices it issues. These notices of funding opportunity announce the funding amounts available for award and more detailed program requirements, which must be consistent with federal statutes and regulations. Those programs include pre-existing programs such as Rebuilding American Infrastructure with Sustainability and Equity (RAISE), Nationally Significant Multimodal Freight and Highway Projects (known as Infrastructure for America (INFRA)), and the newly authorized Reconnecting Communities Pilot program, among others. As previously noted, the Inflation Reduction Act of 2022 authorized the Neighborhood Access and Equity Grant Program and appropriated over \$3 billion for the program for fiscal year 2022 to

¹⁶Some of these discretionary grant programs, such as the Rebuilding American Infrastructure with Sustainability and Equity Grant Program, may fund surface transportation projects other than highways, including rail, bus, maritime, and pedestrian and cycling projects. See 49 U.S.C. § 6702.

¹⁷For example, the Bridge Investment Program, a new program authorized under the Infrastructure Investment and Jobs Act, is part of the federal-aid highway program. See Infrastructure Investment and Jobs Act § 11118 (codified at 23 U.S.C. § 124). In contrast, the Reconnecting Communities Pilot program is not part of the federal-aid highway program.

¹⁸Infrastructure Investment and Jobs Act § 11101(a)(1).

fund certain transportation projects, including those that may reconnect communities.¹⁹

Highway Removal and Capping Projects

Projects to remove or cap existing highways are among the types of projects that states may seek to implement using certain federal funding. In general, both types of projects aim to reconnect communities divided by highways, while also adding greenspace, reducing air and noise pollution, or enhancing pedestrian mobility. According to the University of North Carolina's Highway Safety Research Center, a highway removal project can downsize a highway to a boulevard or relocate a highway so that the land can be used for other purposes.²⁰ For example, officials associated with a project in Rochester, New York, told us that the eastern segment of the Inner Loop Expressway in Rochester, New York, was underutilized with low traffic volume, and the local and state government removed the highway in 2017 and replaced it with surface-level streets (see fig. 1). Such projects may result in reduced vehicle capacity for affected highways and require local planners to account for changes in traffic flows and congestion.

¹⁹Pub L. No. 117–169, § 60501(a), 36 Stat. 1818, 2080 (2022) (codified at 23 U.S.C. § 177).

²⁰The Emerging Language of Highway Removals, Pedestrian and Bicycle Information Center (Chapel Hill, NC).

Figure 1: Inner Loop East Highway Removal Project, Rochester, New York, Before and After

Project: Inner Loop East (highway removal, completed 2017) - Rochester, New York

Project sponsor: City of Rochester



Before: The eastern segment of the Inner Loop before removal.



After: A boulevard replaced the Inner Loop segment and created space for housing and development.

Source: City of Rochester (photographs). | GAO-23-105575

States may also seek to restore connections between neighborhoods that are bisected by highways by constructing a cap park over the highway. Highway caps, sometimes called freeway lids or decks, generally include the construction of a wide bridge featuring a park, plaza, or small buildings over a section of highway. For example, in coordination with the state DOT, a local non-profit organization in Dallas, Texas, constructed the Klyde Warren Park cap over the Woodall Rodgers Freeway to connect downtown with adjacent neighborhoods and to revitalize the area (see fig. 2). In general, highway capping projects do not require demolishing the existing highway if there is sufficient clearance for vehicle traffic under the cap. Once constructed, highway capping projects might not affect the number of lanes or the overall vehicle capacity of the highway.

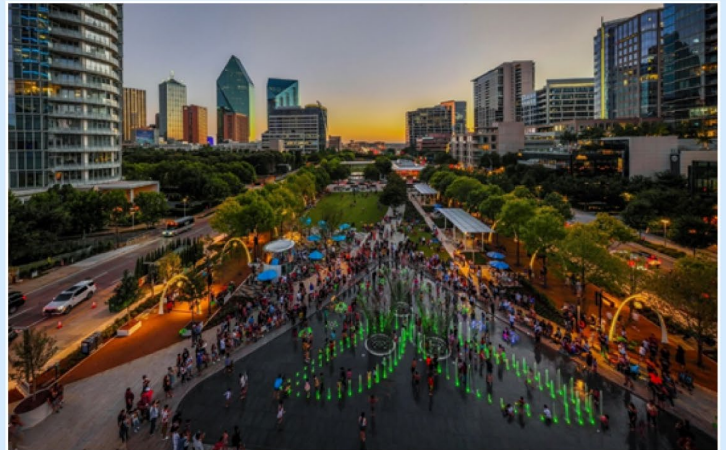
Figure 2: Woodall Rodgers Freeway Highway Capping Project, Dallas, Texas, Before and After

Project: Klyde Warren Park (highway cap, completed 2012) - Dallas, Texas

Project sponsor: Woodall Rodgers Park Foundation



Before: A section of the Woodall Rodgers Freeway, before being capped.



After: The same section of highway with a cap and a park installed on top.

Source: Woodall Rodgers Park Foundation (photographs). | GAO-23-105575

Highway Construction and Transportation Equity

Historical academic research has documented examples of highway officials designing roadways that adversely affected some communities or separated communities based on race. For example, during the 1950s and 1960s, in Miami, Florida, Interstate 95 was built through the center of Overtown, a center of economic and cultural life for Miami's Black or African American population. The highway displaced about 10,000 people, took up over 40 square blocks, and removed the Black or African American business district. In Flint, Michigan, two historically Black or African American communities comprising about 3,000 families were cleared to construct a highway.²¹ Also, in the 1950s in Atlanta, Georgia, highway builders who planned Interstate 20 West used the highway to separate the neighborhood of Adamsville into Black or African American and White communities.²²

DOT's strategic plan for fiscal years 2022 through 2026 notes its intention to deliver a safe, clean, and equitable transportation system. According to

²¹Archer, "White Men's Roads Through Black Men's Homes."

²²Ronald H. Bayor, *Race and the Shaping of Twentieth-century Atlanta*, (1996) 61.

DOT, this is the Department's first strategic plan that includes equity as a strategic goal.²³ In the strategic plan, DOT defines equity as supporting and engaging people and communities to promote, safe, affordable, accessible, and multimodal access to opportunities and services while reducing transportation-related disparities, adverse community impacts, and health effects. In addition, DOT's Equity Action Plan identifies actions to help achieve its equity goals, such as providing technical assistance to small disadvantaged businesses, focusing on civil rights protections, and launching a national technical assistance center to improve local transportation planning. The Equity Action Plan notes that past transportation policy and investment decisions have often failed to address inequities or even made them worse, especially in historically overburdened and underserved communities.

As previously mentioned, the Infrastructure Investment and Jobs Act authorized and appropriated a total of \$1 billion for the Reconnecting Communities Pilot program for fiscal years 2022 through 2026.²⁴ Under this pilot program, DOT may award competitive grants for projects to reconnect communities, such as those removing, retrofitting, or mitigating highways or other eligible transportation facilities that create barriers to community connectivity, including barriers to mobility, access, or economic development. The act requires DOT to submit a report to certain congressional committees that evaluates the pilot program, including information on outcomes and impacts.²⁵ The Notice of Funding Opportunity for fiscal year 2022 specifically lists infrastructure removal, capping, and lids as possible types of projects that may be proposed to reconnect communities using this pilot program funding. In February 2023, DOT announced that it had awarded \$185 million for 45 projects in its first cycle of funding under the pilot program, including six grants for capital construction projects and 39 grants for the planning of future projects.

²³The DOT strategic plan establishes six strategic goals including addressing (1) safety, (2) economic strength and global competitiveness, (3) equity, (4) climate and sustainability, (5) transformation, and (6) organizational excellence.

²⁴Of this funding, \$250 million is for planning grants and the remaining \$750 million for capital construction grants.

²⁵Infrastructure Investment and Jobs Act §11509(e).

From 2012 through 2021, 36 Projects to Remove or Cap Highways Have Been Undertaken, and More Than Half Received Federal Funds

States and Other Project Sponsors Have Planned or Completed a Variety of Highway Removal or Capping Projects

We identified 36 projects—11 highway removal and 25 capping projects—that sponsors planned or completed in fiscal years 2012 through 2021.²⁶ These projects span 15 states and the District of Columbia and comprise 12 completed projects and 24 projects that were in the planning or construction phases of development.²⁷ See appendix 1 for information on the projects we identified. Generally, state DOTs are sponsors of these projects, with primary responsibility for their design, funding, and contracting. In other cases, cities or local community organizations may sponsor the project or work in partnership with the state. According to a representative from an urban planning organization we spoke with, local and community organizations can also initiate the planning process and motivate community or elected officials to move a highway removal or capping project forward. Figure 3 shows these 36 projects.

²⁶These projects do not include highway removal or capping projects for which funding may have been awarded through DOT's Reconnecting Communities Pilot program. Awards for fiscal year 2022 were announced by DOT on February 28, 2023, and thus were outside of the timeframe of our review.

²⁷Of the 12 completed projects, three were highway removals and nine were highway caps. Of the 24 planned projects, eight were highway removals and 16 were highway caps.

Figure 3: Planned or Completed Highway Removal and Capping Projects, Fiscal Years 2012 through 2021



Source: GAO analysis and Map Resources. | GAO-23-105575

Note: A highway “cap”, sometimes called a freeway lid or deck, generally includes the construction of a wide bridge featuring a park, plaza, or small buildings over a section of highway. A highway removal project can downsize a highway to a boulevard or relocate a highway so that the land can be used for other purposes.

We found a variety of goals for projects to remove or cap highways. For example, we identified highway capping projects in Dallas, Texas, and Pittsburgh, Pennsylvania, that were constructed over highways in business districts. In both cases, the project sponsors built the caps to spur economic growth and development, among other goals. Similarly, we identified highway removal projects in Rochester, New York, described above (see fig. 1) and Detroit, Michigan. In both cases, project sponsors told us that these projects were intended to help manage the costs of rehabilitating the aging roadways and rightsizing them to meet current needs. For example, officials with the City of Rochester told us that the city’s population had declined since the Inner Loop was originally constructed and the excess roadway capacity was no longer needed. The

project allowed the city to downsize portions of the six-lane highway and create new land for housing and economic development. The completed project filled in the below-grade highway and replaced it with a smaller two-lane boulevard at the same grade as the connecting streets.

Although we identified 36 projects to remove or cap highways from 2012 through 2021, there is no comprehensive inventory of these projects, and highway removal and highway capping projects are not defined in statute or regulation. According to FHWA officials and AASHTO representatives, highway removal projects can take many different forms, including downsizing a highway to a boulevard or removing and rebuilding a highway in another location. FHWA officials told us that if a cap carries a public roadway, the owner has the option to treat the highway cap as either a bridge or a tunnel for the purposes of inspection. Both options are subject to FHWA regulations that require states to regularly conduct bridge and tunnel inspections. Officials continued, if the cap does not carry a public roadway, it is treated as a highway tunnel for the purposes of inspection. States must submit the resulting inspection data to the respective National Bridge Inventory or National Tunnel Inventory, which are FHWA-maintained databases.²⁸ FHWA officials stated that although highway caps are included in the National Bridge Inventory or the National Tunnel Inventory, they are not specifically identified in either inventory or other federal databases as highway caps, primarily because there is no federal definition for a highway cap.²⁹ FHWA officials also told us that highway caps can be added at various stages of highway construction, such as when a highway is being built, years after a highway was built, or as part of a large reconstruction effort. According to a representative from an urban planning organization, there are many different scales of highway caps, making it difficult to narrow to a single definition.

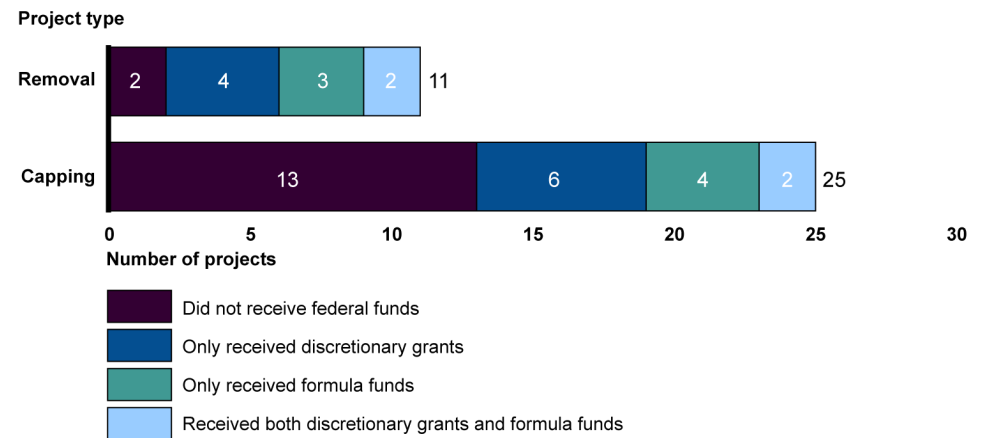
²⁸FHWA's regulations requiring inspections and inspection data reporting for bridges and tunnels are located in 23 C.F.R. Part 650.

²⁹In response to a congressional directive, FHWA issued a report on highway cap parks, a subset of highway caps, which includes a list of 60 cap parks. Federal Highway Administration, *The Benefits of Highway Cap Parks: A Report to Congress*, December 21, 2022.

Twenty-one Projects Received Federal Formula or Discretionary Grant Funding

As of November 2022, 21 of the 36 highway removal and capping projects we identified had received federal funds.³⁰ Conversely, 15 of the 36 projects we identified had not received any federal funding for planning or construction, suggesting that these projects have thus far been funded by state, local, or private funding sources.³¹ Figure 4 shows the number of highway removal and capping projects by federal funding type. See appendix I for additional information on the source of federal funds for these projects.

Figure 4: Number of Highway Removal and Capping Projects by Type of Federal Funding, 2012 through 2021



Source: GAO analysis of Department of Transportation data. | GAO-23-105575

Of the 21 projects that received federal funds, 14 projects received discretionary grants, 11 projects received formula grants, and four of these projects received both types of grants:

- Of the 14 projects that received discretionary grant funds, the most commonly used funding was awarded under DOT’s RAISE program, formerly known as the Transportation Investment Generating

³⁰FHWA officials stated that they do not track highway removal or capping projects in their Financial Management Information System. However, they were able to identify these projects based on the information we gave them and provide information on the federal funding that the 21 projects received.

³¹Because some of these projects are still in the planning phases, the number of projects receiving federal funding could expand as the projects advance toward construction.

Economic Recovery (TIGER) program.³² In total, RAISE or TIGER helped fund seven highway capping and four removal projects, including the previously discussed Rochester, New York, project that received \$17 million in TIGER funds. In addition, the City of Pittsburgh, Pennsylvania, used roughly \$21 million in TIGER grant funds to cap sections of I-579. Stakeholders told us this project helped reconnect the disadvantaged community of Hill District to downtown Pittsburgh and addressed pedestrian safety issues.³³

- Of the 11 projects that used formula funds, the most commonly used were apportioned for the National Highway Performance Program, which helped fund five capping projects and five highway removal projects. The Surface Transportation Block Grant program, formerly known as the Surface Transportation program, funded two highway capping and three removal projects, including the planned removal of I-375 in Detroit. According to the Michigan Department of Transportation, this project includes creating a new boulevard with greenspace and economic development opportunities. It also aims to address a history of negative impact on two Black or African American communities (see fig. 5).

³²This program was also formerly known as Better Utilizing Investments to Leverage Development (BUILD), however no BUILD funds were awarded for highway removal or capping projects.

³³In another example, the City of St. Paul, Minnesota, received \$1.4 million in RAISE funds to plan for roadway improvements in the neighborhoods adjacent to the Interstate 94 highway, which currently bisects the Rondo neighborhood. A related highway capping project, known as the Rondo Land Bridge, is discussed in detail later in this report.

Figure 5: Photograph of Interstate 375 in Detroit, Michigan, and Graphic Rendering of Planned Highway Removal Project

Project: Interstate 375 (highway removal, planned) - Detroit, Michigan

Project sponsor: Michigan Department of Transportation



Current: A section of Interstate 375 in Detroit, Michigan.



Planned: The planned removal would allow for a boulevard and additional acres of land for redevelopment.

Source: Michigan Department of Transportation (photograph and artist's rendering). | GAO-23-105575

FHWA officials stated that federal-aid highway program grants could fund highway removal and capping projects, but eligibility would depend on the specific circumstances of the project and grant program requirements. The officials noted that the functional classification of the roadway, including whether a roadway is an Interstate or other type of highway, could affect which federal-aid highway program funds a project could be eligible to receive. For example, the National Highway Performance Program provides funding for the condition and performance of the National Highway System and other purposes.³⁴ This funding may be used for purposes that include the construction, reconstruction, and preservation of segments of the National Highway System, as well as the construction and replacement of bridges and tunnels on the National Highway System.³⁵ However, the statutes and regulations that govern the National Highway Performance Program do not specify whether highway

³⁴23 U.S.C. § 119. The National Highway System includes the Interstate System, as well as other roads important to the nation's economy, defense, and mobility, and must be designated by FHWA in consultation with appropriate federal agencies and the states. 23 U.S.C. § 103.

³⁵To be eligible for National Highway Performance Program funding, the projects must also support progress toward the achievement of national performance goals for improving the condition of National Highway System infrastructure and be consistent with federal requirements for state and local transportation planning.

removal or capping projects are eligible or ineligible uses of the program's funds. FHWA officials told us that decisions of eligibility for the use of these funds for highway and capping projects are made on a case-by-case basis by the relevant FHWA Division Office, based on project-specific conversations with stakeholders and program requirements.³⁶ Highway capping and removal projects may also be eligible for DOT discretionary grant programs, such as RAISE and the Reconnecting Communities Pilot program, as discussed later in this report.

FHWA officials also stated that the eligibility of highway removal or capping projects to receive federal-aid highway program formula grants is limited to projects with a transportation nexus, or purpose, consistent with statute, such as adding or maintaining transportation capacity. The officials noted that a project that is limited to the removal of a highway may not be eligible for federal formula funding, but a project that removed a highway and rebuilt or replaced it elsewhere may be eligible.

One project sponsor for a highway removal project said that it did not use federal funding to remove the highway but has not faced limitations on using federal funding on prior projects. Washington State DOT (WSDOT) officials told us they used state, not federal, funding for the demolition of the Alaskan Way Viaduct (an elevated highway that previously carried SR-99; see fig. 6). However, WSDOT officials told us that the state did use federal funding to help pay for other aspects of the broader Alaskan Way Viaduct Removal Program, such as the costs of constructing the SR-99 tunnel underneath the city and for reconstructing the surface street roadway for Alaskan Way. Officials told us that they had already expended their federal formula funds on these other aspects before the demolition, though from their project experiences on other programs, FHWA would not preclude using federal funds for removal or demolition.

³⁶FHWA officials stated that in the case of removing Interstate System segments, the state DOT must make a request for withdrawal of the highway from the Interstate System, and FHWA has guidance on the administrative requirements for that withdrawal.

Figure 6: Alaskan Way Viaduct Highway Removal, Seattle, Washington, Before and After

Project: State Route 99 Alaskan Way Viaduct (highway removal, completed 2019) - Seattle, Washington

Project sponsor: Washington State Department of Transportation



Before: A section of State Route 99, before removal.



After: The viaduct that carried State Route 99 has been removed.






Source: Washington State Department of Transportation (photographs). | GAO-23-105575

Key Considerations to Inform Effective Planning of Selected Highway Removal and Capping Projects Include Developing Goals and Measures

In our review of eight selected highway removal and capping projects, we identified five key considerations that project stakeholders discussed as important to inform effective planning of these projects (see fig. 7). These considerations address a range of activities that project sponsors and other stakeholders could undertake when planning highway removal or capping projects, including establishing goals that reflect community and transportation objectives and developing measures to assess outcomes of those objectives. The majority of stakeholders who responded to our request to provide comment on these key considerations concurred with them, as discussed below.³⁷ For a list of the stakeholders we interviewed for these eight selected projects, see appendix II.

³⁷After interviewing 32 stakeholders across eight selected projects and analyzing the collected information, we conducted a web survey using draft language for the five key considerations to each stakeholder. We received responses from 20 stakeholders, including at least one stakeholder for each of the eight projects, as well as the eight project sponsors for each project. For each key consideration below, we provide the total number of concurrence responses for all responding stakeholders and for each project sponsor.

Figure 7: Key Considerations to Inform Effective Planning of Highway Removal or Capping Projects

Key considerations	Stakeholder perspectives
 <p>Establishing goals that reflect community and transportation objectives</p>	<p>Stakeholders cited the importance of establishing project goals that reflect both local community objectives, such as restoring neighborhood connections and improving quality of life, while also improving the condition or performance of the transportation infrastructure.</p>
 <p>Analyzing potential project effects to weigh alternatives</p>	<p>Stakeholders cited the importance of analyzing highway removal or capping costs and the potential impacts of project alternatives on car and freight traffic.</p>
 <p>Planning for the equitable use of project land</p>	<p>Stakeholders cited the importance of planning for the use of land created from these projects to generate economic development without displacing current residents.</p>
 <p>Conceptualizing removal and capping projects to engage and educate stakeholders and address concerns</p>	<p>Stakeholders cited the need for community engagement to educate residents and others about highway removal and capping project concepts and address their concerns in designs.</p>
 <p>Developing measures to assess community goals and other project outcomes</p>	<p>Stakeholders expressed uncertainty over how to develop measures for reconnecting their communities and evaluating the effects of highway removal and capping projects.</p>

Source: GAO analysis of stakeholder interviews. | GAO-23-105575

Establishing Goals that Reflect Community and Transportation Objectives

Stakeholders cited the importance of establishing highway removal or capping project goals that reflect both local community and transportation objectives. For example, restoring neighborhood connections and improving quality of life, while also improving the condition or performance of the transportation infrastructure. Community objectives may also include increasing affordable housing and economic opportunities for local residents, addressing highway noise or air pollution, and reducing construction effects during construction. Transportation objectives may include maintaining aging infrastructure to serve passenger and freight vehicle uses, and improving roadway safety or conditions.³⁸

³⁸Similarly, AASHTO representatives described one of the biggest challenges of a removal or capping project is balancing the competing needs of those living in the neighborhoods divided by the highway with the needs of commuters using the highway for daily travel conveniences.

Rondo Land Bridge Project, Interstate 94 in St. Paul, Minnesota

Highway capping projects intended to benefit local communities may be part of the broader state or local transportation planning efforts. For example, a non-profit organization representing the Rondo community in St. Paul, Minnesota is proposing to construct a highway cap over Interstate 94 (I-94), which is owned and operated by the Minnesota Department of Transportation (MnDOT).

Community leaders of the Rondo neighborhood—a historic Black or African American community and business district in St. Paul—told us that the I-94 construction in the 1950s had a devastating impact on a thriving and diverse community in which 700 homes and 300 businesses were demolished. The proposed highway cap would reconnect the neighborhood, and land created from the cap would support economic development, including job and entrepreneurial training and new housing.

MnDOT is in the early stages of a planning effort, known as “Rethinking I-94” that covers a 13-mile corridor between Minneapolis and St. Paul, including the area of the proposed highway cap in the Rondo neighborhood. “Rethinking I-94” is focused on addressing aging highway and bridge infrastructure along the corridor, while also developing and analyzing alternatives to address local community concerns.

Source: GAO. | GAO-23-105575

In total, 18 of the 20 stakeholders who responded to our survey—including seven of the eight project sponsors—concurred that establishing goals that reflect community and transportation objectives was an important consideration to their project.³⁹ Specifically, all three of the stakeholders responding to our survey for the Rondo Land Bridge project in St. Paul, Minnesota, concurred with this consideration. This project plans to construct a highway cap over I-94 in the Rondo neighborhood. There are two related planning efforts underway concerning this project. The first is led by a local community organization that is focused on the proposed cap over I-94 in Rondo. The second is led by the Minnesota Department of Transportation (MnDOT) and is planning for the entire I-94 corridor. Officials with the metropolitan planning organization for the region told us that for state funds to be used for the highway cap, the project purpose would need to address transportation-related goals, such as improving mobility or the state of repair of the roadway. At the time of our review, project stakeholders were developing a project purpose and needs statement to address both goals of the Rondo neighborhood and the transportation-related goals of the state. See figure 8 for a rendering of the proposed Rondo Land Bridge highway capping project, and the adjacent sidebar for additional project information.

³⁹One project sponsor expressed no opinion on this key consideration, and one other stakeholder did not concur.

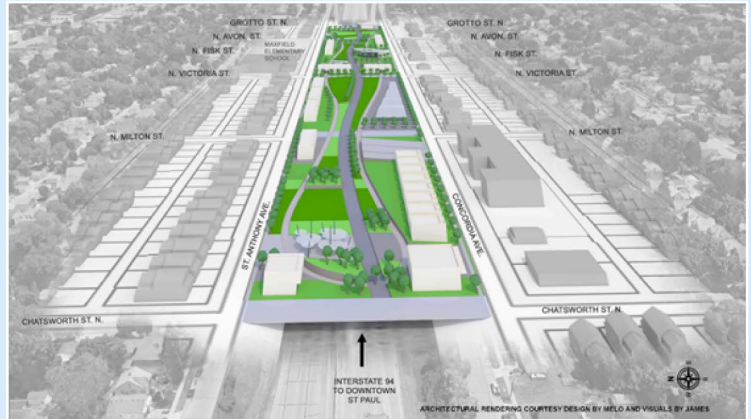
Figure 8: Photograph of Interstate 94 through the Rondo Neighborhood and Graphic Rendering of the Planned Highway Capping Project, St. Paul, Minnesota

Project: Interstate 94 Rondo Land Bridge (highway cap, planned) - St. Paul, Minnesota

Project sponsor: ReConnect Rondo



Current: A section of Interstate 94 in St. Paul, Minnesota.



Planned: The planned cap and development over the same section of Interstate 94.

Sources: GAO (photograph, left); Design by Melo and Visuals by James (artists' rendering, right). | GAO-23-105575

Analyzing Potential Project Effects to Weigh Alternatives

Interstate 81 Removal Project, Syracuse, New York

Stakeholders involved in the planned removal of the Interstate 81 (I-81) viaduct in Syracuse, New York, identified the importance of analyzing the potential effects of the project on the range of parties involved. Those parties include the local community surrounding the roadway; truck traffic using the corridor to deliver goods; and residential, institutional, and business communities surrounding Syracuse. For example, New York State Department of Transportation (NYSDOT) officials sponsoring the project told us that the I-81 viaduct is approaching the end of its useful life and requires significant ongoing maintenance to ensure its safety and state of repair.

NYSDOT officials said that removing the viaduct and replacing it with a street-level grid would be more cost-effective in the long-run than maintaining the viaduct. The officials set a threshold for the proposed alternative to not exceed 2.5 times the cost of rehabilitating the viaduct. City of Syracuse officials told us that this project is an opportunity to make significant quality of life improvements to the community living in public housing surrounding the viaduct.

However, one stakeholder told us that NYSDOT has not sufficiently analyzed the extent of delay that truck traffic could experience by circumventing the city and the associated costs to the trucking industry. NYSDOT officials told us that they performed traffic analysis to assess the effect on several project alternatives when deciding that the state's selected alternative would be to remove the viaduct and improve an alternative highway that circumvents the city. The highway, currently Interstate 481, would become the new I-81.

Source: GAO. | GAO-23-105575

Stakeholders cited the importance of analyzing highway removal or capping costs and the potential impacts of project alternatives on car and freight traffic. In cases where highway sections were proposed for removal or downsizing, project sponsors conducted traffic modeling to assess impacts on freight and other vehicle movement. Project sponsors also weighed the costs and benefits of downsizing highway sections and providing increased mobility for bikes and pedestrians with the costs of proposed alternatives, such as repairing or reconstructing existing infrastructure. In cases where selected highway removals had limited freight traffic or were considered underutilized, vehicle movement tradeoffs were less of a concern to stakeholders.⁴⁰

In total, 13 of the 20 stakeholders who responded to our survey concurred that analyzing potential project effects to weigh alternatives was an important consideration for their projects.⁴¹ These stakeholders include each of the project sponsors from the four selected highway removal projects, and this consideration is of particular interest to those types of projects.⁴² For example, officials with the New York State Department of Transportation told us they considered many different alternatives to address the deteriorating elevated highway (viaduct) that carries I-81 traffic through downtown Syracuse, New York. Officials worked together with the local metropolitan planning organization and other stakeholders to study alternatives before selecting a "community grid" design that would remove the viaduct and replace it with a series of street grid improvements and reroute through traffic around the city. See figure 9 for a rendering of the removal and the sidebar for additional project details.

⁴⁰Additionally, of the highway capping projects we selected, stakeholders told us that capping projects had little to no expected or realized impact over the movement of freight traffic.

⁴¹Five of the responding stakeholders expressed no opinion on this consideration, and two did not concur.

⁴²As previously noted, highway removal projects may result in reduced vehicle capacity for affected highways and require local planners to account for changes in local traffic flows and congestion. Analysis of these potential project effects could be particularly important in weighing decisions to replace highways, in comparison with other alternatives.

Figure 9: Photograph of the Interstate 81 Viaduct and a Graphic Rendering of the Planned Highway Removal Project in Syracuse, New York

Project: Interstate 81 Viaduct Project (highway removal, planned) - Syracuse, New York

Project sponsor: New York State Department of Transportation



Current: A section of Interstate 81 on a viaduct that runs through Syracuse, New York.



Planned: The viaduct removal can allow for a street-level boulevard and green space.

Source: New York State Department of Transportation (photograph and artist's rendering). | GAO-23-105575

Planning for the Equitable Use of Project Land

Stakeholders cited the importance of planning for the use of land created from highway capping and removal projects to generate economic development without displacing current residents and businesses. Removing and capping highways can create new developable land that may be used to facilitate economic development, establish greenspace, or meet other needs. Stakeholders noted the importance of developing land-use strategies such as setting affordable housing requirements for future developments so that lower-income residents are not displaced. Addressing aging infrastructure or reconnecting divided neighborhoods can improve a neighborhood's aesthetics and residents' quality of life. However, such improvements can also result in higher land values that generate higher property taxes, which, in the absence of safeguards, could affect affordability for current residents and business owners. Stakeholders also noted that determining who will own and be responsible for maintaining the land and amenities is important for lasting success.

In total, 18 of 20 stakeholders from the eight selected projects concurred with the key consideration of planning for the equitable use of project land, including seven of the eight project sponsors. For example, officials with the City of Rochester, New York, told us that the Inner Loop East

highway removal project created a pedestrian and bicycle-friendly environment and generated acres of land for additional housing and commercial development. The removal allowed for the creation of a new neighborhood by adding more than 600 housing units, many of which are required by local zoning to be available at below-market rents to ensure equitable access to the new neighborhood. City officials told us that they used existing city zoning policy to direct the types of development the city wants in an area to combat the adverse effects of gentrification, while also generating economic opportunities that would benefit the community once the highway was removed. However, one stakeholder from the highway removal project we reviewed in Detroit, Michigan, did not concur with the key consideration, as the stakeholder was concerned about the displacement of existing businesses.⁴³ Stakeholders noted that being proactive, studying land-use issues, and planning for what to do with the land can help prevent or lessen the impacts of unintended consequences.

Conceptualizing Removal and Capping Projects to Engage and Educate Stakeholders and Address Concerns

Stakeholders cited the need for community engagement to educate residents and others about highway removal and capping project concepts and address their concerns in designs. Conceptualizing what removing a highway or building a cap looks like can be a challenge for the local community and others who may be affected by these projects. Stakeholders cited the importance of visualizing what a highway cap entails and engaging stakeholders to solicit and incorporate community needs in project design. Highway removal projects can take different forms, including downsizing to a boulevard or diverting traffic to other roadways. Stakeholders also noted engagement with the local community and other stakeholders is important to address concerns.

In total, 19 of the 20 stakeholders—including seven of the eight project sponsors—concurred with this key consideration.⁴⁴ For example, during the planned expansion of Interstate 70 in Denver, Colorado, the Colorado Department of Transportation and the City of Denver proposed a highway cap to address local concerns. Specifically, stakeholders from the adjacent Elyria-Swansea neighborhood voiced concerns about a proposal to relocate a local elementary school to accommodate the expanded highway. When the state DOT proposed a highway cap as a mitigation to allow the school to remain in the same location, they faced the challenge

⁴³One stakeholder expressed no opinion on this key consideration.

⁴⁴One project sponsor expressed no opinion on this key consideration.

of educating local residents to conceptualize what the cap would entail and how it would address their concerns.

Stakeholders involved in this project told us that they provided visuals of the project, and invited local residents to participate through numerous public meetings to share their thoughts in how the elementary school would benefit from the new land created by the cap (see fig. 10). As a result, community input from this process drove the decision to build a highway cap that includes a playfield for the school, among other features. The community involvement process also resulted in the state DOT monitoring the air quality and adding new ventilation systems and windows to the elementary school to help reduce pollution during construction.

Figure 10: Central 70 Project Highway Cap, Denver, Colorado, Before and After

Project: Interstate 70, part of the Central 70 project (highway cap, completed) - Denver, Colorado

Project sponsor: Colorado Department of Transportation



Before: A section of Interstate 70, before being capped.



After: The same section of land with a cap park and sports fields built over Interstate 70.

Source: Colorado Department of Transportation (photographs). | GAO-23-105575

Note: The Colorado Department of Transportation completed the Central 70 project highway cap in 2022, though it was in the planning stages when we selected projects for review.

Developing Measures to Assess Community Goals and Other Project Outcomes

Stakeholders cited the importance of developing measures for community goals, as well as evaluating the effects of highway removal and capping projects. Stakeholders also expressed uncertainty over how to develop measures for reconnecting their communities and evaluating the effects

of highway removal and capping projects. Reconnecting communities is an emerging transportation goal, and stakeholders told us that the outcomes of these projects can be hard to measure. Stakeholders for the selected projects largely did not have specific measures to demonstrate how a connection was reestablished in a previously divided neighborhood. Also, few stakeholders of completed projects had assessed other project effects or outcomes. Stakeholders suggested quantifying outcomes such as population changes, jobs created, or increased tax revenues as possible measures of success for highway removal and capping projects.

Fifteen of the 20 stakeholders from the eight selected projects—including six of the eight project sponsors—concurred that developing measures to assess project community goals and project outcomes was an important consideration.⁴⁵ While the majority of stakeholders agreed that developing measures was important, few of the selected projects we reviewed had established specific measures. For example, the project sponsors for the Interstate 579 Highway Cap in Pittsburgh, Pennsylvania, told us that they are tracking performance measures related to the state-of-good repair and safety outcomes resulting from their project, and that these performance measures are required under the federal grant agreement governing its use of the TIGER program funding for this project. However, the project sponsors told us that they do not have specific measures to assess how effective the project was at creating connections between the Lower Hill District neighborhood with the services and amenities of downtown Pittsburgh on the other side of the highway cap. Officials stated they have observed such outcomes, such as improved walkability and bike-ability, which they saw almost immediately after completing the cap (see fig. 11).

⁴⁵Three of the stakeholders had no opinion, and two did not concur with this consideration when asked.

Figure 11: Interstate 579 Highway Capping Project in Pittsburgh, Pennsylvania, Before and After

Project: Frankie Pace Park, formerly the Interstate 579 Urban Connector (highway cap, completed 2021) - Pittsburgh, Pennsylvania

Project sponsor: Pittsburgh Sports and Exhibition Authority



Before: A section of Interstate 579, before being capped.



After: The same section of land with a cap park built over Interstate 579.

Source: Pittsburgh Sports and Exhibition Authority (photographs). | GAO-23-105575

DOT Has Made Progress in Implementing the Pilot Program, but Its Design Does Not Fully Align with Leading Practices

Since the enactment of the Infrastructure Investment and Jobs Act, the Office of the Secretary of Transportation (OST) has taken a number of steps to implement the Reconnecting Communities Pilot program, including making and announcing grant awards for its first cycle of funding. As previously noted, the program's purpose is to award grants to eligible applicants to reconnect communities, such as by removing, retrofitting, or mitigating highways or other eligible transportation facilities that create barriers to community connectivity, including to mobility, access, or economic development.

To fulfill this purpose, OST created a team to administer the program to solicit and review applications for grants for fiscal year 2022, the first fiscal year for which the program's funds were available. Among its efforts, OST established an implementation plan for the pilot program, drafted and issued the Notice of Funding Opportunity, hosted public webinars, and created partnerships with other federal agencies for relevant technical expertise. OST officials told us that they wanted the program to reach a wide audience, including rural and Tribal communities. They also said they hoped applications would have a variety of solutions for reconnecting communities. On February 28, 2023, DOT announced its selection of 45 projects to receive fiscal year 2022

planning and capital construction grants, awarding \$185 million.⁴⁶ According to DOT's website, among these selected projects are 11 projects to remove transportation infrastructure and 12 projects to cap barriers, including highways.⁴⁷






While DOT has made substantial progress implementing the first round of the pilot program, we found that DOT's design of the Reconnecting Communities Pilot program does not fully align with all leading practices for effective pilot program design. We have previously reported that a well-designed pilot program can help ensure agency assessments produce information needed to make effective program and policy decisions, and we identified five leading practices to design pilot programs accordingly.⁴⁸ These five leading practices are (1) ensure two-way stakeholder communication, (2) establish measurable objectives, (3) articulate assessment methodology, (4) develop an evaluation plan, and (5) identify criteria for identifying lessons learned. Prior GAO reports have shown that designing pilot programs in alignment with leading practices increases an agency's ability to assess the pilot's statutory success and evaluate outcomes and impacts of the pilot. Our analysis of DOT's Reconnecting Communities Pilot program determined it aligned with one of the five leading practices, partially aligned with three leading practices, and did not align with one leading practice. See figure 12 for a summary of our analysis.

⁴⁶According to a DOT document, eight of the 36 previously mentioned highway removal and capping projects were selected to receive fiscal year 2022 funding under the Reconnecting Communities Pilot program.

⁴⁷The 11 grants awarded to remove transportation infrastructure include more than highway removals, such as projects to infill sunken highways, take down elevated highways, repurpose railroad tracks, and reconfigure highway ramps. The 12 grants awarded for capping include a cap, lid, or bridge over barriers that could possibly mitigate pollution and provide new space for parks, housing, and crossings for pedestrians and bicyclists.

⁴⁸[GAO-16-438](#).

Figure 12: Alignment of Department of Transportation’s Reconnecting Communities Pilot Program with GAO Leading Practices for Pilot Program Design

Leading practice	Description of leading practice	Alignment
Stakeholder communication	Appropriate two-way stakeholder communication and input should occur at all stages of the pilot. Relevant stakeholders should be identified and involved.	 Aligns
Measurable objectives	Establish well-defined, appropriate, clear, and measurable objectives.	 Partially aligns
Assessment methodology	Articulate a data gathering and assessment methodology that details the type and source of the information necessary to evaluate the pilot and methods for collecting that information, including timing and frequency.	 Partially aligns
Evaluation plan	Develop a plan that defines how the information collected will be analyzed to evaluate the pilot’s implementation and performance.	 Partially aligns
Scalability criteria	Identify criteria for identifying lessons from the pilot to inform decisions on whether and how to integrate pilot activities into overall efforts.	 Does not align

Source: GAO analysis of DOT information. | GAO-23-105575

Note: GAO leading practices on pilot project design are contained in GAO, *DATA ACT: Section 5 Pilot Design Issues Need to Be Addressed to Meet Goal of Reducing Recipient Reporting Burden*, [GAO-16-438](#) (Washington, D.C.: April 19, 2016).

- Ensure two-way stakeholder communication.** We found that DOT’s pilot program design aligns with this leading practice because OST officials established and maintained communication with federal and industry stakeholders and with potential program applicants, while also taking steps to award the first round of funding. DOT documentation showed that DOT partnered with other federal agencies to collect and address concerns regarding the pilot program. For example, DOT entered into a memorandum of understanding with the Department of Housing and Urban Development, Small Business Administration, and other federal agencies to address issues related to community investment. OST officials told us that they had conducted a listening session with industry stakeholders to obtain insight on the implementation of the pilot program and to convey the program’s overarching benefits. DOT also held a series of webinars to share information with applicants, and OST officials told us that they used participant feedback from the webinars to update the application process.

According to officials, DOT has plans to continue two-way communication with stakeholders through ongoing technical assistance as the program progresses. For example, DOT plans to

establish a technical assistance resource, named the Reconnecting Communities Institute, for grant recipients. The Infrastructure Investment and Jobs Act provided that during the period of fiscal years 2022 through 2026, DOT may use up to \$30 million of the funding made available under the act for planning grants to provide technical assistance in building organizational or community capacity to engage in transportation planning and identify innovative solutions to infrastructure challenges.⁴⁹ DOT issued a request for proposals to select a contractor to facilitate the technical assistance program. OST officials said that they plan to use information learned from the Reconnecting Communities Institute to develop future award cycles of the Reconnecting Communities Pilot program. The technical assistance program, once established, may provide a means for DOT to continue two-way stakeholder communication in later stages of the grant cycle.

- **Establish well-defined, appropriate, clear, and measurable objectives.** We found that DOT’s pilot program partially aligns with this leading practice. Specifically, DOT has established well-defined, appropriate, and clear objectives, but the objectives are not measurable. We found that the pilot program’s objective was clear and consistently reflected throughout program documentation, including the Notice of Funding Opportunity, informational webinars, public website, and an internal implementation plan for the pilot program. For example, we found that DOT’s objective “to restore community connectivity through the mitigation of transportation facilities” was appropriate as it is consistent with the statutory purpose of the pilot program. It also aligned with language in DOT’s strategic and equity plans. Additionally, the program directly addresses one of DOT’s strategic goals on equity. According to agency officials, the program is to align with DOT’s Equity Action Plan by advancing racial equity, addressing environmental justice in minority populations, encouraging an increase in housing supply, and awarding funding to rural and Tribal communities.

However, we found that DOT has not created performance measures for the program to indicate progress in meeting its objectives. The Office of Management and Budget’s regulations require federal

⁴⁹\$15 million of this \$30 million is included in the \$100 million appropriated for planning grants for fiscal years 2022 through 2026. Infrastructure Investment and Jobs Act, div. J., tit. VIII, 135 Stat. 1427. The other \$15 million is included in the \$150 million authorized for planning grants for the same fiscal years. Infrastructure Investment and Jobs Act § 11509(f).

agencies to develop clear goals and objectives during program planning and design, and measure program performance to be based on these goals and objectives.⁵⁰ They also require notices of funding opportunity to include program goals, objectives, indicators, targets, baseline data, data collection, and other outcomes that the agency expects to achieve through the program.⁵¹ DOT's Notice of Funding Opportunity states that DOT will work with award recipients to determine appropriate measures to gauge the success of their projects. OST officials stated they will base those measures on the criteria developed by DOT to evaluate applications and award grants under the pilot program.⁵² OST officials told us that they would like to develop performance measures for the pilot program that reflect the issues communities face with highways and other transportation infrastructure that create barriers, and be based on the applications received in the first funding round of the pilot program. Officials noted that they have not yet completed this analysis as they were focused on evaluating project applications to make the February 2023 awards.

OST officials told us they are currently reviewing the menu of performance measures that DOT established for grantees in the TIGER program (now known as RAISE) to see if any may be leveraged for the Reconnecting Communities Pilot program. The officials also said that additional measures would be required to assess highway removal projects funded under the Reconnecting Communities Pilot program, and that developing these measures would take additional work. According to the officials, performance measures for the Reconnecting Communities Pilot program should also align with the goals of the Biden Administration's "Justice40 Initiative," which establishes a goal that 40 percent of the overall benefits of certain federal investments flow to disadvantaged

⁵⁰OMB's regulations governing federal awards are located in 2 C.F.R. Part 200 and include uniform requirements for pre-award and post-award processes and the contents of notices of funding opportunity, among other things.

⁵¹2 C.F.R. pt. 200, app'x I.

⁵²Those areas of measurement are (1) mobility, (2) access, (3) safety, (4) environmental impacts, (5) congestion, (6) economic development, (7) quality of life, and (8) community engagement. DOT stated that in its notice of funding opportunity that it will work with grant recipients to determine the most appropriate indicators and metrics to assess project benefits before the grant agreement is established.

communities.⁵³ DOT officials told us that DOT has established several performance measures for the broader Justice40 Initiative, and that the Reconnecting Communities Pilot program is one of the DOT programs covered by the Initiative.⁵⁴ Establishing performance measures for the Reconnecting Communities Pilot program that align with the pilot program objectives would give DOT a valuable tool to demonstrate the program's effectiveness in meeting its objectives and reconnecting communities.⁵⁵

- **Articulate a data gathering strategy and an assessment methodology.** We found that DOT's pilot program design partially aligns with this leading practice. While DOT has partially created a data gathering strategy, it has not developed or documented an assessment methodology to evaluate the pilot program. A data gathering strategy includes methods for collecting data, including the timing and frequency of the collection, and a clear plan that details the type and source of the data necessary to evaluate the pilot. DOT has a plan for data collection milestones, such as during applications, annually after grant agreements, and 5 years after construction projects are completed. However, DOT has not created a plan detailing the types and sources of data, without which it may not be able to ensure that it has captured all of the data necessary to evaluate the pilot.

In addition, DOT officials told us that they have not yet developed an assessment methodology for the pilot program, because they have been focused on setting up the program and awarding the first round of funding. An assessment methodology acts as a strategy for comparing the pilot implementation and results with program objectives. DOT officials told us they have not completed an

⁵³See Exec. Order 14008, Tackling the Climate Crisis at Home and Abroad (Jan. 27, 2021). As required by Executive Order 14008, the Office of Management and Budget and other federal entities provided guidance on how these investments might be made to achieve the Initiative's goal. The Order also required that the guidance focus on investments in the six areas of: affordable and sustainable housing; clean transit; the development of critical clean water infrastructure; clean energy and energy efficiency; the remediation and reduction of legacy pollution; and training and workforce development.

⁵⁴According to DOT, a goal of the Justice40 Initiative is to improve transportation quality and reduce negative impacts to disadvantaged communities and that it intends to measure the performance of its efforts according to improvements in safety, jobs and economic competitiveness, resilience, access, and emissions.

⁵⁵In addition, OMB regulations require agencies to measure grant recipients' performance not only to show achievement of program goals and objectives, but also to share lessons learned, improve program outcomes, and foster adoption of promising practices. 2 C.F.R. § 200.301.

assessment methodology, in part, because they have not yet determined how they will roll up outcomes from a diverse set of individual projects to gauge results of the overall program. For example, an assessment methodology would translate outcomes from individual projects, such as reducing pedestrian and cycling commute times, to the pilot program's overall goals of reconnecting communities.

Developing a data gathering strategy and assessment methodology would help DOT assess and report pilot program outcomes to Congress. Specifically, the Infrastructure Investment and Jobs Act requires DOT to submit a report, no later than January 1, 2026, to certain congressional committees that evaluates the Reconnecting Communities Pilot program. Its report is to include information on the level of applicant interest in the pilot program's grants, the extent to which overall demand for grants exceeded available funds, and the outcomes and impacts of highway removal projects that received capital construction grants.⁵⁶ By implementing a strategy to collect and assess data from awarded projects, DOT will have greater assurance that it can assess how the outcomes of funded projects are meeting overall pilot program goals.

- **Develop a data analysis and evaluation plan to track pilot performance and implementation.** We found that DOT's pilot program design partially aligns with this leading practice. DOT has begun the planning process to develop a data analysis and evaluation plan for the pilot program, but has not yet finalized the specifics of that plan. A data analysis plan identifies who will do the analysis as well as when and how data will be analyzed to measure the pilot program's implementation and performance. For example, a data analysis plan could include talking to pilot program applicants or award recipients, or DOT managers and staff, to compare their experiences and observations with program objectives. While DOT has not yet developed a data analysis and evaluation plan, DOT has collected some information that could be helpful in assessing the program's implementation. For example, OST officials told us that they conducted a survey, which is being evaluated, of the more than 200 internal DOT stakeholders involved in the application evaluation process to document these stakeholders' views on the efficiency of the review process.

DOT has developed a proposal to formally evaluate the Reconnecting Communities Pilot program but not yet developed the specific details

⁵⁶Infrastructure Investment and Jobs Act § 11509(e).

for the evaluation. In March 2023, DOT issued a department-wide Evaluation Plan, which describes the 17 program evaluations DOT expects to fund in fiscal year 2024. DOT's proposed evaluation for the Reconnecting Communities Pilot program would assess the effectiveness of the pilot program's design in encouraging communities to participate in transportation planning to address infrastructure barriers. It also suggests types of data that could be helpful in assessing the program. However, the proposed evaluation does not include detailed information on the specific data to be analyzed or how the evaluation will be conducted. OST officials told us that they are in the process of determining what the data analysis and evaluation plan will include and who will conduct the evaluation. According to OST officials, they would likely use a contractor to conduct the evaluation, and they plan for the evaluation to take place from 2023 through 2025. Developing and implementing a plan that details the specific data to be analyzed and a process for evaluating the pilot program's results within established timelines will provide DOT with a path to identify any areas for program improvements moving forward.

- **Identify a means to assess lessons learned about the pilot to inform decisions on scalability, and whether and how to integrate pilot activities into overall efforts.** We found that DOT's design does not align with this leading practice because DOT has not identified criteria for identifying lessons learned from the pilot program. Such criteria should inform decisions on whether or how to scale the program or integrate pilot activities into overall efforts. The criteria for determining lessons learned should be observable and measurable events, actions, or characteristics that provide evidence that the pilot objectives have been met. Examples of criteria for lessons learned could include measures for whether DOT is able to attract enough high-quality applications for projects to meet the program objectives, and whether funded projects are able to advance to construction in a timely manner.

OST officials described some areas in which they hope to gather lessons from the pilot program, but have not yet developed criteria to assess lessons learned or use them to make future program decisions. For example, OST officials told us that they hope to gather lessons from the first award cycle to make improvements to applicant outreach and the application evaluation process. The officials also said that DOT plans to learn from pilot program grant recipients about their experience in planning for highway removal projects and these projects' eligibility for federal-aid highway program funds, and other areas in which the program can support DOT's goals.

Developing criteria for identifying lessons learned from the pilot program will provide DOT with a means to decide whether the program should be expanded, reduced, or combined with other DOT programs with similar objectives. For example, OST officials told us that they are considering combining future notices of funding opportunity for the Reconnecting Communities Pilot program with the notice of funding opportunity for the Neighborhood Access and Equity Grant program. Establishing criteria for lessons learned from the Reconnecting Communities Pilot program could be critical for the effective use of the program's funds, the Neighborhood Access and Equity Grant program's funds, and other programs contributing to DOT's equity goal.⁵⁷

According to DOT officials, DOT has not fully implemented these leading practices largely due to the competing priorities and time constraints DOT has faced in implementing the first round of funding for the pilot program. Specifically, the Infrastructure Investment and Jobs Act authorized and appropriated funding for fiscal years 2022 through 2026 for the program—a timeframe that called for DOT to set up the initial funding round and subsequent rounds in an annual succession, according to DOT. DOT is also responsible for administering other discretionary grant programs, including RAISE and INFRA, which also require DOT to issue annual notices of funding opportunity, collect and evaluate applications from applicants, and make annual grant awards—all with similar timeframes as the Reconnecting Communities Pilot program. DOT officials told us that their immediate priorities have been to select and evaluate the inaugural year of pilot program grants as well as stand up the technical assistance program. Further, officials told us that they had waited to develop an evaluation plan and a process to identify criteria for identifying lessons learned after evaluating the applications from the first funding round to better understand the range of projects being proposed.

OST officials told us that they intend to use the first round of funding for the pilot program to inform its assessment efforts. By taking the opportunity now to establish measurable objectives for the pilot program, a plan to collect data and evaluate results, and criteria to assess lessons

⁵⁷As previously mentioned, the Inflation Reduction Act of 2022 authorized the Neighborhood Access and Equity Grant Program and appropriated approximately \$3 billion in funding for this program for fiscal year 2022. FHWA may award competitive grants to improve walkability, safety, and affordable transportation access through projects that are context-sensitive, to mitigate or remediate negative impacts on the human or natural environment resulting from certain facilities in a disadvantaged or underserved community, and for planning and capacity building activities in disadvantaged or underserved communities.

learned from the program, DOT will be better positioned to apply the knowledge it learns from its first funding round and make sound program decisions moving forward.

Conclusion

DOT has noted that federal funding for highway removal and capping projects can help achieve a number of goals, such as reducing inequities in U.S. transportation systems. For example, reconnecting communities separated by highway construction could help restore economic and cultural life for underserved communities. The Reconnecting Communities Pilot program provides an opportunity for project sponsors to pursue highway removal and capping projects and connect divided neighborhoods. DOT has taken substantial effort to get the pilot program off the ground. As DOT implements the remaining four rounds of pilot funding, it should take steps to better align this program with leading practices for pilot program design. Specifically, by (1) establishing performance measures for the program's objectives; (2) developing and implementing a plan to collect and analyze data and evaluate pilot program results; and (3) identifying criteria to inform key decisions on whether to scale the pilot program or integrate it with other related efforts, DOT will have a means to improve future funding rounds and assess whether the pilot program is achieving its goals and reducing transportation inequities. Taking these steps is particularly important, given the approximately \$3 billion in funding FHWA will administer through the new Neighborhood Access and Equity Grant program, which provides funding in the form of competitive grants that could be used on highway removal and capping projects. By better aligning the Reconnecting Communities Pilot program with leading practices for pilot program design, DOT will be able to assess whether or how to integrate these two programs moving forward. It will also give DOT greater assurance that it is effectively allocating its resources to help states and local governments invest in infrastructure projects that reconnect communities and meet transportation goals.

Recommendations for Executive Action

We are making the following three recommendations to DOT.

The Secretary of Transportation should establish performance measures for the Reconnecting Communities Pilot program. Such performance measures should indicate DOT's progress in meeting the pilot program's objectives. (Recommendation 1)

The Secretary of Transportation should develop and implement a plan to collect and analyze data and evaluate results of the Reconnecting Communities Pilot program. Such a plan should detail the specific data to

be collected, a methodology for assessing this data, and a plan for evaluating the pilot program's results with timelines for completion. (Recommendation 2)

The Secretary of Transportation should identify a means to assess lessons learned from the Reconnecting Communities Pilot program to inform decisions on whether or how to scale or integrate the pilot with other DOT efforts. (Recommendation 3)

Agency Comments

We provided a draft of this report to DOT for review and comment. In its comments, reproduced in appendix III, DOT concurred with our recommendations. DOT also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to interested congressional committees, the Secretary of Transportation, and other interested parties. In addition, this report is available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or RepkoE@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.



Elizabeth Repko
Director, Physical Infrastructure

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The Honorable Shelley Moore Capito
Ranking Member
Committee on Environment and Public Works
United States Senate

The Honorable Brian Schatz
Chair
The Honorable Cindy Hyde-Smith
Ranking Member
Subcommittee on Transportation, Housing and Urban Development, and
Related Agencies
Committee on Appropriations
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The Honorable Sam Graves
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The Honorable Rick Larsen
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Committee on Transportation and Infrastructure
House of Representatives

The Honorable Tom Cole
Chair
The Honorable Mike Quigley
Ranking Member
Subcommittee on Transportation, Housing and Urban Development, and
Related Agencies
Committee on Appropriations
House of Representatives

Appendix I: Additional Information on 36 Highway Removal and Capping Projects Undertaken, 2012-2021

Table 1: Twenty-one Highway Removal and Capping Projects that Received Federal Funding, 2012-2021

Project name	Location	Removal or capping	Planned or completed	Received discretionary grants	Received formula funds
Inner Loop East Reconstruction	Rochester, NY	Removal	Completed 2017	TIGER (2013)	—
Sheridan Expressway Corridor	New York City, NY	Removal	Completed 2017	TIGER (2010)	—
Oak Street Connector	New Haven, CT	Removal	Completed 2022	TIGER (2016) TIGER (2010)	—
Claiborne Corridor Plan	New Orleans, LA	Removal	Planned	TIGER (2010)	—
Klyde Warren Park	Dallas, TX	Capping	Completed 2012	ARRA (2009)	—
CityArchRiver Revitalization	St. Louis, MO	Capping	Completed 2017	TIGER (2011)	—
The Stitch	Atlanta, GA	Capping	Planned	RAISE (2021)	—
Rondo Land Bridge	St. Paul, MN	Capping	Planned	RAISE (2021)	—
Reimagining the Cross Bronx Expressway	New York City, NY	Capping	Planned	RAISE (2021)	—
Interstate 10 Deck Plaza Planning Study	El Paso, TX	Capping	Planned	RAISE (2021)	—
Interstate 375	Detroit, MI	Removal	Planned	INFRA (2022)	STBG (2022)
Lakefront Shoreway	Cleveland, OH	Removal	Planned	HPP (2013)	STP (2004, 2006, 2010, 2012-2015) Equity Bonus (2006, 2014) SPR (2004) NHPP (2012, 2015, 2016-2020, 2022) HSIP (2015, 2019)
Presidio Parkway	San Francisco, CA	Capping	Completed 2015	TIGER (2009) ARRA (2009)	STP, CMAQ, NHPP (2009-2015)
Frankie Pace Park, formerly Urban Connector	Pittsburgh, PA	Capping	Completed 2021	TIGER (2016) TIGER (2014)	Other Federal Funds (2015)
Skyway Bridge	Buffalo, NY	Removal	Planned	—	NHPP (2018)
Innerbelt Freeway	Akron, OH	Removal	Planned	—	Innovative Projects (2004,2006) NHPP (2015-16) STBG (2016) HSIP (2016)
Interstate 81 Viaduct Project	Syracuse, NY	Removal	Planned	—	NHPP (2013, 2015, 2016)
The Golden Project	Golden, CO	Capping	Completed 2019	—	NHPP (2014)
Central 70	Denver, CO	Capping	Completed 2022	—	IM (2012) NHPP (2013-2016) CMAQ (2018)

**Appendix I: Additional Information on 36
Highway Removal and Capping Projects
Undertaken, 2012-2021**

Project name	Location	Removal or capping	Planned or completed	Received discretionary grants	Received formula funds
Penn's Landing	Philadelphia, PA	Capping	Planned	—	STP (2019, 2020, 2022) NHPP (2022) BFP (2022)
Rose Quarter Freeway Cap	Portland, OR	Capping	Planned	—	NHPP (2016, 2020) NHFP (2020)

Legend: — = no data

Source: Department of Transportation and GAO. | GAO-23-105575

- Notes: American Recovery and Reinvestment Act (ARRA)
- Bridge Formula Program (BFP)
- Congestion Mitigation and Air Quality (CMAQ)
- High Priority Projects (HPP)
- Highway Safety Improvement Program (HSIP)
- Interstate Maintenance (IM)
- National Highway Freight Program (NHFP)
- National Highway Performance Program (NHPP)
- Nationally Significant Multimodal Freight and Highway Projects (INFRA)
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
- State Planning and Research (SPR)
- Surface Transportation Block Grant Program (STBG)
- Surface Transportation Program (STP)
- Transportation Investment Generating Economic Recovery (TIGER)

**Appendix I: Additional Information on 36
Highway Removal and Capping Projects
Undertaken, 2012-2021**

Table 2: Fifteen Highway Removal and Capping Projects that Did Not Receive Federal Funding, 2012-2021

Project	Location	Removal or capping	Planned or completed
Alaskan Way Viaduct	Seattle, WA	Removal	Completed 2019
Inner Loop North Removal	Rochester, NY	Removal	Planned
Capitol Crossing	Washington, DC	Capping	Completed 2022
92nd Ave NE Lid	Clyde Hill, WA	Capping	Completed 2014
84th Ave NE Lid	Hunts Point, WA	Capping	Completed 2014
Evergreen Point Road Lid	Medina, WA	Capping	Completed 2013
Park 101	Los Angeles, CA	Capping	Planned
Hollywood Central Park	Los Angeles, CA	Capping	Planned
South Loop Link Park	Kansas City, MO	Capping	Planned
Fort Washington Way	Cincinnati, OH	Capping	Planned
ReConnect Austin	Austin, TX	Capping	Planned
Southern Gateway Park	Dallas, TX	Capping	Planned
Richmond 300	Richmond, VA	Capping	Planned
Montlake Lid	Seattle, WA	Capping	Planned
Lid Interstate 5	Seattle, WA	Capping	Planned

Source: Department of Transportation and GAO. | GAO-23-105575

Appendix II: Highway Removal and Capping Project Stakeholders and Others We Interviewed

Table 3: Selected Project Stakeholders Interviewed

Selected projects	Stakeholders interviewed
State Highway Spur 366 (Woodall Rogers Freeway) completed highway cap, known as Klyde Warren Park (Dallas, Texas)	<ul style="list-style-type: none"> • Texas Department of Transportation • City of Dallas • North Central Texas Council of Governments • Woodall Rodgers Park Foundation (project sponsor)
Interstate 70 (I-70) completed highway cap, part of the Central 70 project (Denver, Colorado) ^a	<ul style="list-style-type: none"> • Colorado Department of Transportation (project sponsor) • City of Denver • Denver Regional Council of Governments • Swansea Elementary School
Interstate 579 (I-579) completed highway cap, known as Frankie Pace Park, previously the I-579 Urban Connector (Pittsburgh, Pennsylvania)	<ul style="list-style-type: none"> • Pennsylvania Department of Transportation • City of Pittsburgh / Sports and Exhibition Authority (project sponsor) • Southwestern Pennsylvania Commission • Uptown Partners of Pittsburgh
Interstate 94 (I-94) planned highway cap, known as the Rondo Land Bridge (St. Paul, Minnesota)	<ul style="list-style-type: none"> • Minnesota Department of Transportation • City of St. Paul • Metropolitan Council • ReConnect Rondo (project sponsor) • Our Streets Minneapolis
Interstate 375 (I-375) planned highway removal (Detroit, Michigan)	<ul style="list-style-type: none"> • Michigan Department of Transportation (project sponsor) • City of Detroit • Southeast Michigan Council of Governments • Greektown Neighborhood Partnership
State Route 940T (SR-940T or east segment of Inner Loop Expressway) completed highway removal (Rochester, New York)	<ul style="list-style-type: none"> • New York State Department of Transportation • City of Rochester (project sponsor) • Genesee Transportation Council • Reconnect Rochester • Trucking Association of New York
State Route 99 (SR-99 or Alaskan Way Viaduct) completed highway removal (Seattle, Washington)	<ul style="list-style-type: none"> • Washington State Department of Transportation (project sponsor) • City of Seattle • Puget Sound Regional Council • Port of Seattle
Interstate 81 (I-81) Viaduct Project planned highway removal (Syracuse, New York)	<ul style="list-style-type: none"> • New York State Department of Transportation (project sponsor) • City of Syracuse • Syracuse Metropolitan Transportation Council • Syracuse Public Housing Authority • Trucking Association of New York

Source: GAO. | GAO-23-105575

Note: For each selected project, we also interviewed the relevant Federal Highway Administration Division Office in the respective state.

^aThe Colorado Department of Transportation completed the Central 70 project highway cap in 2022, though was in the planning stages when we selected projects for review

Appendix III: Comments from the Department of Transportation



**U.S. Department
of Transportation**
Office of the Secretary
of Transportation

Assistant Secretary
for Administration

1200 New Jersey Avenue, SE
Washington, DC 20590

Elizabeth Repko
Director, Physical Infrastructure
U.S. Government Accountability Office (GAO)
441 G Street NW
Washington, DC 20548

Date: May 8, 2023

Dear Ms. Repko:

The Department of Transportation's (DOT) mission is to deliver the world's leading transportation system, serving the American people and economy through the safe, efficient, sustainable, and equitable movement of people and goods. To support this mission, the new Reconnecting Communities Pilot (RCP) discretionary grant program was funded to restore community connectivity through the removal, retrofit, mitigation, or replacement of highways, roadways and other transportation infrastructure facilities that create barriers to mobility, access, or economic development. The Department successfully implemented the first year of a 5-year pilot program, developed technical criteria, engaged in robust stakeholder engagement, evaluated over 400 applications from across the country, and awarded \$185 million in grants to 45 communities in support of the Department's strategic priorities. DOT continues to improve upon its performance management and evaluation of the RCP Program by:

- Using RCP webinar geographic attendance data and the Bureau of Transportation Statistics (BTS) project location data to better target future applicant outreach, particularly for disadvantaged communities.
- Harnessing existing application data to identify Key Performance Indicators (KPIs) for program improvement, with a focus on local measurement.

Upon review of the draft report, the DOT concurs with GAO's three recommendations to (1) establish performance measures for the RCP Program, (2) develop and implement a plan to collect and analyze data and evaluate results of the RCP Program, and (3) identify a means to assess lessons learned from the RCP Program to inform decisions on whether or how to scale or integrate the pilot with other DOT efforts. We will provide a detailed response to each recommendation within 180 days of the final report's issuance.

We appreciate the opportunity to respond to the GAO draft report. Please contact Gary Middleton, Director of Audit Relations and Program Improvement, at (202) 366-6512 with any questions or if you would like to obtain additional details.

Sincerely,

A handwritten signature in black ink, appearing to read "Philip McNamara".

Philip McNamara
Assistant Secretary for Administration

Appendix IV: Staff Acknowledgments

GAO Contact

Elizabeth Repko, (202) 512-2834, or RepkoE@gao.gov

Staff Acknowledgments

In addition to the contact named above, Matt Barranca (Assistant Director); Brian Chung (Analyst-in-Charge); Sue Bernstein; Nicole Kelleher; Alicia Loucks; Josh Ormond; Mary-Catherine P. Overcash; Krishana Jackson Perry; Todd Schartung; Brian Stephenson; and Elizabeth Wood made key contributions to this report.

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