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2023 ANNUAL PRIVATIZATION REPORT: SURFACE TRANSPORTATION

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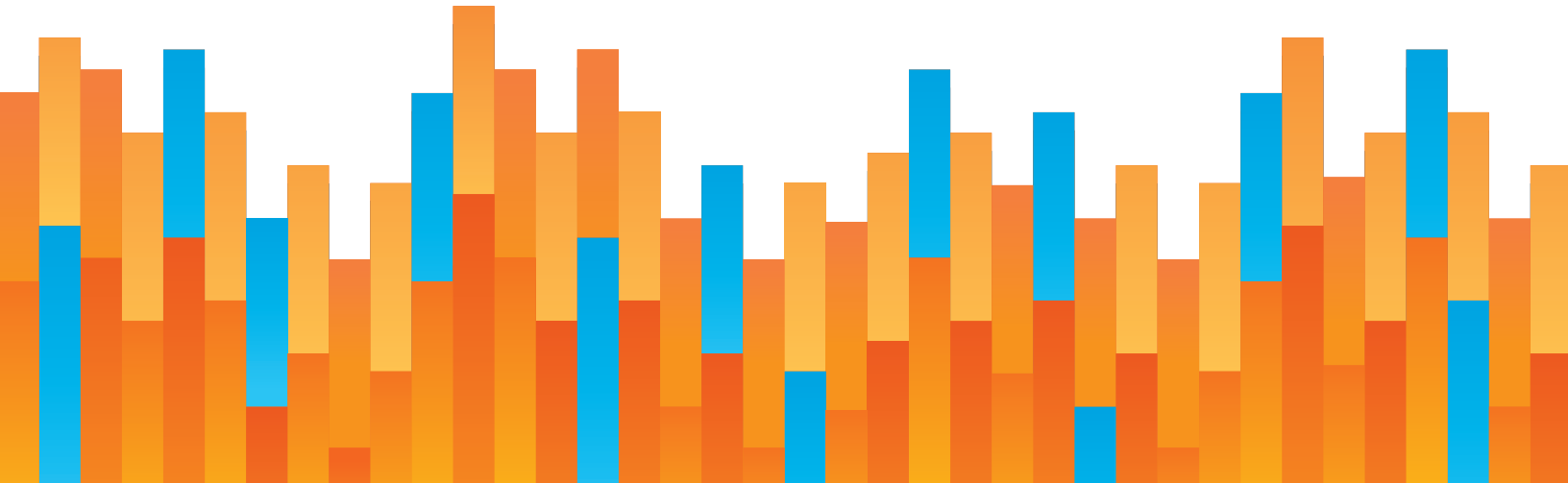

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PART 1

OVERVIEW

Governments have used long-term public-private partnerships (P3s) for surface transportation projects for the past 60 years. As documented by José A. Gómez-Ibáñez and John Meyer, the phenomenon began in the 1950s and 1960s, as France and Spain emulated the model pioneered by Italy prior to World War II.[1] Italy's national motorway systems were developed largely by investor-owned or state-owned companies operating under long-term franchises (called concessions in Europe). In exchange for the right to build, operate, and maintain the highway for a period ranging from 30 to 70 years, the company could raise the capital needed to build it (typically a mix of debt and equity). The model spread to Australia and parts of Asia in the 1980s and 1990s, and to Latin America in the 1990s and 2000s.

> *"In the late 1990s and early 2000s, however, the governments of France, Italy, Portugal, and Spain all privatized their state-owned toll road companies and formalized the toll concession P3 model."*

[1] José A Gómez-Ibáñez and John R. Meyer, "Going Private: The International Experience with Transport Privatization," Brookings Institution, 1993. https://trid.trb.org/view/405691 (6 June 2019).

Nearly all the projects in those regions from the 1950s to 1980s were financed based on the projected toll revenues to be generated once the highway was in operation. Some projects went bankrupt as a consequence of reduced traffic and revenues during severe economic downturns (e.g., the oil price shock of 1974), leading to the nationalization of some companies. In the late 1990s and early 2000s, however, the governments of France, Italy, Portugal, and Spain all privatized their state-owned toll road companies and formalized the toll concession P3 model. Australia has allowed several concession company entities to go through liquidation, with the assets (in each case major highway tunnels) being acquired by new operators at a large discount from the initial construction cost.

Other governments in Europe adopted a different form of highway concession. Generally, not favoring the use of tolls, they created the concept of availability payments as a means of financing long-term concession projects. In this structure, the company or consortium selected via a competitive process negotiates a stream of annual payments from the government sufficient (the company expects) to cover the capital and operating costs of the project and make a reasonable profit. The capital markets generally find such a concession agreement compatible with financing the project, via a mix of debt and equity. Since no toll revenues are involved, this model applies to a much broader array of transport and facility projects, including rail transit and public buildings. In the highway sector, nearly all long-term concession P3 projects in Canada, Germany, the UK, and a number of Central and Eastern Europe countries have been procured and financed as availability payment (AP) concessions.[2]

In the highway sector, nearly all long-term concession P3 projects in Canada, Germany, the UK, and a number of Central and Eastern Europe countries have been procured and financed as availability payment (AP) concessions

[2] "PPPs on German Federal Trunk Roads," Joint Workshop on Financing Transport Infrastructure, Geneva, 10 Sep. 2013. Lecture. (6 June 2019).

In a small but growing number of cases—major bridges, as well as highway reconstruction that includes added express toll lanes, for example—governments collect the toll revenues and use the money to help meet their availability payment obligations.[3] These cases are called "hybrid concessions" in this report.

Five of the top 10 worldwide P3s that reached financial close in 2022 used availability payments, continuing a growing trend over the last seven years.[4] In 2021, seven of the top 10 P3s used availability payments. The growing use of AP concessions has enabled P3s for projects that do not generate their own revenues, as well as hybrid concessions in which toll revenues help the government cover the costs of its AP obligations.

Many P3 project components, steps, or procedures are abbreviated using acronyms. The following abbreviations are used throughout this paper to refer to the different P3 contracts, P3 procedures, and relevant policies:

- AP: Availability Payment
- BOO: Build-Operate-Own
- BOT: Build-Operate-Transfer
- DBF: Design-Build-Finance
- DBFOM: Design-Build-Finance-Operate-Maintain
- DBFM: Design-Build-Finance-Maintain
- DBOM: Design-Build-Operate-Maintain
- IIJA: Infrastructure Investment and Jobs Act
- P3: Public-Private Partnership
- PAB: Private Activity Bond
- RFI: Request for Information
- RFP: Request for Proposals
- RFQ: Request for Qualifications
- RR: Revenue Risk

[3] "Public-Private Partnership (P3) Procurement: A Guide for Public Owners," Build America Bureau, U.S. Department of Transportation, *Transportation.gov*, 2019. https://www.fhwa.dot.gov/ipd/pdfs/PPP/toolkit/PPP_procurement_guide_0319.pdf (27 June 2019).

[4] For the past seven years almost three-quarters of the largest P3 projects, by financial value, have used AP P3s.

- TIFIA: Transportation Infrastructure Finance and Innovation Act
- TOT: Toll-Operate-Transfer

PART 2

PRIVATE HIGHWAY PROJECTS

In surface transportation policy, P3s are far more common than privatized roads. However, there are 18 privately owned highways and bridges in the United States. Table 1 displays these facilities and includes the type of project, ownership, cost (when constructed), and year constructed.

TABLE 1: PRIVATE ROADWAYS AND BRIDGES

Roadway/Bridge Name	State	Project Type	Owner	Cost $ (M)	Year Constructed
Adams Avenue Parkway	UT	Bypass	Adams Avenue Parkway Inc.	$8.9	2001
Alabama River Parkway Bridge	AL	Bridge	American Roads, LLC	$12.0	1998
Ambassador Bridge	MI to Canada	Bridge	Detroit International Bridge Authority	$23.5	1929
Black Warrior Parkway Bridge	AL	Bridge	American Roads, LLC	$25.0	1998
Brownsville & Matamoros Express Bridge	TX to Mexico	Bridge	Brownsville & Matamoros Bridge Co.	$0.2	1910
Cline Avenue Bridge	IL	Bridge	Figg/American Infrastructure	$150.0	2020
Detroit-Windsor Tunnel	MI to Canada	Tunnel	Detroit International Bridge Authority	$23.0	1930

Roadway/Bridge Name	State	Project Type	Owner	Cost $ (M)	Year Constructed
Dingman's Ferry Bridge	NJ to PA	Bridge	Dingman's Choice & DE Bridge Company	N/A	1900
Downbeach Express	NJ	Bridge	Margate Bridge Company	N/A	1929
Emerald Mountain Expressway	AL	Bridge	American Roads, LLC	$4.0	1994
Foley Beach Express	AL	Highway	American Roads, LLC	$25.0	2000
Fort Frances-International Falls International Bridge	MN to Canada	Bridge	Boise Inc./ Resolute Forest Products	N/A	1912
Fort Madison	IL to Indiana	Bridge	A.T. & S.F. Rdway Co., Topeka, KS	$5.5	1927
Grosse Ile Toll Bridge	MI	Bridge	Grosse Ile Bridge Company	$3.9	1913
Lake of the Ozarks Community Bridge	MO	Bridge	Lake of the Ozarks Community Bridge Transportation Development District	$18.2	1996
Newell-East Liverpool Toll Bridge	WV to Ohio	Bridge	Newell Brdg & Rdwy Co., Newell, WV	$0.2	1905
Orchard Pond Parkway	FL	Highway	Orchard Pond Parkway, LLC	$17.0	2016
Progreso International Bridge	TX to Mexico	Bridge	Progreso International Bridge Co.	N/A	1952
Rio Grande City–Camargo International Bridge	TX to Mexico	Bridge	Starr Camargo Bridge Company	N/A	1966
Seventeen Mile Drive	CA	Roadway	Pebble Beach Company	N/A	1892
South Norfolk Jordan Bridge	VA	Bridge	United Bridge Partners	$142.0	2011

Note: Table 1 does not include toll roads or bridges that provide access to private communities, resorts, or tourist destinations only.
Source: "Toll Facilities in the United States," April 2018, FHWA.DOT.gov

The **Adams Avenue Parkway** is a one-mile private toll road in Washington Terrace, Utah that provides direct access from local communities to I-84.[5] The route provides an alternative to the traffic lights, low speed limits, and congestion of US 89 and local streets.

[5] "Welcome," *adamsavenueparkway.com*, Adams Avenue Parkway, Inc., 2022. http://www.adamsavenueparkway.com/index.htm (19 Jan. 2022).

Drivers pay a toll to access **the Montgomery Expressway**, also known as the Alabama River Parkway northeast of Montgomery near SR 152.[6] The 12.5-mile Montgomery Expressway carries SR 143 from Montgomery to the northern residential suburbs of Coosada, Millbrook, and Prattville. Drivers cross the Alabama River Parkway Bridge to access the Expressway.

The **Ambassador Bridge** provides a direct connection between Detroit, Michigan and Windsor, Ontario.[7] The bridge connects Highway 3 in Canada with I-96 in Michigan and is the only route between Detroit and Windsor that allows large trucks. The lanes on the Detroit-Windsor Tunnel, the only other road crossing between the cities, are too narrow for tractor-trailers.

The **Black Warrior Parkway Bridge**, also known as the Tuscaloosa Bypass, is a private toll bridge over the Black Warrior River west of downtown Tuscaloosa, Alabama.[8] The bridge, located near the Tuscaloosa National Airport, connects downtown with the city's northern and western suburbs.

The **Brownsville & Matamoros Express Bridge** is private toll bridge that connects the cities of Brownsville, Texas and Matamoros, Mexico across the U.S.-Mexico border. The bridge connects the larger Matamoros-Brownsville metropolitan area.[9] The original bridge serves rail primarily while a parallel bridge constructed in 1997 handles automobile traffic.

The **Cline Avenue Bridge** is a 1.7-mile bridge that creates a connection from the employment center of East Chicago across the Indiana Harbor to Lake Michigan. The new bridge, which was constructed in 2017, connects I-90 and I-80 to industrial employment, particularly mills and Gary/Chicago International Airport.[10]

6 "About Us," *montgomeryexpressway.com*, Montgomery Expressway, 2022. https://www.montgomeryexpressway.com/About.aspx (19 Jan. 2022).

7 "About Us," *ambassadorbridge.com*, Ambassador Bridge, 2022. https://www.ambassadorbridge.com (7 Feb. 2022).

8 "The Fastest Route Between Tuscaloosa and Northport," *Tuscaloosabypass.com*, Tuscaloosa By-Pass, 2022. www.tuscaloosabypass.com/Home.aspx. (19 Jan. 2022).

9 George C. Werner, "TSHA | St. Louis, Brownsville and Mexico Railway," Texas State Historical Association, 2020. www.tshaonline.org/handbook/entries/st-louis-brownsville-and-mexico-railway.

10 "Cline Avenue Bridge: BACKGROUND," Cline Avenue Bridge, n.d. www.clineave.com/background. (27 Feb. 2023).

The **Detroit-Windsor Tunnel** is an underwater tunnel connecting Detroit, Michigan and Windsor, Ontario.[11] The tunnel was constructed in 1930 in order to provide swift transportation under the Detroit River between the U.S. and Canada.

The **Dingman's Ferry Bridge** was constructed in 1900, providing an alternative to ferry service to cross the Upper Delaware River.[12] The two-lane bridge connects Pike County, Pennsylvania to Sussex County in New Jersey.

The **Downbeach Express Toll Bridge** in Margate, New Jersey provides a connection between Margate City on Absecon Island and the New Jersey mainland via Margate Boulevard, which is also maintained by toll revenue.[13] The bridge allows drivers in Margate to avoid a route north through Atlantic City or south through Longport to access the mainland and the Garden State Parkway.

The 1.75-mile **Emerald Mountain Expressway** consists of a toll bridge over the Tallapoosa River and a road that connects Rifle Range Road and Wares Ferry Road in the northeast suburbs of Montgomery, Alabama.[14] The expressway bypasses a much lengthier 45- to 60-minute drive via US 231 by providing a direct 15-minute route between the communities of Emerald Mountain and eastern Montgomery.

The **Foley Beach Express** (FBE) is an arterial highway and tolled bridge that connects the Alabama communities of Gulf Shores and Orange Beach to more northern parts of Baldwin County, extending 14 miles north to Foley. A second, untolled connecting road, the Baldwin Beach Express, originates near the northern terminus of the FBE, and extends another 13 miles to I-10.[15] Paralleling SR 59, the highway has higher travel speeds and offers better travel time reliability during the peak tourist season.

11 "History," *dwtunnel.com*, Detroit-Windsor Tunnel, 2018. www.dwtunnel.com/history/ (23 Jan. 2022).

12 "History," *dcdbc.com*, Dingmans Choice and Delaware Bridge Company, 2022. www.dcdbc.com/history.php (23 Jan. 2022).

13 "Welcome." *downbeachexpress.com*, Downbeach Express. 2021. https://downbeachexpress.com/Home_Page.html (19 Jan. 2022). www.downtownbeachexpress.com/

14 "Travel Fast Travel Smart." *Emeraldmountainexpressway.com*, Emerald Mountain Expressway, 2022, https://www.emeraldmountainexpressway.com/Home.aspx (19 Jan. 2022).

15 "Non-Interstate System Toll Bridges and Tunnels in the United States," The Office of Highway Policy Information, *fhwa.dot.gov*, 2018. www.fhwa.dot.gov/policyinformation/tollpage/page07.cfm (7 Feb 2022).

The **Fort Frances-International Falls International Bridge** is a privately owned toll bridge that connects Fort Francis in Ontario with International Falls, Minnesota.[16] The bridge connects US 53 and US 71 with Trans-Canada Highway 71.

The **Fort Madison Bridge**, also known as the Mississippi River Bridge, was the first bridge to span the Mississippi at Fort Madison in 1927.[17] It provides a connection between Fort Madison, Iowa and Niota, Illinois for rail traffic on the lower part of the bridge and automobile traffic on the upper portion.

The private **Grosse Ile Toll Bridge** connects Grosse Ile, the largest island on the Detroit River, with mainland Michigan.[18] The island, located south of Detroit and home to over 10,000 residents, is also connected to the mainland by the untolled Wayne County Bridge.

The **Lake of the Ozarks Community Bridge** spans a half-mile across the Lake of the Ozarks. The bridge connects the east side (the highway to St. Louis) to the west side (the highway to Kansas City), the two largest metro areas in Missouri.[19]

The **Newell-East Liverpool Toll Bridge** over the Ohio River connects Newell, West Virginia to East Liverpool, Ohio.[20] The bridge was constructed in 1905, and today provides interurban transportation for automobiles and pedestrians.

The **Orchard Pond Parkway** in northern Leon County acts as a bypass of Tallahassee, Florida, connecting the communities to the northwest and northeast of the city.[21] The eastern end of the parkway is at CR 155, while the western end terminates at CR 157.

16 Ibid.

17 "Historic Bridges in Iowa, Fort Madison Bridge," *iowadot.gov*, Iowa Department of Transportation, 2022. https://iowadot.gov/historicbridges/historic-bridges/fort-madison-bridge (23 Jan. 2022).

18 "History of the Grosse Ile Toll Bridge," *grosseillbridge.com*, Grosse Ill Bridge Company, 19 Jan. 2022. www.grosseilebridge.com/history/ (19 Jan. 2022).

19 "Lake of the Ozarks Community Bridge, Missouri," Federal Highway Administration: Center for Innovative Finance Support, n.d. (27 Feb. 2023). www.fhwa.dot.gov/ipd/project_profiles/mo_lake_of_the_ozarks_community_bridge.aspx.

20 "Newell Bridge," *historicbridges.org*, Historic Bridges. 2022. www.bridgestunnels.com/location/newell-toll-bridge/ (23 Jan. 2022).

21 "About," *Orchardponparkway.com*, Orchard Pond Parkway, 2022, www.orchardpondparkway.com (19 Jan. 2022).

The **Progreso International Bridge** connects Nuevo Progreso, Mexico and Progreso, Texas providing a transportation link for trucks, motorists, and pedestrians.[22] Since its construction in 1952, the bridge has served commercial purposes and made border crossings more efficient.

The **Rio Grande City—Camargo International Bridge** is a privately owned and operated bridge that spans the Rio Grande and connects Rio Grande City, Texas to Camargo in Mexico.[23] On the United States side, the bridge provides access via local streets to US 83.

The **Seventeen Mile Drive** is a toll road that links Carmel, California to Pebble Beach, an unincorporated community on the Monterey Peninsula.[24]

The **South Norfolk Jordan Bridge** carries State Route 337 traffic between the Virginia cities of Portsmouth and Chesapeake over the Southern Branch Elizabeth River.[25] The cities are also connected by the Midtown and Downtown tunnels north of the bridge and a vehicular bridge farther south.

22 "About Us," *texasmexicobridges.com*, Progreso International Bridge, 2022 https://texasmexicobridges.com/who-we-are/(23 Jan. 2022).

23 "Non-Interstate System Toll Bridges and Tunnels," *FHWA.DOT.gov*.

24 "Scenic 17-Mile Drive in Picturesque Pebble Beach," Pebble Beach Resorts, n.d. 2023. www.pebblebeach.com/17-mile-drive/ (27 Feb. 2023).

25 "About Us," *snjb.net*, South Norfolk Jordan Bridge, 2021. https://snjb.net/jordan-bridge-history/ (23 Jan. 2022).

PART 3

INTERNATIONAL SURFACE TRANSPORTATION INFRASTRUCTURE 2022

3.1 LARGEST INTERNATIONAL SURFACE TRANSPORTATION P3S

Part 3 provides an overview of worldwide surface transportation P3 activity in 2022.[26] It was a strong year for global P3 activity with 179 project closings worth $56.9 billion. These projects were mainly dispersed throughout Asia and Latin America, followed by Europe. In 2022 there were 11 project closings worth more than $1 billion each. This is an increase from five project closings of more than $1 billion each in 2021.[27] Table 2 displays the 10 largest agreements, which were compiled using the news source *Inframation*—the leading news publication for P3 data.

[26] "Global Surface Transportation PPP Deals, January 1, 2022–December 31, 2022," *InframationNews.com* Inframation News, 2022. https://www.inframationnews.com/deals/ (27 Feb. 2023).

[27] Ibid.

TABLE 2: LARGEST GLOBAL SURFACE TRANSPORTATION P3 PROJECTS

Project	Location	Country	Cost $ (B)	Type	Duration (In Years)	Concessionaire
Metro de Bogotá - Line 1	Bogotá	Colombia	$4.4	DBFOM AP	20	APCA Transmimetro
Chicago Skyway Sale	Chicago	United States	$3.4	DBFOM RR	89	OTPP, Atlas Arteria
West Sydney Airport Metro	Sydney	Australia	$3.3	DBFOM RR	15	Parklife Metro
Maryland Purple Line Renewed P3 Agreement	Bethesda-New Carrollton	United States	$2.7	DBFOM AP	34	Purple Line Transit Partners
Pennsylvania Major Bridge Program	Throughout State of Pennsylvania	United States	$2.3	DBFOM AP	30	Bridging Pennsylvania Partner
Ontario Line	Toronto	Canada	$1.7	DBFOM AP	30	Connect 6ix
Reliance Rail Rolling Stock Refinancing	Sydney	Australia	$1.4	DBFOM AP	30	INPP, Reliance Rail
WestConnex Stage 2 Refinancing	Sydney	Australia	$1.2	DBFOM RR	37	Sydney Transport Partners
I-495 NEXT Project Refinancing	Fairfax County, Virginia	United States	$1.1	DBFOM RR	59	Transurban
Sotra Connection	Sotra-Bergen	Norway	$1.1	DBFOM AP	25	SK Group, FCC, Salini Impregilo, Macquarie

Source: 2022 Transaction list from *Inframation Infrastructure News*

The following are brief explanations of each project.

The **Metro de Bogotá - Line 1** DBFOM AP P3 project seeks to construct 24 kilometers of passenger rail, stretching from Portal Las Américas to Avenida Caracas in Bogotá, Colombia.[28] The project was granted by Empresa Metro de Bogota, reaching financial close in December of 2022.

[28] "Metro de Bogotá - Line 1 PPP," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/806518/metro-de-bogot----line-1-ppp.thtml (27 Feb. 2023).

The **Chicago Skyway** DBFOM AP P3 sold a 66.67% stake in the 99-year lease from Canada Pension Plan Investment Board (CPPIB) and OMERS Infrastructure to Atlas Arteria and reached financial close in December of 2022.[29] The 7.8-mile toll road includes a half-mile steel-truss bridge over the Calumet River.

The **West Sydney Airport Metro** DBFOM RR P3 seeks to create a rail network reaching from St. Mary's to Macarthur via West Sydney Airport.[30] The project granted by the Government of New South Wales reached financial close in December of 2022.

The **Maryland Purple Line Renewal** DBFOM AP P3 is a revised concession for a 16.2-mile rail line from Bethesda to New Carrollton, Maryland.[31] The renewal granted by the Maryland Department of Transportation and the Maryland Transit Administration reached financial close in April 2022.

The **Pennsylvania Major Bridge Program** DBFOM AP P3 will rehabilitate and reconstruct six major bridges throughout the state.[32] The project granted by the Pennsylvania Department of Transportation reached financial close in December of 2022.

The **Ontario Line** DBFOM AP P3, a 16-kilometer free-standing subway in downtown Toronto, was granted by Infrastructure Ontario and Metrolinx.[33] The project, which reached financial close in November 2022, is for one of three procurements. This procurement is for rolling stock, systems, operations, and maintenance.

29 "Chicago Skyway Sale (66.67% stake)," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/11608716/chicago-skyway-sale-66-67--stake-2022.thtml (27 Feb. 2023).

30 "Sydney Metro Western Sydney Airport (Metro WSA) Phase 1 Package 3 PPP," *inframationnews.com* , Inframation, 2022. www.inframationnews.com/deals/1500776/sydney-metro-western-sydney-airport-metro-wsa-phase-1-package-3-ppp.thtml (27 Feb. 2023).

31 "Maryland Purple Line Renewed P3 Agreement," *inframationnews.com* , Inframation, 2022. www.inframationnews.com/deals/9988786/maryland-purple-line-renewed-p3-agreement-2022.thtml (27 Feb. 2023).

32 "Pennsylvania Major Bridge Program P3," *inframationnews.com*, Inframation, 2022. (27 Feb. 2023). www.inframationnews.com/deals/6868821/pennsylvania-major-bridge-program-p3.thtml

33 "Ontario Line – Rolling Stock, Systems, Operations and Maintenance P3," *inframationnews.com* Inframation, 2022. (27 Feb. 2023). www.inframationnews.com/deals/3759831/ontario-line---rolling-stock--systems--operations-and-maintenance-p3.thtml

The **Reliance Rail Rolling Stock** P3 was refinanced to replace the two tranches of an existing facility. It reached financial close in March of 2022.[34] The project was originally tendered by the Government of New South Wales to the Transport Infrastructure Development Corporation and RailCorp in 2006.

Stage 2 of the **WestConnex** DBFOM RR P3 refinancing was tendered by the Government of New South Wales.[35] The 33-kilometer motorway complex's refinancing reached financial close in August of 2022. The project's lease will begin when the motorway opens (projected in 2023) and will end in 2060.

The **I-495 NEXT Project** DBFOM RR P3 financing was granted by the Virginia Department of Transportation for the existing section of the I-495 express lanes. The financing in Fairfax County reached financial close in March of 2022.[36] The project's lease duration included five years for construction and 75 years for operation and maintenance, leaving 59 years remaining following the refinancing.

The **Sotra Connection** DBFOM AP P3 is a project that will develop new sections of the Rvv 555 and Fv 562, 24 kilometers of two-lane access roads, as well as a few small bridges in Norway.[37] The project, granted by the Norwegian Public Roads Administration, reached financial close in March of 2022.

3.2 COUNTRIES REACHING FINANCIAL CLOSE ON FIRST P3

In 2022, no new countries reached financial close on their first surface transportation P3.

3.3 INTERNATIONAL P3 ACTIVITY BY REGION

The first transportation P3s were located in Australia and Europe, but today there is surface transportation P3 activity on every inhabited continent. Table 3 summarizes the surface transportation P3s that reached financial close by region, and provides a value of all P3s

34 "Reliance Rail Refinancing (2022)," Inframation, 2022. www.inframationnews.com/deals/9790346/reliance-rail-refinancing-2022.thtml (16 Mar. 2023).

35 "WestConnex (Stage 2) (Refinancing)," *inframationnews.com* Inframation, 2022. www.inframationnews.com/deals/12106591/westconnex-stage-2refinancing-2022.thtml (27 Feb. 2023).

36 "I-495 NEXT Project Refinancing," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/12285076/i-495-next-project-refinancing-2022.thtml (27 Feb. 2023).

37 "Sotra Connection (Rv 555) PPP," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/2400036/sotra-connection-rv-555-ppp.thtml (27 Feb. 2023).

within a region. For context, Asia saw the largest number of P3 closures with 74, followed by Latin America with 53 and Europe with 28.[38] Latin America's P3 projects had the highest total value at $16.4 billion.

TABLE 3: GLOBAL SURFACE TRANSPORTATION P3S IN 2022

Region	Number of Financial Closes	Value $(B)
Africa	3	$0.45
Asia	74	$11.79
Australasia	7	$6.83
Europe	28	$5.76
Latin America	53	$16.41
Middle East	0	$0
North America	14	$15.63

Source: 2022 Transaction list from *Inframation Infrastructure News*

[38] "Global Surface Transportation P3s in 2022," *inframationnews.com*, Inframation. 2023 https://www.inframationnews.com (6 Mar. 2023).

PART 4

U.S. SURFACE TRANSPORTATION CONCESSIONS, 2022

4.1 LARGEST U.S. SURFACE TRANSPORTATION P3S

Over the past 35 years, 38 U.S. highway P3s and three U.S. transit P3s have reached financial close. While not impressive by international standards, the pace of P3 projects has accelerated over the past 10 years. Table 4 provides an overview of the FY 2022 U.S. surface transportation concession market, listed in order of the investment value of each project. The length of each lease is provided for existing toll roads now leased to private concessionaires.

Most new P3 projects use a DBFOM contract with terms ranging from 30 to 70 years. Since 2012, the major trend in highway concessions has reportedly migrated away from toll-revenue-based financing toward AP-based financing. (Transit projects need to use AP-based financing because they do not generate enough revenue.) However, of the 37 highway projects in Table 4, 26 are financed based on toll revenues alone. Of the others, only five are financed on a pure AP basis, with six larger hybrid AP concessions all involving new toll revenues that will supplement the state's revenue sources. The total dollar value of the 40

concessions is $56.2 billion, of which 65% is generated based on toll revenue financing, with the other 35% financed based on the states' (and in the case of Goethals Bridge, the Port Authority of New York and New Jersey's) AP commitments.

TABLE 4: LARGEST U.S. LONG-TERM SURFACE TRANSPORTATION CONCESSIONS AS OF 12/31/22

Project	Location	Cost ($) B	Type	Most Recent Closing	Concessionaire
Indiana Toll Road	Indiana	$5.7	75-year lease, toll	05/15	IFM Global Infrastructure Fund/California Public Employees' Retirement System/Allstate
I-4 Ultimate Managed Lanes	Orlando, FL	$2.9	DBFOM, AP/toll	09/14	Skanska/Granite/Lane
Purple Line Transit	Montgomery/ Prince Georges County, MD	$2.7	DBFOM, AP	04/22	Purple Line Transit Partners LLC
I-635 LBJ Managed Lanes	Dallas, TX	$2.6	DBFOM, toll	06/10	Cintra/Meridiam
Transform 66 P3 (Outside the Beltway I-66)	Fairfax County/Prince William County, VA	$2.4	DBFOM, toll	11/17	APG/Cintra/Ferrovial/John Laing/Meridiam Infrastructure North America II
Midtown Tunnel	Norfolk, VA	$2.4	DBFOM, toll	11/20	Abertis, Manulife Investment Management
North Tarrant Express (Phase I and 2W)	Fort Worth, TX	$2.1	DBFOM, toll	12/19	Cintra/APG/Meridiam
I-495 Express Lanes	Fairfax County, VA	$2.1	DBFOM, toll	05/07	Transurban/Fluor
Denver Eagle P3 Rail	Denver, CO	$2.0	DBFOM AP	08/10	Fluor/Lang/Uberior
Moynihan Train Hall	New York City, NY	$1.9	99-year lease AP	11/21	Empire State Development Corporation
I-595 Managed Lanes	Fort Lauderdale, FL	$1.8	DBFOM, AP/toll	10/09	ACS Infrastructure
Chicago Skyway	Chicago, IL	$1.8	89-year lease, toll	02/16	Ontario Teachers' Pension Plan/Atlas Arteria
Goethals Bridge	New York City, NY	$1.4	DBFM, AP/toll	11/13	Macquarie/Kiewit
PR-22/PR-5	Puerto Rico	$1.4	50-year lease toll	05/13	Abertis/Goldman Sachs
SH 183 Managed Lanes	Dallas – Fort Worth, TX	$1.4	DBFOM, AP/toll	11/14	Kiewit
North Tarrant Express Phase 3A	Fort Worth, TX	$1.4	DBFOM, toll	06/16	Cintra/Meridiam/APG

Project	Location	Cost ($) B	Type	Most Recent Closing	Concessionaire
I-75 Modernization Segment 3 P3	Michigan	$1.4	DBFM, AP	11/18	AECOM/Ajax/Dan's Excavating Inc./Jay Dee/John Laing
SH 130 Segments 5-6	Texas	$1.3	DBFOM, toll	03/08	SH 130 Concession Co.
ORB East End Crossing	Louisville, KY	$1.3	DBFOM, AP/toll	03/13	Walsh/Vinci/Bilfinger Berger
Central 70 P3	Denver, CO	$1.3	DBFOM, AP/toll	9/21	Kiewit/Meridiam/Jacobs Engineering Group/WSP
Rapid Bridge Replacement	Pennsylvania	$1.1	DBFM, AP	03/15	Plenary/Walsh
Port of Miami Tunnel	Miami, FL	$1.1	DBFOM, AP	10/09	Meridiam/Bouygues Travaux Publics
SH 288 Toll Lanes	Harris County, TX	$1.1	DBFOM, toll	05/16	ACS/Infrared/Shikin & Binui/Northleaf/Clal Insurance/Star America
I-95 Express Lanes	Virginia	$0.9	DBFOM, toll	07/12	Transurban
Presidio Parkway	San Francisco, CA	$0.9	DBFOM, AP	06/12	Meridiam/ HOCHTIEF PPP Solutions
I-95 Express Lanes Fredericksburg Extension	Virginia	$0.8	DBFOM, toll	07/19	Transurban Group
SR 125, South Bay Expressway	San Diego, CA	$0.7	DBFOM, toll	07/11	SANDAG
Portsmouth Bypass	Portsmouth, OH	$0.7	DBFOM, AP	04/15	ACS, Infrared, Star
I-77 Managed Lanes	Charlotte, NC	$0.6	DBFOM, toll	05/15	Cintra/Aberdeen/John Laing
I-495 NEXT	Fairfax County, VA	$0.6	DBFOM RR	03/22	Transurban
Pocahontas Parkway	Henrico County, VA	$0.6	99-year lease, toll	06/06	DBi Services/Macquarie
Northwest Parkway	Denver, CO	$0.6	99-year lease, toll	03/17	DIF/InfraRed/HICL/ Northleaf
I-395 P3	Arlington County and Fairfax County VA	$0.6	DBFOM, toll	06/17	Transurban/Fluor
Dulles Greenway Toll Road	Loudoun County, VA	$0.4	DBFOM, toll	02/17	Macquarie
Southern Connector, SC	Greenville, SC	$0.2	DBFOM (63-20)*, toll	08/12	SCDOT
91 Express Lanes	Orange County, CA	$0.2	DBFOM, toll	11/03	OCTA

Project	Location	Cost ($) B	Type	Most Recent Closing	Concessionaire
US 36 HOT Lanes, Phase 2	Colorado	$0.2	DBFOM, toll	02/14	Plenary/Ames/Granite
Belle Chasse Bridge and Tunnel Replacement	Belle Chasse, LA	$0.2	DBFOM, toll	12/19	Plenary
Teodoro Moscoso Bridge	San Jose, Puerto Rico	$0.1	DBFOM, toll	01/92	Abertis
Camino Columbia Bypass	Laredo, TX	$0.1	DBFOM, toll	06/99	TXDOT

*** Before Private Activity Bonds (PABs) were authorized, non-profit corporations labeled 63-20s allowed a project to be financed with tax-exempt bonds. Since PABs are preferable, 63-20s are no longer used.**
Source: "US Highway PPP Deals," *Inframation Infrastructure News*, Acuris.

The continued expansion and redevelopment of U.S. highways with P3s provides cause for optimism in three different ways. First, it suggests that the more aggressive developers of new toll projects have an exit option after the project is operational and demonstrating traffic and revenue results. These purveyors may want to shift their capital to new projects.

Second, it shows that P3s can be successful in attracting much-needed investment in replacing the U.S.'s first-generation, largely untolled Interstate highways (which are nearing the end of their useful life). Such projects should be particularly attractive to pension fund investments, since they are lower risk than greenfield projects. Pension funds may also be seen as more politically acceptable to legislators and the public than global investment firms seeking higher rates of return.

Third, it reveals P3 actors' sustained commitment to roadway quality due to the long-term nature of P3 contracts and their handback provisions calling for infrastructure assets to be returned to agencies in good condition.

4.2 2021 SURFACE TRANSPORTATION P3S

During the 2022 calendar year (January-December), eight surface transportation P3 projects worth $12.1 billion reached financial close in the United States.[39] This is a large increase from the absence of any project closings in 2021.

[39] "Global Surface Transportation PPP Deals, January 1, 2022–December 31, 2022," *InframationNews.com* Inframation, 2022. https://www.inframationnews.com/deals/ (27 Feb. 2023).

TABLE 5: 2022 P3 FINANCIAL CLOSINGS AND REFINANCINGS

Project	Location	State	Cost ($) B	Type	Duration (in years)	Concessionaire
Chicago Skyway Sale	Chicago	Illinois	$3.4	DBFOM RR	81	OTPP and Atlas Arteria
Maryland Purple Line Renewal	Bethesda-New Carrollton	Maryland	$2.7	DBFOM AP	34	Purple Line Transit Partners
Pennsylvania Major Bridge Program	Pennsylvania	Pennsylvania	$2.3	DBFOM AP	30	Bridging Pennsylvania Partner
I-495 NEXT Project Refinancing (I-95 to SR 267)	Fairfax County	Virginia	$1.1	DBFOM RR	59	Transurban, Fluor
Indiana Toll Road	Indiana	Illinois-Ohio	$0.8	DBFOM RR (re-financing)	75	IFM Global Infrastructure Fund/California Public Employees' Retirement System/Allstate
I-495 NEXT Project (SR 267 to the Potomac River)	Fairfax County	Virginia	$0.6	DBFOM RR	59	Transurban, Fluor
I-95 Express Lanes Fredericksburg Extension	Stafford County	Virginia	$0.6	DBFOM RR	73	Transurban
Midtown Tunnel	Norfolk	Virginia	$0.6	DBFOM RR	58	Abertis, Manulife Investment Management

The following are brief explanations of each project.

The **Chicago Skyway Sale** DBFOM RR P3 involved the sale of a 66.67% stake in the 99-year lease from Canada Pension Plan Investment Board (CPPIB) and OMERS Infrastructure to Atlas Arteria and reached financial close in December of 2022.[40] The 7.8-mile toll road includes a half-mile steel-truss bridge over the Calumet River. The sale was valued at $3.40 billion.

The **Maryland Purple Line Renewal** DBFOM AP P3 is a preplacement P3 concession for a 16.2-mile rail line from Bethesda to New Carrollton, Maryland. The renewal granted by the

[40] "Chicago Skyway Sale (66.67% stake)," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/11608716/chicago-skyway-sale-66-67--stake-2022.thtml (27 Feb. 2023).

Maryland Department of Transportation and the Maryland Transit Administration reached financial close in April 2022.[41] The project cost $2.68 billion.

The **Pennsylvania Major Bridge Program** DBFOM AP P3 will rehabilitate and reconstruct six major bridges throughout the state.[42] The project granted by the Pennsylvania Department of Transportation reached financial close in December of 2022 and cost $2.30 billion.

The **I-495 NEXT Project,** granted by the Virginia Department of Transportation, will construct a northern extension on I-495 express lanes.[43] The project reached financial close in March of 2022 and was valued at $0.60 billion.

The **Indiana Toll Road** 75-year toll lease was refinanced in July of 2022. The 157-mile road runs from Chicago, Illinois to Toledo, Ohio, with a direct connection to the Chicago Skyway.[44] The road's refinancing was valued at $0.59 billion.

The **I-495 Express Lanes** DBFOM RR P3 refinancing was granted by the Virginia Department of Transportation. The financing is paired with a separate project to extend the current 14 miles of express lanes northward by 2.5 miles.[45] The project's refinancing was valued at $1.13 billion and reached financial close in March of 2022.

Virginia's **I-95 Express Lanes** DBFOM toll P3 project was refinanced in February of 2022. The project began in 2012 with 29 miles of high-occupancy vehicle (HOV) high-occupancy toll (HOT) lanes on I-95 in Stafford County. A new closing in 2019 extended the lanes to I-95 exit 133.[46] The project's refinancing was valued at $0.64 billion.

41 "Maryland Purple Line Renewed P3 Agreement," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/9988786/maryland-purple-line-renewed-p3-agreement-2022.thtml (27 Feb. 2023).

42 Pennsylvania Major Bridge Program P3," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/6868821/pennsylvania-major-bridge-program-p3.thtml (27 Feb. 2023).

43 "I-495 Express Lanes Northern Extension (I-495 NEXT)," *inframationnews.com*, Inframation. 2022. www.inframationnews.com/deals/8587631/i-495-express-lanes-northern-extension-i-495-next.thtml (27 Feb. 2023).

44 "Indiana Toll Road Refinancing (July 2022)," *inframationnews.com* , Inframation, 2022. www.inframationnews.com/deals/316106/indiana-toll-road-privatisation-2006.thtml (27 Feb 2023).

45 "I-495 NEXT Project Refinancing," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/12285076/i-495-next-project-refinancing-2022.thtml (27 Feb. 2023).

46 "I-95 Express Lanes Bond Refinancing (2022)," Inframation, 2022. www.inframationnews.com/deals/10040511/i-95-express-lanes-bond-refinancing-2022.thtml (27 Feb. 2023).

The **Midtown Tunnel** DBFOM toll P3 refinancing reached financial close in January of 2022. The original project included the construction of a new two-lane tunnel next to the existing Midtown tunnel, among other improvements to the existing Midtown and Downtown tunnels in Norfolk, Virginia.[47] The refinancing was valued at $0.58 billion.

[47] "Midtown Tunnel (Elizabeth River Tunnels Project) Refinancing (2022)," Inframation, 2022. www.inframationnews.com/deals/9885506/midtown-tunnel-elizabeth-river-tunnels-project-refinancing-2022.thtml (27 Feb. 2023).

PART 5

FEDERAL POLICY ON P3 CONCESSIONS

5.1 SURFACE TRANSPORTATION REAUTHORIZATION

In late 2021, Congress passed the Infrastructure Investment and Jobs Act (IIJA), which included a five-year reauthorization of federal surface transportation policy.[48] The law made significant changes to public-private partnerships as well as two financing tools used by many P3 projects: Transportation Infrastructure Finance and Innovation Act (TIFIA) loans and Private Activity Bonds (PABs). It also regulates how tolling, the largest P3 funding source, can be used.

5.1.1 IIJA AND P3 PROVISIONS

The IIJA made several changes relating to P3 projects that use federal funding or financing. The law requires P3 projects costing more than $750 million and using either a TIFIA or Railroad Rehabilitation and Improvement Financing (RRIF) loan to conduct a value-for-money (VfM) analysis.[49] A VfM analysis is used to compare the financial impacts of a P3

[48] "Infrastructure Investment and Jobs Act, H.R. 3684" Congress.gov, *congress.gov*, Nov. 2021. https://www.congress.gov/bill/117th-congress/house-bill/3684/text (15 Feb. 2022).

[49] "AASHTO Comprehensive Analysis of the Bipartisan Infrastructure Bill," *policy.transportation.org*, American Association of State Highway and Transportation Officials, 15 Sep. 2021. www.policy.transportation.org/wp-

project against those for a publicly procured project.[50] This type of analysis creates a public sector comparator to estimate the life-cycle cost of a project using a traditional approach, estimates the cost, and conducts an apples-to-apples comparison of the two approaches.

Often a P3 will appear more expensive when, over the long term, the opposite is true. For example, let's compare a traditional bid with a P3 bid to extend variably priced toll lanes on an Interstate highway for two miles. The conventional delivery bid is $60 million and the P3 bid is $71 million.[51] Yet the P3 includes a $21-million reduction due to risk-transfer and competitive neutrality as well as a net savings to the government of $9 million. (A competitive neutrality adjustment calculates the tax revenue lost in a traditional procurement compared with a P3.) As a result, the government has a 7% value for money. Table 6 breaks down the different funding options for both delivery methods.

TABLE 6: VALUE FOR MONEY ANALYSIS OF PUBLIC SECTOR AND P3 PROJECTS

Option	Public Sector	P3
Base Cost	$60M	$65M
Financing	$15M	$17M
Ancillary Costs	$11M	$15M
Retained Risk	$20M	$7M
Competitive Neutrality	$8M	$0M
Total	**$114M**	**$104M**

Source: Calculated by the Authors

IIJA also added a new requirement for public sponsors, which includes reviewing private sector compliance, certifying that the private party is adhering to the P3 terms, and notifying the public that a review has been conducted.[52] These steps are required for all projects worth more than $100 million. While having a process to monitor P3 projects is important, P3s have not been a risky endeavor. Not a single P3 has needed to be bailed out

content/uploads/sites/59/2021/09/2021-09-15-AASHTO-Comprehensive-Analysis-of-IIJA-FINAL.pdf (15 Feb. 2022).

50 "Value for Money Analysis for Public-Private Partnerships," Federal Highway Administration, Center for Innovative Finance Support, *fhwa.dot.gov*, 2022. www.fhwa.dot.gov/ipd/fact_sheets/p3_toolkit_03_vfm.aspx (31 Jan. 2022).

51 Ibid.

52 Fernando Marin, Nicolai J. Sarad, and Liam P. Donovan, "Infrastructure Investment and Jobs Act: Selected Changes Impacting Public-Private Partnerships." *The National Law Review*, 24 Nov 2021, *National Law Review Online*. www.natlawreview.com/article/infrastructure-investment-and-jobs-act-selected-changes-impacting-public-private (15 Feb. 2021).

by federal or state taxpayers.[53] While it is unclear exactly what the U.S. Department of Transportation (DOT) will require, the provision seems unnecessary.

> *Not a single P3 has needed to be bailed out by federal or state taxpayers.*

The bill also authorizes grants to help increase the number of P3s.[54] Section 71001 of IIJA establishes the asset concessions and innovative finance assistance program, and authorizes technical assistance grants that can be used for the following:

- Feasibility Studies
- Revenue Forecasting
- Cost-Benefit Analysis
- Other Economic Assessments
- Public Benefit Studies
- Value-for-Money Analysis
- Business Case Development
- Life-Cycle Cost Analysis
- Risk Assessment
- Financing and Funding Options Analysis
- Procurement Alternative Analysis
- Statutory and Regulatory Framework Analysis
- Financial and Legal Planning
- Early Assessment of Environmental Review
- Assistance Entering into an Asset Concession

53 "Public Private Partnerships (P3s)," Federal Highway Administration Center for Innovative Finance Support, *fhwa.dot.gov*, 2022. https://www.fhwa.dot.gov/ipd/p3/ (28 Feb. 2022).

54 Marin, et al., "Infrastructure Investment and Jobs Act."

DOT is required to ensure that using an asset concession to rebuild a highway does not make it more challenging to build that project. And the costs of the project cannot be shifted to any taxpayer with an annual household income of $400,000 per year or less. It is unclear how DOT will interpret that provision.

Further, the usefulness of the asset concession grants may be limited as the Build America Bureau already provides a wealth of information on P3s. However, any process that educates public and private entities on P3s is a positive.

5.1.2 IIJA AND TIFIA

Congress created the TIFIA program to provide low-interest credit support for projects with dedicated revenue sources that can qualify for investment-grade ratings.[55] Although the law currently allows a TIFIA loan to cover up to 49% of a project's total cost, the TIFIA office within DOT has not awarded any loans exceeding 33%. (Previously USDOT officials required projects to be "truly exceptional" to receive a loan exceeding 33%.) This is consistent with the law's original intent that TIFIA provide gap financing rather than being a project's primary source of debt finance. It also enables a given TIFIA budget allocation to support a larger total number of projects. Accordingly, TIFIA loans often are subordinated debt, which means senior loans or bonds are the first to receive project revenue. Only in the event of bankruptcy does the TIFIA loan shift to having equal status with other creditors.

Unfortunately, in October 2022 Secretary of Transportation Buttigieg announced that transit and transit-oriented development projects can now be funded at 49% of their cost.[56] This also includes ferry systems. It is unclear how many projects will be eligible to receive this higher funding match, but the change counters the law's original intent that TIFIA provide gap financing. Transit projects should not be receiving a higher match than other types of projects.

While the IIJA keeps TIFIA program funding steady at approximately $250 million per year, the legislation has made a number of programmatic changes. One of the most promising

[55] "Program Overview," Build America Bureau, *transportation.gov*, 29 Nov. 2021. www.transportation.gov/buildamerica/financing/tifia (15 Feb. 2022).

[56] "U.S. Department of Transportation Expands its Financing Program to Help Even More Infrastructure Projects Move Forward," U.S. Department of Transportation, *transportation.gov*, 4 Oct. 2022. https://www.transportation.gov/briefing-room/us-department-transportation-expands-its-financing-program-help-even-more (16 Mar. 2023).

changes is a requirement for DOT to create a streamlined application process for projects that can begin within 90 days after a TIFIA loan is awarded.[57] This provision addresses one of the biggest problems with TIFIA: the time from loan application to loan award. This reform could decrease loan processing time by 50%.

Earlier in 2021, USDOT took steps to speed up loan processing by creating TIFIA Lite. Under this program, experienced borrowers with strong credit and small, shovel-ready projects can use an expedited application process.[58] The accelerated process uses a loan template with standard terms to forgo the sometimes lengthy back-and-forth negotiations between the office and the applicant. Those loans are limited to $100 million.

Earlier in 2021, USDOT took steps to speed up loan processing by creating TIFIA Lite.

The TIFIA office has been under congressional pressure since the passage of the Moving Ahead for Progress for the 21st Century (MAP-21) reauthorization bill in 2012 to expedite awarding loans.[59] Rather than treat TIFIA as a check-the-box process as Congress intended, USDOT had turned TIFIA into a discretionary program. Only time will tell if these changes speed up the application process, but the fact that DOT finally recognized the problem by creating TIFIA Lite before Congress intervened with IIJA is encouraging. The changes also extend the timeframe when contingent commitments must result in financial close from three to five years.[60] This change will make TIFIA more attractive for larger, more complicated deals that have multiple funding and financing sources.

57 "AASHTO Comprehensive Analysis of the Bipartisan Infrastructure Bill," *policy.transportation.org*.

58 "TIFIA Lite," Build America Bureau, *transportation.gov*, 28 Jun. 2021 www.transportation.gov/buildamerica/financing/tifia/lite (15 Feb. 2022).

59 William Mallett, "The Transportation Infrastructure Finance and Innovation Act (TIFIA) Program." *crsreports.congress.gov*, CRS Reports, 2022. www.crsreports.congress.gov/product/pdf/R/R45516 (15 Feb. 2022).

60 Ibid.

Unfortunately, Congress also made one problematic change. It extended eligibility to transit-oriented development, airport projects, and wildlife acquisition activities.[61] To be sure, each of these project types can benefit from TIFIA loans. But TIFIA's $250 million annual funding in the IIJA is far below its $1 billion annual funding in 2014 and 2015.[62] Limited appropriations, combined with a steady stream of projects and an expedited review process, means TIFIA loans can finance a shrinking share of eligible projects.

5.1.3. IIJA AND PABS

PABs are especially useful to P3 projects because they are tax-exempt bonds that would not normally be available to projects that expect to earn a return on equity investments.[63] Congress authorized PABs for P3 surface transportation projects on the grounds that, since these projects serve the public, public sector entities should not have a built-in financial advantage over private sector entities. By exempting interest income on these PABs from taxation, revenue bonds issued for P3 projects as PABs will carry interest rates similar to those available for the revenue bonds of state toll agencies.

After almost 10 years of lobbying, Congress in the IIJA finally increased the PAB cap from $15 billion to $30 billion.[64] Since the law has taken effect, USDOT has issued or allocated more than $19 billion, which it could not have awarded without a doubling of the cap.[65]

After almost 10 years of lobbying, Congress in the IIJA finally increased the PAB cap from $15 billion to $30 billion.

61 Marin et al., "Infrastructure Investment and Jobs Act."

62 Jeff Davis, "Was the FAST Act's 70 Percent Cut in TIFIA Funding Justified?" *enotrans.org*, The Eno Center for Transportation. 16 Dec. 2015. www.enotrans.org/article/22938/ (15 Feb. 2022).

63 Aidan Vining, Anthony E. Boardman, and Finn Poschmann, "Public-Private Partnerships in the US and Canada: Case Studies and Lessons 1." *International Public Procurement Conference Proceedings*, *ResearchGate*, 2004. www.researchgate.net/publication/237477965_PUBLIC-PRIVATE_PARTNERSHIPS_IN_THE_US_AND_CANADA_CASE_STUDIES_AND_LESSONS1 (15 Feb. 2022).

64 "AASHTO Comprehensive Analysis of the Bipartisan Infrastructure Bill," *policy.transportation.org*.

65 "Private Activity Bonds," United States Department of Transportation Build America Bureau, *transportation.gov*, 24 Feb. 2022. https://www.transportation.gov/buildamerica/financing/private-activity-bonds (28 Feb. 2022).

The IIJA also expands PAB eligibility to broadband and carbon dioxide capture and sequestration.[66] For the next few years there will be plenty of room under the PAB cap. But the expanding number of uses will put pressure on Congress to adjust the cap in the future. The cap was originally instituted because PAB skeptics argued that demand for PABs might be low, given access to traditional municipal financing sources. Given the demonstrated importance of PABs in financing megaprojects, eliminating the cap would be a pragmatic, long-term solution.

Table 7 lists all current PABs and TIFIA loans for P3 surface transportation projects through the end of calendar year 2022.

TABLE 7: HIGHWAY AND TRANSIT PROJECTS FINANCED BY TIFIA AND PABS

Project	Year Originally Financed	TIFIA ($M)	PABs ($M)	Total Project ($M)
Pocahontas Parkway (VA)	2007	$150	$0	$597
SH 130, 5 & 6 (TX)	2007	$430	$0	$1,328
I-495 HOT Lanes (VA)	2008	$589	$589	$2,068
I-595 Express (FL)	2009	$603	$0	$1,834
Port of Miami Tunnel (FL)	2009	$341	$0	$1,073
NTE Phases 1 and 2W (TX)	2010	$650	$398	$2,122
LBJ Express (TX)	2010	$850	$606	$2,615
Denver Eagle P3 Rail (CO)	2010	$280	$396	$2,047
South Bay Expressway (CA)	2011	$140	$0	$658
Midtown Tunnel (VA)	2012	$422	$675	$2,089
Presidio Parkway II (CA)	2012	$150	$0	$852
I-95 Express (VA)	2013	$300	$253	$923
NTE Phase 3A, 3B and 3C (TX)	2013	$531	$274	$2,327
Goethals Bridge (NY/NJ)	2013	$474	$453	$1,436
US 36, Colorado Phase 2 (CO)	2014	$60	$20	$175
I-4 Ultimate (FL)	2014	$949	$0	$2,877
East End Bridge (IN/KY)	2015	$162	$508	$1,319
PA Rapid Bridge Replacement (PA)	2015	$0	$722	$1,118
I-77 Express Lanes (NC)	2015	$189	$100	$636
Portsmouth Bypass (OH)	2015	$209	$227	$634
SH 288 Toll Lanes (TX)	2016	$375	$299	$1,064
MD Purple Line (MD)	2016	$875	$313	$2,650
Transform 66 (VA)	2017	$1,229	$737	$3,724
Moynihan Train Hall (NY)	2017	$607	$0	$1,850
Central 70 (CO)	2018	$465	$115	$1,271
I-75 Modernization Segment 3 (MI)	2018	$0	$610	$1,400
I-95 Fredericksburg Express Lanes (VA)	2019	$0	$262	$830
TOTAL		**$11,030**	**$7,557**	**$41,517**

Source: Projects financed by TIFIA and Private Activity Bonds on www.transportation.gov

[66] "AASHTO Comprehensive Analysis of the Bipartisan Infrastructure Bill."

As the table shows, $11 billion in TIFIA loans led to approximately $42 billion in project activity over the past 15 years. PABs had a similar effect: $7.8 billion in PABs helped make that $42 billion in project activity a reality. Compare TIFIA and PABs to federal grants that provide 50%–90% of a project's cost. If a grant covers 70% of the project costs, in order to receive the same benefit of $11 billion of TIFIA loans, more than $27.8 billion in grants would need to be disbursed. Clearly, TIFIA loans and PABs are more than useful financing tools. Compared with direct grant funding, they also allow leveraging taxpayer expenditures to stretch those taxpayer dollars further.

5.1.4 IIJA AND TOLLING POLICY

> *The IIJA has several new tolling programs.*

The IIJA has several new tolling programs. The $250-million congestion relief program ($50 million per year) allows states to use cordon pricing or congestion pricing for up to 10 Interstate segments.[67] The program limits DOTs to charging tractor trailers no more than five times the rate of automobiles. Program funding can be used for other purposes such as parking pricing and multi-modal stations. A toll credit marketplace will be created to assess the benefits of states selling toll credits.[68] The selling state may use the proceeds for any highway-related project. The buying state may use the credit for the state- or local-match to any highway-related project. Finally, the bill guarantees that over-the-road buses have the same access to HOV and HOT lanes as transit buses.[69]

This outcome could be considered a win for tolling proponents, because the House-passed Moving Forward bill that was discarded in favor of the IIJA would have restricted tolling.[70]

67 "U.S. Senate Approves the Infrastructure and Jobs Act: A Summary and Analysis for the Toll Industry," *ibtta.org*, International Bridge Tunnel and Turnpike Association, 17 Aug. 2021. https://www.ibtta.org/sites/default/files/documents/Advocacy/GA049-IBTTA%20Infrastructure%20INvestment%20and%20Jobs%20Act%20Bill%20Summary%202021-0817.pdf (28 Feb. 2022).

68 Ibid.

69 Ibid.

70 "How We Are INVESTing in America," *transportation.house.gov*, The House Committee on Transportation and Infrastructure. 2021. https://transportation.house.gov/invest-in-america (31 Jan. 2022).

While the American Automobile Association national board and several state chapters of the American Trucking Association have dropped their hostility to tolling, there is resistance to allowing states to toll and rebuild their Interstate systems.[71]

5.2 OVERVIEW OF FINANCING TOOLS

Federal support for surface transportation P3s comes largely from several entities within the Federal Highway Administration (FHWA) in the U.S. Department of Transportation (USDOT).

The Center for Innovative Finance Support (CIFS—previously the old Office of Innovative Program Delivery), which provides vital support for P3s, is housed within the larger new Office of Innovative Program Delivery; both entities are units of FHWA. CIFS was created during the George W. Bush administration and expanded under both the Obama and Trump administrations, developing a large array of educational and analytical materials to assist state DOTs and others in getting up to speed on innovative finance and P3s in transportation infrastructure. CIFS is also likely to provide guidance on asset concession grants.[72] Table 8 details the P3 toolkit provided by the center.

TABLE 8: CENTER FOR INNOVATIVE FINANCE SUPPORT TOOLS

Program Category	Tool	Purpose
Publications	Fact Sheets	Provides overview of key P3 elements
	Primers	Details in-depth explanations of specific elements of P3 projects
	Model Contract Guides	Provides overview of P3 contracting process and best practices
	Other Guides	Covers miscellaneous topics from the federal review process and financing
	Reports, Discussion Papers	Provides in-depth analysis of policies, case studies and other policy assessments
Analytical Tools	P-3 Value	Provides spreadsheet-based calculation tools for conducting feasibility assessments of potential P3 projects including risk assessment, value for money, benefit/cost analysis and financial analysis
	P-3 Screen	Provides a checklist of key factors and analyses involved in making decisions about possible P3 procurements

71 Kathleen Bower, "AAA Supports Tolling in Certain Situations," Email, Dec. 2015.

72 Marin et al., "Infrastructure Investment and Jobs Act."

	Contracting Alternatives Suitability Evaluator	Evaluates and aids in selecting the most effective short- and long-term alternative contracting methods
Webinars	Recordings	Documents and recordings that enhance toolkit materials
Programs	SEP-15	Explains experimental new process for the FHWA to evaluate P3 project delivery with four major components: contracting, compliance with environmental requirements, right-of-way acquisition, and project finance
	Build America Bureau	Provides access to and credit and grants
	BATIC Institute	Facilitates coordination and information-sharing of public projects
	TIFIA	Provides credit assistance to select projects of regional importance
	PABs	Provides tax-exempt debt instruments authorized by USDOT on behalf of private entities for highway and freight projects
	GARVEEs	Allows a state DOT to issue debt that will be repaid with future federal-aid highway funding

Source: The Center for Innovative Finance Support's website: https://www.fhwa.dot.gov/ipd/p3/

Stressing the importance of increasing infrastructure investment, former Secretary of Transportation Anthony Foxx created the Build America Bureau, which aims to speed up the time it takes for transportation P3s to reach financial close.[73] The American Association of State Highway & Transportation Officials (AASHTO) launched the BATIC Investment Center as a new center of excellence to assist state DOTs in capacity-building in the area of project finance and P3s. The Center hosts multiple events throughout the country educating policymakers on transportation financing.

5.3 OTHER FEDERAL TOLLING POLICY

States are banned from imposing tolls on existing Interstate lanes or rebuilding an Interstate highway and imposing tolls on rebuilt lanes that previously were untolled. However, states can implement four types of tolling projects. While these options don't *require* P3s, many tolling projects are P3s.

[73] Anthony Foxx, "Removing the Roadblocks to Smarter Investment in American Transportation," *mckinsey.com*, McKinsey & Company 1 June 2015. www.mckinsey.com/business-functions/operations/our-insights/removing-the-roadblocks-to-smarter-investment-in-american-transportation (15 Feb. 2022).

The first and most popular option is for states to add variably priced managed lanes, which price lanes dynamically to manage congestion and maintain high throughput.[74] Some are conversions from poorly operating high-occupancy vehicle (HOV) lanes, while others are new construction. Many large metro areas—including Atlanta, Dallas/Fort Worth, Denver, Houston, Los Angeles, San Diego, San Francisco, Seattle, South Florida, and Washington, D.C.—have, are building, or are planning to build networks of variably priced managed lanes. While these lanes work best in urban areas, a Reason study highlighted several Interstate corridors that pass through more-rural areas in which variably priced lanes may be feasible.[75]

Many large metro areas—including Atlanta, Dallas/Fort Worth, Denver, Houston, Los Angeles, San Diego, San Francisco, Seattle, South Florida, and Washington, D.C.—have, are building, or are planning to build networks of variably priced managed lanes.

The second option is the FHWA Value Pricing Pilot Program (VPPP), which allows a state to charge variable tolls on all lanes of an Interstate to reduce congestion.[76] Oregon has applied for the program to put variable tolls on all lanes of I-5 in the Portland metro area. In November 2021 the state began planning for the project, inviting community feedback through local workshops as it awaits approval for the program.[77] In November 2022, the state began an Environmental Impact Assessment of the tolling project. Oregon also completed a 50-day comment period that informed the public about the environmental

74 States adding managed lanes include California, Colorado, Florida, Georgia, Maryland, Minnesota, North Carolina, Texas, Utah, Virginia, and Washington State.

75 Baruch Feigenbaum, "Managed Lanes Connecting Metro Areas: The Pragmatic Solution," Reason Foundation. 2019. www.reason.org/wp-content/uploads/managed-lanes-between-metro-areas-the-pragmatic-solution.pdf (15 Feb. 2022).

76 Value Pricing Pilot Program," *ops.fhwa.dot.gov*, U.S. Department of Transportation Federal Highway Administration. 2021. www.ops.fhwa.dot.gov/congestionpricing/value_pricing/index.htm (15 Feb. 2022).

77 Scott Keillor, Lucinda Broussard, and Garet Prior, "Oregon Toll Program Region 1 Area Commission on Transportation+ Toll Work Group Meeting #2," Oregon Department of Transportation, *Oregon.gov*, 1 Nov 2021. www.oregon.gov/odot/Get-Involved/Documents/110121-R1ACtplus-presentation.pdf (15 Feb. 2022).

assessment.[78] There is no limit on the number of slots/roadways that can take part in the VPPP.

The third option is the Interstate System Reconstruction and Rehabilitation Pilot Program (ISRRPP), which allows a state to use toll financing to rebuild one of its Interstate highways.[79] Currently, there are three slots open in the program. Since congestion is worst in urban areas, the Value Pricing Pilot Program is a better fit in urban regions, while the ISRRPP is a better choice to rebuild a long-distance corridor.

Since congestion is worst in urban areas, the Value Pricing Pilot Program is a better fit in urban regions, while the ISRRPP is a better choice to rebuild a long-distance corridor.

The fourth option is for states to rebuild their untolled bridges and tunnels with tolled bridges and tolled tunnels using a provision in the 1998 Transportation Equity Act for the 21st Century (TEA-21).[80] There is no limit on the number of bridges and tunnels that can be rebuilt using tolling. (A state can impose tolls on reconstructed bridges and tunnels on its Interstate system but cannot do the same for Interstate segments that do not include bridges and tunnels.) Rhode Island, which has the largest percentage of structurally deficient bridges in the country, tolls trucks (but not light-duty vehicles) to use 12 bridges or bridge-groups in the state.[81] Rhode Island's stated goal is to bring the bridges to a state of good repair by 2025. FHWA approved the toll truck program in 2016, leading to an ongoing lawsuit from the American Trucking Associations challenging the constitutionality

78 "Regional Mobility Pricing Project, Oregon Tolling: State of Oregon," Oregon Department of Transportation, 2022. www.oregon.gov/ODOT/tolling/Pages/I-5-Tolling.aspx (27 Feb. 2023).

79 "Interstate System Reconstruction and Rehabilitation Pilot Program," U.S. Department of Transportation Federal Highway Administration, *fhwa.dot.gov*, October 2018. www.fhwa.dot.gov/ipd/tolling_and_pricing/tolling_pricing/interstate_rr.aspx (31 Jan. 2022).

80 Robert S. Kirk, "Tolling U.S. Highways," Congressional Research Service, *crsreports.congress.gov*, 4 Aug 2017. www.sgp.fas.org/crs/misc/R43575.pdf (15 Feb. 2022).

81 "The RhodeWorks Tolling Program," Rhode Island Department of Transportation, dot.ri.gov. 31 Jan. 2022. www.dot.ri.gov/tolling/index.php (15 Feb. 2022).

of tolling trucks but not cars.[82] In September of 2022 a federal judge ruled that the program discriminates against heavy truckers and ordered that the tolling stop.[83] In February of 2023 the state filed an appeal which has received support from the International Bridge, Tunnel, and Turnpike Association who filed an amicus brief with the U.S. Court of Appeals.[84]

Other states are developing toll plans in hopes that the federal ban on states tolling their Interstates is repealed. Connecticut proposed and then abandoned a plan to toll trucks on 12 sites throughout the state.[85] Indiana and Wisconsin examined the technical and political feasibility of rebuilding their Interstates via tolling.[86] Michigan completed a similar study in 2022, which found tolling many of its Interstates and other freeways would be realistic from both fiscal and implementation perspectives.[87]

82 "ATA Sues Rhode Island Over Unconstitutional Truck Toll Program," *trucking.org*, American Trucking Associations. 9 July 2018, www.trucking.org/news-insights/ata-sues-rhode-island-over-unconstitutional-truck-toll-program (15 Feb. 2022).

83 John Gallagher, "Court rules against Rhode Island's truck-only toll program," FreightWaves, 2022. www.freightwaves.com/news/court-rules-against-truck-only-tolling-in-rhode-island (13 Mar 2023).

84 Ryan Witkowski, "Rhode Island's truck toll appeal gets international group's support," Land Line Magazine, 2023. www.landline.media/international-group-throws-support-behind-rhode-islands-appeal-of-truck-toll-verdict/ (13 Mar 2023).

85 "Connecticut Governor Drops Plans for Tolls on Highways Including Interstate 684," *lohud.com*, Lohud, 20 Feb. 2020. www.lohud.com/story/news/local/westchester/2020/02/20/connecticut-governor-ned-lamont-drops-plan-tolls-highways-684/4817501002/ (15 Feb. 2022).

86 "Statewide Interstate Tolling Strategic Plan," Indiana Department of Transportation, *in.gov*, Nov. 2018. www.in.gov/indot/files/tolling_strategic_plan.pdf (15 Feb. 2022).

87 "State of Michigan Tolling Study (PA 140 of 2020)," House Appropriations Subcommittee on Transportation, *house.mi.gov*, 28 Apr. 2021. www.house.mi.gov/hfa/PDF/Transportation/Transportation_Subcmte_Presentation_HNTB_4-28-21.pdf. (15 Feb. 2022).

PART 6

P3 LEGISLATION AND HIGHWAY ACTIVITY PER STATE

6.1 OVERVIEW OF STATE P3 LEGISLATION

The FHWA Center for Innovative Finance Support lists 37 states, the District of Columbia, and Puerto Rico as jurisdictions that have P3 authority for transportation infrastructure.[88] However, the enabling acts vary in authority provided from state to state. Further, many of these states with authority have entered into DBFs or DBMs but not DBFMs or DBFOMs. Full P3s have been implemented in only 11 states, in Puerto Rico, and in projects under the auspices of the Port Authority of NY/NJ.

Legislators in the other states have failed to enter into P3s for one or more of several reasons: Some legislation contains language that makes entering into P3s a poor choice for the public partner, the private partner, or both. Other states have had political challenges in which the governor or a state's legislative body was opposed to P3s. Some states have not found a project that is a good fit for a P3. Table 9 lists the type of P3 authority in states with authorizing legislation.

88 "State P3 Legislation." Center for Innovative Finance Support, *fhwa.dot.gov*, 2018. www.fhwa.dot.gov/ipd/p3/legislation/ (15 Feb. 2022).

TABLE 9: P3 STATES BY AUTHORITY

Broad Authorization	Restricted Authorization	States Entering into Full P3s
Alabama	Alaska	California
Arizona	Hawaii	Colorado
Arkansas	Kansas	Florida
California	Louisiana	Indiana
Colorado	Michigan	Maryland
Connecticut	Missouri	Michigan
Delaware	New Hampshire	North Carolina
District of Columbia	North Dakota	Ohio
Florida	Puerto Rico	Pennsylvania
Georgia	Tennessee	Texas
Indiana	West Virginia	Virginia
Illinois		Port Authority of NY/NJ
Kentucky		Puerto Rico
Maine		
Maryland		
Massachusetts		
Minnesota		
Mississippi		
Nebraska		
Nevada		
New Jersey		
North Carolina		
Ohio		
Oklahoma		
Oregon		
Pennsylvania		
South Carolina		
Texas		
Utah		
Virginia		
Washington		
Wisconsin		

Source: Association for the Improvement of American Infrastructure: P3 Legislation. AIAI-infra.org.

6.2 2022 STATE LEGISLATIVE P3 ACTIVITY

Over the past year, six states debated bills establishing or expanding P3 authority. Table 10 summarizes that activity. This section provides more details on all of the states' P3 activities.

TABLE 10: 2022 P3 LEGISLATIVE ACTIVITY BY STATE

State	Bill	Pass/Fail/Pending	Summary
Colorado	S 74	Failed	Requires transportation commission to review procurements contracted through a method other than Design-Bid-Build for CDOT
Illinois	S 1900	Failed	Creates the Public-Private Partnerships Act
Illinois	HJR 24	Failed	Supports the I-55 Managed Lane P3 project
Louisiana	S 445	Enacted	Provides for approval of P3 contracts by the Louisiana Department of Transportation and Development
Nebraska	L 1016	Enacted	Provides for P3s and progressive design builds
New Mexico	H 55	Failed	Enacts the Public-Private Partnership Act
Pennsylvania	S 382	Enacted	Defines the duties of the Public-Private Transportation Partnership Board

Source: National Conference of State Legislatures

Colorado: Senate Bill (S) 74 failed in 2022.[89] The bill, which required the transportation commission to review transportation P3s contracted by alternative methods for fairness, cost, and process, died in the Senate Finance Committee.

Illinois: Senate Bill (S) 1900 was introduced in February of 2021. The bill aimed to create the Public-Private Partnerships Act, which sought to make public-private partnerships more flexible.[90] In February 2022, the bill was re-referred to the assignments committee. It died at the beginning of 2023 when the legislative session ended.

Illinois: House Joint Resolution (HJR) 24 was introduced to the House in March of 2021. The resolution emphasized the support of the Illinois House in the I-55 Managed Lane P3 project.[91] The bill died at the beginning of 2023 when the legislative session ended.

89 "Transportation Project Procurement Monitoring," *statenet.com*, State Net, 2022. www.custom.statenet.com/public/resources.cgi?id=ID:bill:CO2022000S74&ciq=ncsl17&client_md=7f04703b92ad97eb17372e816c05be89&mode=current_text (27 Feb. 2023).

90 "Public Private Partnerships Act," *statenet.com*, State Net, 2022. www.custom.statenet.com/public/resources.cgi?id=ID:bill:IL2021000S1900&ciq=ncsl17&client_md=7767581bec2f6b1e5599d151ddcb1a8a&mode=current_text (27 Feb. 2023).

91 "I-55 Managed Lane Project," *statenet.com*, State Net, 2022. www.custom.statenet.com/public/resources.cgi?id=ID:bill:IL2021000HJR24&ciq=ncsl17&client_md=c7e8ea1c2705224dadc7d2de6677ceeb&mode=current_text (27 Feb. 2023).

Louisiana: Senate Bill (S) 445 was signed into law in June of 2022. The law requires that the Department of Transportation and Development must receive approval from the state House and Senate before entering into a P3 contract.[92] The law also requires the Department to provide a financial analysis of the I-10 Calcasieu River Bridge Project.

Nebraska: Legislative Bill (L) 1016 was signed into law in April of 2022. The law provides for public-private partnerships under the Transportation Innovation Act.[93] It states that the agency that contracts with a private partner will be responsible for oversight of the partner's functions.

New Mexico: House Bill (H) 55 was introduced in January of 2022. The bill would have allowed for P3s, and created a public-private partnership fund and a public-private partnership board.[94] After passing the House, the bill was referred to the Senate Finance Committee in February 2022. It died at the beginning of 2023 when the legislative session ended.

Pennsylvania: Senate Bill (S)382 was signed into law in July of 2022. The law defines the duties of the Public-Private Transportation Partnership Board.[95] It requires that the board create a contracting process and evaluate transportation P3s.

6.3 STATE CONCESSION ACTIVITY

Two states and Puerto Rico had major proposed highway concession activity in 2022, detailed in this section.

92 "Transportation and Development," *statenet.com*, State Net, 2022. www.custom.statenet.com/public/resources.cgi?id=ID:bill:LA2022000S445&ciq=ncsl17&client_md=5ef19f06de62b7114ab9cae0ac25ea0b&mode=current_text (27 Feb. 2023).

93 "Transportation Innovation Act," *statenet.com*, State Net, 2022. www.custom.statenet.com/public/resources.cgi?id=ID:bill:NE2021000L1016&ciq=ncsl17&client_md=399b13d95a3c9d77969c39074fc694b0&mode=current_text (27 Feb. 2023).

94 "Public Private Partnership Act," *statenet.com*, State Net, 2022. www.custom.statenet.com/public/resources.cgi?id=ID:bill:NM2022000H55&ciq=ncsl17&client_md=0030082800c9c1515d1350d474092818&mode=current_text (27 Feb. 2023).

95 "Transportation Partnerships," *statenet.com*, State Net, 2022. www.custom.statenet.com/public/resources.cgi?id=ID:bill:PA2021000S382&ciq=ncsl17&client_md=e847c89707b782ea249a4525bd5a145b&mode=current_text. (27 Feb. 2023).

TABLE 11: MAJOR STATE SURFACE TRANSPORTATION P3 CONCESSION ACTIVITY

Project	Location	Status	Cost $ (B)	Type	Duration	Concessionaire
SR 400 Express Lanes P3 Retender	Georgia	Shortlisted Proponents	N/A	DMFOM RR	50 years	Winner will be announced in August 2023
I-77 Charlotte Express Lanes	North Carolina	Pre-Launch	$2.3	TBD	TBD	Cintra, Ferrovial
Highway Package (PR-52, PR-20, PR-53, and PR-66)	Puerto Rico	Shortlisted Proponents	N/A	FOM RR	TBD	TBD

Source: Inframation Infrastructure News

Georgia: In February 2022, the Georgia Department of Transportation (GDOT) issued an RFQ in Q2 of the year and an RFP in Q3 for a relaunch of the contract to add tolled express lanes to SR 400. The project will rely on a revenue-risk structure with a duration of 50 years.[96] Most recently, GDOT has shortlisted all the teams and a winner is expected to be announced in August of 2023.

North Carolina: In July 2022, the Charlotte Regional Transportation Planning Organization (CRTPO) voted to initiate a study of an unsolicited proposal for the I-77 express lanes project. The project, proposed by Cintra and Ferrovial, would extend the express lanes from Charlotte to the South Carolina border.[97] Most recently, CRTPO voted for the North Carolina Department of Transportation to plan a competitive procurement of the proposed project.

Puerto Rico: In August 2022, the Public-Private Partnerships Authority launched an RFQ for a package of highway projects that will finance, maintain, and operate four major roads in Puerto Rico. It shortlisted a consortium in December 2022.[98]

96 "SR 400 Express Lanes P3 Retender," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/10196861/sr-400-express-lanes-p3-retender.thtml (27 Feb. 2023).

97 "I-77 Charlotte And South Carolina Express Lanes P3," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/11993136/i-77-charlotte-and-south-carolina-express-lanes-p3.thtml (27 Feb. 2023).

98 "Highway Package (PR-52, PR-20, PR-53 and PR-66) P3," *inframationnews.com*, Inframation, 2022. www.inframationnews.com/deals/12171766/highway-package-pr-52--pr-20--pr-53-and-pr-66-p3.thtml (27 Feb. 2023).

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