FHWA FY 2017 BUDGET

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FEDERAL HIGHWAY ADMINISTRATION (FHWA)
FISCAL YEAR 2017 BUDGET

BUDGET SUMMARY OVERVIEW

On December 4, 2015, President Obama signed into law the first long-term, fully-funded surface transportation bill in a decade—the Fixing America's Surface Transportation (FAST) Act. The President has been very clear that increasing investment in our Nation's transportation infrastructure is a top priority. The five-year FAST Act authorization will make our roads and bridges safer, repair and modernize our aging transportation infrastructure, spur economic growth, and create jobs. Moreover, after years of uncertainty, States and local governments can now move forward with critical transportation projects with the confidence that they will have a Federal partner over the long term.

The costs of inadequate infrastructure investment are evident to all of us. First and foremost, this is a safety issue. In 2014, 32,675 people died on our Nation's highways. One life lost is too many. Furthermore, our infrastructure is struggling to meet even our basic needs. Sixty-five percent of our roads are in less than good condition and 25 percent of our bridges need significant repair or cannot handle current traffic demands per the 2013 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance report. This has a significant economic impact. From the large shipper, to the commuter, to local businesses and service providers, Americans spend an estimated 6.9 billion hours in traffic each year, costing them more than $160 billion in extra fuel and lost time.

The FAST Act provides States and local project sponsors with long-term funding certainty, allowing them to more effectively plan, especially for large-scale transportation projects necessary to move our national and regional economies forward. The FAST Act and the resources requested in this budget will allow States to make significant, critical investments now—investments that will be costlier and more time-consuming if deferred.

The need to invest in our transportation infrastructure becomes even more apparent when one considers not just the state of our infrastructure today, but where we are heading in the future. For a Nation expected to have 70 million more citizens by 2045 and a 45 percent increase in the volume of freight traveling on our highways, the current investments we put into our transportation system are inadequate to address these critical needs.

Building on the successes of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and reflecting the second year of the FAST Act, the Fiscal Year (FY) 2017 Budget will spur economic growth and give States the certainty needed to make sound, long-term investments in projects that will create jobs. FHWA programs will continue the focus on safety, streamlined project delivery, and enhanced performance management, while increasing our investment in projects that facilitate the movement of freight, repair structurally deficient bridges, improve safety on rural roads, empower local communities, and provide ladders of opportunity that connect people to employment, education, and services.

FHWA requests $44.0 billion in base funding for FY 2017 to maintain and improve the safety, condition, and performance of our national highway system, and enable FHWA to provide effective stewardship and oversight of highway programs and funding. In addition to the base funding, **FHWA also requests $7.5 billion in additional resources through the 21st Century Clean Transportation Plan Investments initiative in FY 2017 for a series of new, multi-modal programs** that reflect America's changing and increasingly regional demographics.

The budget request will support a performance-based investment approach that provides funding flexibility to States and other recipients of FHWA funding. This request is a vital investment in our Nation's infrastructure, necessary to keep pace with our growing population while expanding the economy and creating jobs.

The request will continue FHWA's focus on accelerated project delivery through expedited environmental review and elimination of duplicate processes, while maintaining our commitment to environmental protection. Through the Every Day Counts (EDC) initiative, which based on its previous successes has been included in the FAST Act, FHWA will accelerate the deployment and implementation of market-ready strategies and technologies in partnership with State and local transportation agencies.

FHWA's budget request emphasizes the importance of freight projects to our national transportation infrastructure and economy. Two new Freight programs established by the FAST Act are included in the request along with a new freight program included in the 21st Century Clean Transportation Plan Investments. The National Highway Freight Program is a formula program providing States with necessary funds for vital projects that will improve the movement of freight on the National Highway Freight Network. The Nationally Significant Freight and Highway Projects program is a new discretionary grant program which will fund major highway and freight projects that will achieve national transportation objectives. The Future Freight System Program will provide targeted, competitive grants to State and local agencies by funding innovative rail, highway, port and intermodal projects that can help transform our current freight system into a highly efficient, multi-modal system that will strengthen America's exports and trade, while reducing the freight system's environmental impact.

Through a reauthorized Federal-aid Highway Program (FAHP), we will provide national leadership to connect America's communities and economies. FHWA programs not only help create jobs today for people willing to build and maintain our infrastructure, but also enable the movement of people and goods, tying communities together, and supporting our economy. The following is a summary of the programs included in the FY 2017 budget request.

Safety remains our highest priority. The **Highway Safety Improvement Program ($2.5 billion)** will focus on reducing traffic fatalities and serious injuries on all public roads. This program will emphasize a data-driven and performance-based strategic approach to improving highway safety. The foundation of this approach is a safety data system that identifies key safety problems, establishes their relative severity, and then adopts strategic and performance-based measures to maximize safety. Each State will develop and regularly update a State Strategic Highway Safety Plan that lays out strategies to address key safety problems, including bike and pedestrian safety. The Highway Safety Improvement Program includes a

$230 million targeted set-aside, the **Railway-Highway Crossings Program**, to fund safety improvements to reduce the number of fatalities, injuries, and crashes at public grade crossings. Safety performance will be monitored via State-specific safety targets for the number of fatalities and serious injuries and the number of such events per vehicle mile of travel. Additionally, States will monitor safety performance regarding older drivers and high risk rural roads.

The **National Highway Freight Program** (**$1.1 billion)**, is a new formula program established by the FAST Act that will provide States with necessary funds for vital projects that will improve the movement of freight on the National Highway Freight Network (NHFN), which is comprised of the 41,500-mile Primary Highway Freight System (PHFS), all other Interstates not on the PHFS, and other State-identified critical rural and urban corridors. The FAST Act requires all States using formula dollars to develop a multimodal State Freight Plan.

Nationally Significant Freight and Highway Projects ($850 million) is a new discretionary grant program, established by the FAST Act, for major highway and freight projects that will achieve national transportation objectives. This program will be led by the newly created National Surface Transportation and Innovative Finance Bureau. Selected projects must receive grants of at least $25 million and have a total project cost of $100 million or more.

The **National Highway Performance Program ($22.8 billion)** will target investment to preserve, modernize, and ultimately save lives on the National Highway System (NHS). This network is composed of 220,000 miles of rural and urban roads serving major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. The NHS includes the Interstate System, all principal arterials, intermodal connectors, and other roads important to mobility, commerce, national defense, and intermodal connectivity. Through a performance-based approach, this program will maintain or improve the condition and performance of the NHS, construct new facilities on the NHS, and ensure that investments of Federal-aid funds are directed to support progress toward the achievement of specified performance targets.

The performance basis of this program will be defined by individual State asset management plans. These plans aim to improve or preserve asset condition and system performance. States will periodically review and update the asset management plans to ensure that they meet or exceed the established minimum performance standards.

The **Surface Transportation Block Grant Program ($11.4 billion)** will provide flexible funding that States and localities may use for the following: projects to improve or preserve the condition and performance on any Federal-aid highway; bridge and safety projects on any public road; facilities for non-motorized transportation; transit capital projects; and public bus terminals and facilities. The flexible nature of this program focuses funding to priority areas and areas of greatest need.

The Surface Transportation Block Grant Program will provide funding for a wide range of eligible projects that range from traditional activities, such as construction and rehabilitation of highways and bridges, to more innovative projects, such as electric and natural gas vehicle charging infrastructure and electronic toll collection facilities. Additionally, projects that expand transportation choice and enhance the transportation experience, such as bicycle and pedestrian

infrastructure and safety programs, historical preservation, and environmental mitigation are eligible. The broad range of eligibility allows States to improve and maintain their critical infrastructure while fostering transportation innovation.

The **Congestion Mitigation and Air Quality Improvement Program ($2.4 billion)** will provide a flexible funding source to State and local governments for transportation projects and programs designed to help States meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) as well as former nonattainment areas that are now in compliance (maintenance areas).

This program will incorporate performance measures that assess traffic congestion and on-road motor vehicle emissions. To date, each Metropolitan Planning Organization with a transportation management area that serves more than one million people and represents a nonattainment or maintenance area has developed and will continue to update biennially a performance plan to achieve air quality and congestion reduction targets.

Funding for **Metropolitan Transportation Planning ($336 million)** will provide resources for the improvement of metropolitan and statewide transportation planning processes. States will use a performance-based approach to transportation decision-making to support national goals and critical outcomes for the region of the metropolitan planning organization. The planning process will provide consideration for projects that increase safety (including bike and pedestrian safety), support economic vitality, increase accessibility, mobility, and connectivity, protect and enhance the environment, emphasize the preservation of existing infrastructure, and increase security of the transportation system.

The **Federal Lands and Tribal Transportation Programs ($1.1 billion)** will fund projects that provide access to and within Federal and Tribal lands.

- **Federal Lands Transportation Program**: $345 million for projects that improve public access on high-priority roads, trails, and transit systems within the Federal estate (national forests, national parks, national wildlife refuges, national recreation areas, and other Federal public lands) on infrastructure owned by the Federal government.
- **Federal Lands Access Program**: $255 million for projects that improve access to the Federal estate on infrastructure owned by States, counties, and local governments.
- **Tribal Transportation Program**: $475 million for projects that improve access to and within Tribal Lands. This program provides better access to basic community needs such as housing, schools, stores, jobs, and emergency and medical services.

The **Transportation Infrastructure Finance and Innovation Act Program (TIFIA) ($275 million)** will leverage Federal dollars in a time of scarce budgetary resources, facilitating private participation in transportation projects and encouraging innovative financing mechanisms that help advance projects sooner than otherwise possible. TIFIA provides Federal credit assistance for highway, transit, rail, and intermodal freight projects. By offering loans, the TIFIA Program will leverage $275 million in Federal funds to stimulate up to $8 billion in infrastructure investment.

The **Research, Technology, and Education Program ($418 million)** is a flexible, nationally-coordinated research and technology program that addresses fundamental, long-term highway research needs, significant research gaps, emerging issues with national implications, and research related to policy and planning. All research activities will include components of performance measurement and evaluation, will be outcome-based, and will be consistent with the research and technology development strategic plan.

- **Highway Research and Development Program**: $125 million for research activities associated with highway safety, infrastructure integrity, planning and the environment, highway operations, exploratory advanced research, and the Turner-Fairbank Highway Research Center, including the Innovative Infrastructure Design Research initiative focused on improving accessibility and connectivity for all citizens.

- **Technology and Innovation Deployment Program**: $68 million to accelerate implementation and delivery of new innovations and technologies that result from highway research and development to benefit all aspects of highway transportation. The FAST Act requires that TIDP include the Advanced Transportation & Congestion Management Technologies Deployment Program to award grants to States and other entities to deploy technologies with the potential to relieve congestion and improve quality of life. This program will be funded out of the Highway Research and Development, Technology and Innovation Deployment, and Intelligent Transportation Systems programs.

- **Training and Education**: $24 million to train the current and future transportation workforce, transferring knowledge quickly and effectively.

- **Intelligent Transportation Systems**: $100 million to conduct an ongoing intelligent transportation system program to research, develop, and operationally test intelligent transportation systems and to provide technical assistance in the nationwide application of those systems.

The Research, Technology, and Education Program request also includes $101 million for programs administered by the **Office of the Assistant Secretary for Research and Technology:**

- University Transportation Centers ($75 million)
- Bureau of Transportation Statistics ($26 million)

Federal Allocation Programs ($404 million) is comprised of six vital programs:

- **Construction of Ferry Boats and Ferry Terminal Facilities**: $80 million to construct ferry boats and ferry boat terminal facilities, which will improve connectivity, provide travel mode options, and reduce congestion.
- **Disadvantaged Business Enterprise:** $10 million to assist certified DBE firms in becoming competitive when seeking to obtain highway and bridge construction contracts.

- **Emergency Relief**: $100 million to assist Federal, State, Tribal, and local governments with the expense of repairing serious damage to Federal-aid, Tribal, and Federal Lands highways resulting from natural disasters, or catastrophic failures.
- **Highway Use Tax Evasion Projects:** $4 million to provide funding to the Internal Revenue Service (IRS), other Federal agencies, and the States to carry out intergovernmental enforcement efforts along with training and research to reduce evasion of payment of motor fuel and other highway use taxes.
- **On-the-Job Training:** $10 million to enhance the development of our Nation's highway construction industry workforce.
- **Territorial and Puerto Rico Highway Program**: $200 million to fund highway programs in United States territories and Puerto Rico.

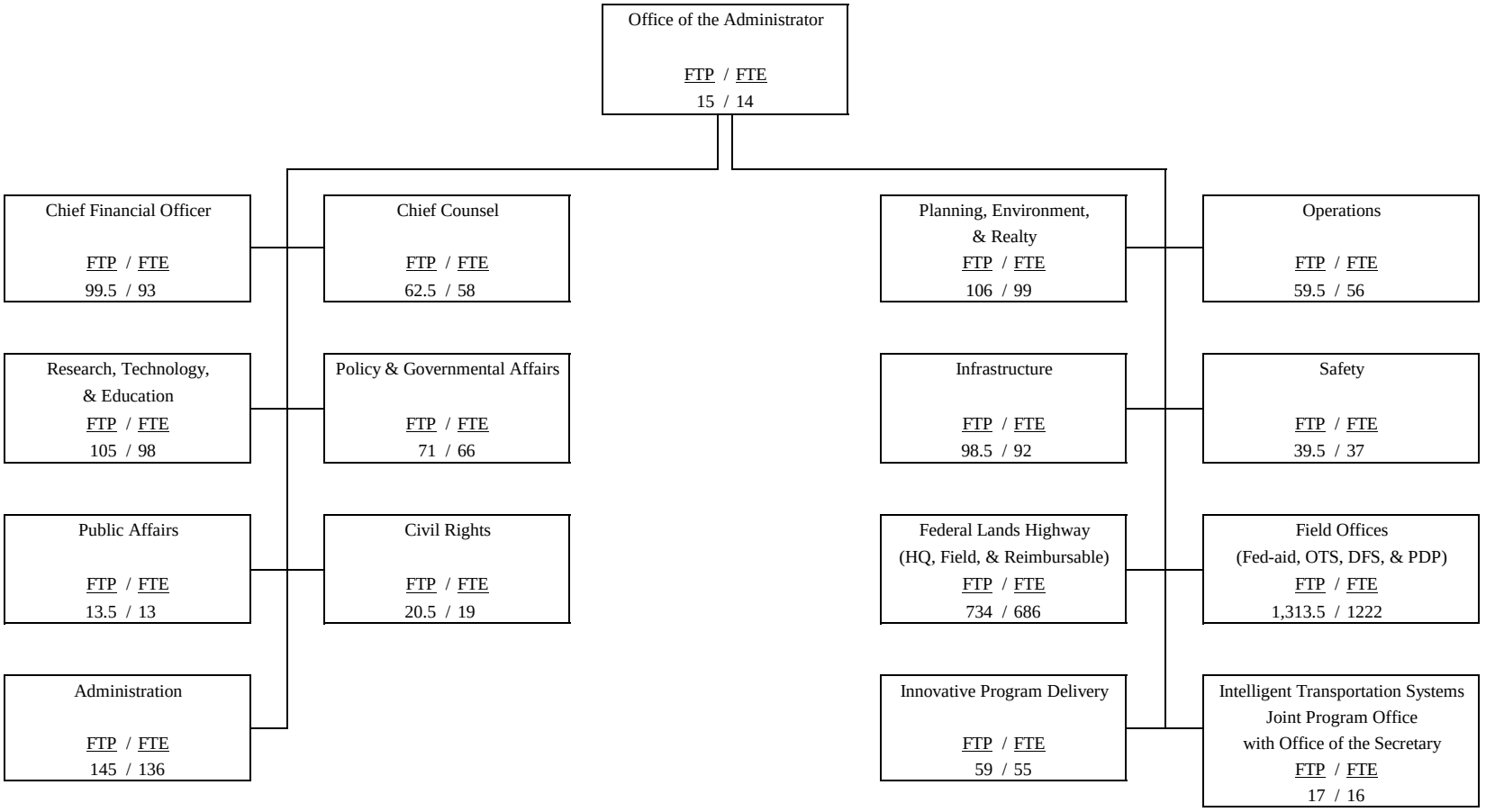
21st Century Clean Transportation Plan Investments ($7.5 billion) provides funding for a series of new, multi-modal programs that focus on shifting investment decisions towards a "21st Century Regions" approach that reflects America's changing and increasingly regional geography and improves outcomes for communities and the environment. The five new programs included in this initiative are:

- **Climate-Smart Performance Formula Funds Program**: $2.0 billion to incentivize States to invest in transportation projects that are demonstrated to reduce greenhouse gas emissions.
- **21st Century Regions Grant Program:** $1.0 billion to promote regional transportation and land use plans that reflect the changing demographics and economy of the country, reduce greenhouse gas emissions, and improve the transportation of people and goods.
- **Clean Communities Grant Program**: $1.0 billion for competitive grants to local governments to transform land use and transportation systems, encourage climate-smart development, and achieve regional greenhouse gas and vehicle-miles-travelled reduction goals.
- **Resilient Transportation Grant Program**: $1.5 billion to encourage State and local governments to propose specific projects that address the impacts of climate change on all types of transportation systems and surrounding communities.
- **Future Freight System Program**: $2.0 billion to provide targeted, competitive grants to State and local agencies for innovative rail, highway, port, and intermodal projects that help transform the current freight system into a highly efficient, multi-modal system. Differing from the National Highway Freight Program and the Nationally Significant Freight and Highway Projects program, the Future Freight System program will target projects that lower emissions on the freight system and improve bottlenecks that have been historically neglected by existing patterns of institutional interest.

The total Administrative Expenses request of **$436 million** includes funding for FHWA General Operating Expenses and Appalachian Regional Commission (ARC) administrative expenses related to the Appalachian Development Highway System. These resources are essential for FHWA and ARC to effectively perform critical oversight functions and successfully implement the programs proposed in the budget.

EXHIBIT I-A

FEDERAL HIGHWAY ADMINISTRATION ORGANIZATION CHART
FY 2016 ESTIMATED FTP POSITIONS BY OFFICE AND ESTIMATED FTE BY OFFICE



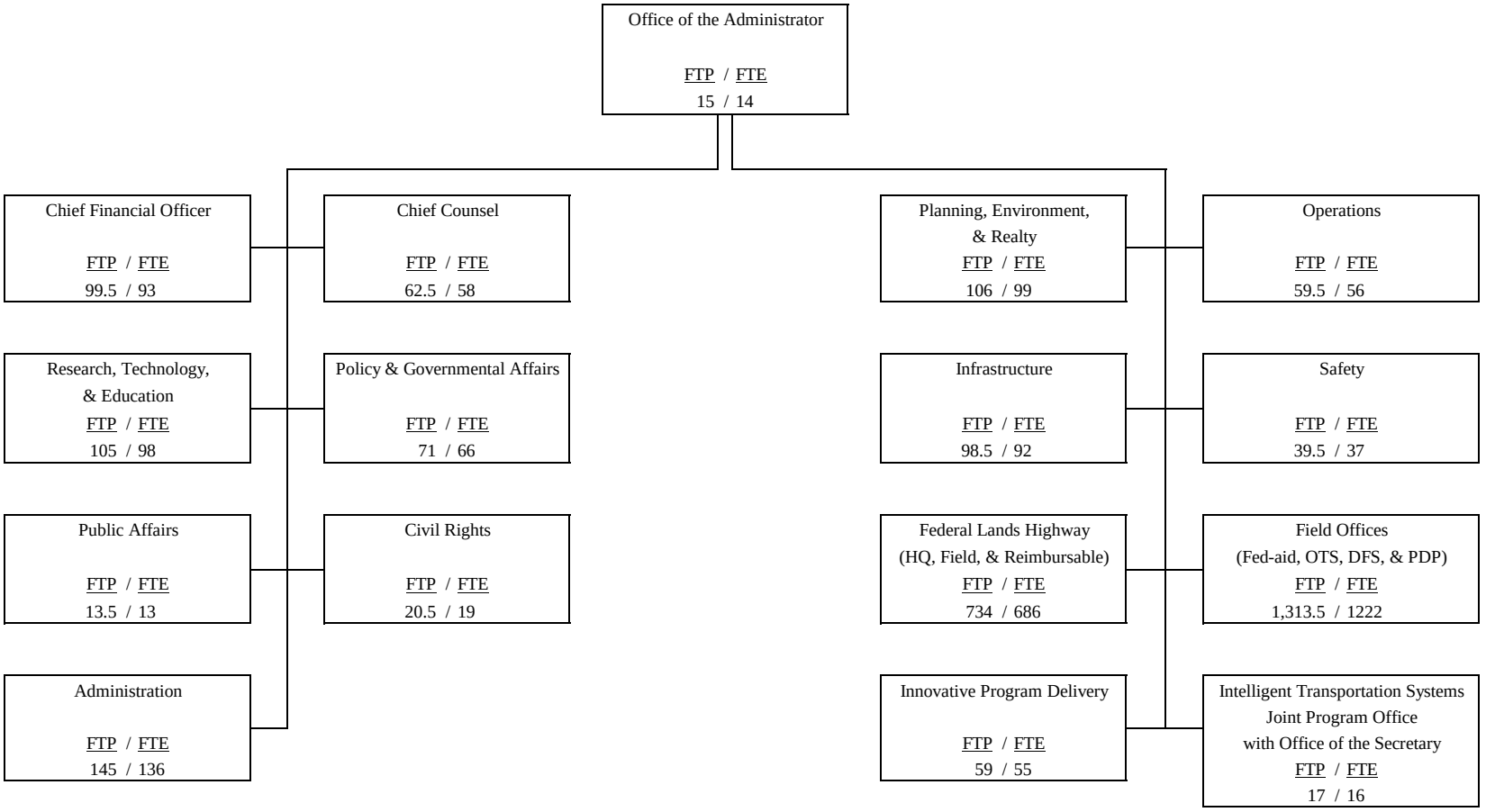
FTP - FULL-TIME PERMANENT POSITIONS	
Direct funded	2,720
Indirect funded (Fed Lands & TIGER)	239
Total	2,959

FTE - FULL-TIME EQUIVALENTS	
Direct funded	2,543
Indirect funded (Fed Lands & TIGER)	239
Total	2,782

Direct funded FTE presented by office reflect a pro-ration of total FTE. Indirect funded FTP & FTE include Federal Lands Highway reimbursable FTE and allocation FTE from OST.

EXHIBIT I-B

FEDERAL HIGHWAY ADMINISTRATION ORGANIZATION CHART
FY 2017 ESTIMATED FTP POSITIONS BY OFFICE AND ESTIMATED FTE BY OFFICE



FTP - FULL-TIME PERMANENT POSITIONS	
Direct funded	2,720
Indirect funded (Fed Lands & TIGER)	239
Total	2,959

FTE - FULL-TIME EQUIVALENTS	
Direct funded	2,543
Indirect funded (Fed Lands & TIGER)	239
Total	2,782

Direct funded FTE presented by office reflect a pro-ration of total FTE. Indirect funded FTP & FTE include Federal Lands Highway reimbursable FTE and allocation FTE from OST.

EXHIBIT II-1
FY 2017 COMPARATIVE STATEMENT OF NEW BUDGET AUTHORITY
FEDERAL HIGHWAY ADMINISTRATION
($000)

ACCOUNT	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
[Administrative Expenses (Contract Authority, subject to limitation)] 1/	[415,000]	[429,000]	[435,795]
Federal-aid Highways			
Contract Authority (subject to limitation)	40,256,000	42,361,000	43,266,100
Exempt Contract Authority	739,000	739,000	739,000
Subtotal, Federal-aid Highways	40,995,000	43,100,000	44,005,100
Flex Transfers to/from FTA	- 1,429,885 2/	- 1,300,000	- 1,300,000
Transfer to NHTSA 3/	- 82,581	-----	-----
Sequestered Exempt Contract Authority	- 53,947 4/	- 50,252 5/	-----
Cancellation of Unobligated Balances	-----	-----	- 2,436,000 6/
Total, Federal-aid Highways	39,428,587	41,749,748	40,269,100
Miscellaneous Trust Funds (TF)	20,422	20,422	20,422
21st Century Clean Transportation Plan Investments (TF) 7/	-----	-----	7,500,000
Miscellaneous Appropriations (GF)	158,680	216,000	-----
TIFIA Upward Reestimate	-----	40,000	-----
General Fund Payment to the Highway Trust Fund 8/	8,068,000	70,000,000	19,000,000
Transfer from the Leaking Underground Storage Tank Trust Fund	-----	100,000	100,000
TOTALS	**47,675,689**	**112,126,170**	**66,889,522**

[ ] Non-add

1/ Includes FHWA General Operating Expenses (GOE) and transfers to the Appalachian Regional Commission (ARC) for administrative activities associated with the Appalachian development highway system. Does not include amounts for other non-administrative programs authorized under Administrative Expenses.

2/ Includes transfer amounts that are recorded as unobligated balance transfers due to accounting system limitation. These transfer amounts include both contract authority and obligation limitation and are available for use.

3/ FHWA anticipates transfers to NHTSA in FY 2016 and FY 2017 in amounts to be determined based on State penalty information.

4/ Reflects sequestration of 7.3 percent of contract authority exempt from obligation limitation per Sequestration Order dated March 10, 2014.

5/ Reflects sequestration of 6.8 percent of contract authority exempt from obligation limitation per Sequestration Order dated February 2, 2015.

6/ Cancellation of unobligated balances of contract authority apportioned to the States under chapter 1 of title 23, United States Code.

7/ The budget proposes the new 21st Century Clean Transportation Plan Investments, which is to be funded through a new, separate account. Includes $2 billion for the Climate-Smart Performance Formula Funds Program, $1 billion for the 21st Century Regions Grant Program, $1 billion for the Clean Communities Grant Program, $1.5 billion for the Resilient Transportation Grant Program, and $2 billion for the Future Freight System Program.

8/ FY 2015 payment to the Highway Trust Fund comprised of $6.068 billion to the Highway Account and $2.0 billion to the Mass Transit Account. FY 2016 payment to the Highway Trust Fund comprised of $51.9 billion to the Highway Account and $18.1 billion to the Mass Transit Account. The FY 2017 payment to the Highway Trust Fund is to pay for the Department's proposed 21st Century Clean Transportation Plan Investments. The budget proposes redesignating the Highway Trust Fund as the Transportation Trust Fund.

EXHIBIT II-2
FY 2017 TOTAL BUDGETARY RESOURCES BY APPROPRIATION ACCOUNT
FEDERAL HIGHWAY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations
($000)

ACCOUNT NAME	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
[Limitation on Administrative Expenses] [1/]	[415,000] [2/]	[429,000]	[435,795]
Federal-aid Highways			
(Liquidation of contract authorization)	(40,995,000)	(43,100,000)	(44,005,100)
(Limitation on obligations)	(40,256,000)	(42,361,000)	(43,266,100)
Exempt Contract Authority	739,000	739,000	739,000
Subtotal, Federal-aid Obligation Limitation & Exempt CA	40,995,000	43,100,000	44,005,100
Flex Transfers to/from FTA	- 1,429,885 [3/]	-1,300,000	-1,300,000
Transfer to NHTSA	-82,581 [4/]	-----	-----
Sequestered Exempt Contract Authority	-53,947 [5/]	- 50,252 [6/]	-----
Total, Federal-aid Obligation Limitation & Exempt CA	39,428,587	41,749,748	42,705,100
21st Century Clean Transportation Plan Investments (TF) [7/]	-----	-----	7,500,000
Total, Federal Highway Administration			
(Limitation on obligations)	(38,743,534)	(41,061,000)	(49,466,100)
Exempt Contract Authority	685,053	688,748	739,000
Total Budgetary Resources, FHWA	**39,428,587**	**41,749,748**	**50,205,100**

[ ] Non-add

1/ Includes FHWA General Operating Expenses (GOE) and transfers to the Appalachian Regional Commission (ARC) for administrative activities associated with the Appalachian development highway system. ARC is provided a separate sub-limitation for its administrative expenses in FY 2015 and FY 2016. The budget proposes one overall limitation on administrative expenses for both FHWA GOE and ARC administrative expenses in FY 2017. For FY 2015 and FY 2016, the ARC limitation is shown as part of the overall Limitation on Administrative Expenses for comparison purposes. All fiscal years do not include amounts for other non-administrative programs authorized under Administrative Expenses.

2/ FY 2015 annual appropriations (PL 113-235) provided an obligation limitation of $429.3 million for GOE and ARC. The Surface Transportation and Veterans Health Care Choice Improvement Act of 2015 (PL 114-41) provided contract authority of only $415 million.

3/ Includes transfer amounts that are recorded as unobligated balance transfers due to accounting system limitation. These transfer amounts include both contract authority and obligation limitation and are available for use.

4/ FHWA anticipates transfers to NHTSA in FY 2016 and FY 2017 in amounts to be determined based on State penalty information.

5/ Reflects sequestration of 7.3 percent of contract authority exempt from obligation limitation per Sequestration Order dated March 10, 2014.

6/ Reflects sequestration of 6.8 percent of contract authority exempt from obligation limitation per Sequestration Order dated February 2, 2015.

7/ The budget proposes the new 21st Century Clean Transportation Plan Investments, which is to be funded through a new, separate account. Includes $2 billion for the Climate-Smart Performance Formula Funds Program, $1 billion for the 21st Century Regions Grant Program, $1 billion for the Clean Communities Grant Program, $1.5 billion for the Resilient Transportation Grant Program, and $2 billion for the Future Freight System Program.

EXHIBIT II-3
FY 2017 BUDGET REQUEST BY STRATEGIC GOAL AND OBJECTIVE
FEDERAL HIGHWAYS ADMINISTRATION
Appropriations, Obligation Limitations, & Exempt Obligations
(000)

STRATEGIC GOALS & OBJECTIVES [1/]	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
SAFETY			
Improve Safety of System	7,797,668	8,027,030	8,398,679
Total – Safety	**7,797,668**	**8,027,030**	**8,398,679**
STATE OF GOOD REPAIR			
Maintain Operating Conditions	7,365,063	7,399,829	7,649,490
Improve Infrastructure, Equipment, and Facilities	7,669,001	7,897,281	9,034,386
Sustain Assets	4,095,646	4,135,508	4,303,393
Total – State of Good Repair	**19,129,710**	**19,432,618**	**20,987,268**
ECONOMIC COMPETITIVENESS			
Enhance Productivity and Growth	3,730,477	4,231,126	5,482,979
Increase Access to Foreign Markets	1,134,947	1,567,660	2,029,918
Improve System Efficiency	143,821	536,769	1,054,784
Create Dynamic Workforce	59,997	54,245	54,896
Total – Economic Competitiveness	**5,069,242**	**6,389,799**	**8,622,577**
QUALITY OF LIFE IN COMMUNITIES			
Enhance Quality of Life	1,535,058	1,656,775	2,166,218
Expand Access and Choice	1,612,261	1,659,306	1,712,742
Total – Quality of Life in Communities	**3,147,319**	**3,316,080**	**3,878,960**
ENVIRONMENTAL SUSTAINABILITY			
Promote Energy Efficiency	975,783	1,065,792	1,930,072
Mitigate Environmental Impacts	1,821,668	1,960,230	3,249,021
Adapt to Climate Change	1,231,851	1,286,348	2,861,254
Total – Environmental Sustainability	**4,029,301**	**4,312,370**	**8,040,346**
ORGANIZATIONAL EXCELLENCE			
Develop Human Capital	194,854	203,878	209,304
Improve Information Systems and Financial Management	50,396	57,879	57,886
Total – Organizational Excellence	**245,250**	**261,757**	**267,190**
OTHER (NON-ALIGNED)			
Ensure Effective Response	0	0	0
Meet National Security Needs	0	0	0
Expand Small Business Opportunities	10,097	10,094	10,079
Total – Other (Non-Aligned)	**10,097**	**10,094**	**10,079**
GRAND TOTAL [2/]	**39,428,587**	**41,749,748**	**50,205,100**

1/ FY 2015 amounts include sequestration and transfers to FTA and NHTSA. FY 2016 and FY 2017 amounts include transfers to FTA.

2/ Includes Federal-aid Highways and the 21st Century Clean Transportation Plan Investments.

EXHIBIT II-4
FY 2017 BUDGET AUTHORITY
FEDERAL HIGHWAY ADMINISTRATION
($000)

ACCOUNT NAME	M / D	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Federal-aid Highways				
Contract Authority (subject to limitation)	Mand.	40,256,000	42,361,000	43,266,100
Exempt Contract Authority	Mand.	739,000	739,000	739,000
Subtotal for Federal-aid Highways (TF)		40,995,000	43,100,000	44,005,100
Flex Transfers to/from FTA	Mand.	- 1,429,885 1/	- 1,300,000	- 1,300,000
Transfer to NHTSA	Mand.	- 82,581 2/	-----	-----
Sequestered Exempt Contract Authority	Mand.	- 53,947 3/	- 50,252 4/	-----
Cancellation of Unobligated Balances	Disc.	-----	-----	- 2,436,000 5/
Total, Federal-aid Highways		39,428,587	41,749,748	40,269,100
Miscellaneous Trust Funds (TF)	Mand.	20,422	20,422	20,422
21st Century Clean Transportation Plan Investments (TF) 6/	Mand.	-----	-----	7,500,000
Miscellaneous Appropriations (GF)	Mand.	158,680	216,000	-----
TIFIA Upward Reestimate	Mand.	-----	40,000	-----
General Fund Payment to the Highway Trust Fund 7/	Mand.	8,068,000	70,000,000	19,000,000
Transfer from the Leaking Underground Storage Tank Trust Fund	Mand.	-----	100,000	100,000
TOTALS		**47,675,689**	**112,126,170**	**66,889,522**
[Discretionary]		-----	-----	- 2,436,000
[Mandatory]		47,675,689	112,126,170	69,325,522
PROPRIETARY AND OTHER GOVERNMENTAL RECEIPTS				
Adv. from State Coop, Other Fed. Agencies, and Foreign Gov.	Mand.	20,168	19,800	19,800
Interest under Cash Management Improvement Act (net)	Mand.	42	-----	-----
Earnings on Investments, Highway Trust Fund	Mand.	1,890	11,000	16,000
Adv for Hwy Research Prog, Misc Trust	Mand.	859	622	622
Deposits for Coop. Work, International Highway Trans Outreach	Mand.	- 605	-----	-----
TIFIA Interest on Downward Reestimates	Mand.	173,485	208,035	-----
TIFIA Negative Subsidy	Mand.	12,609	-----	-----
Payment from the General Fund, Highway Trust Fund (Highways)	Mand.	6,068,000	51,900,000	-----
Payment from the General Fund, Highway Trust Fund (Mass transit)	Mand.	2,000,000	18,100,000	-----
Transfer from the Leaking Underground Storage Tank Trust Fund	Mand.	-----	100,000	100,000
TOTAL		**8,276,448**	**70,339,457**	**136,422**

1/ Includes transfer amounts that are recorded as unobligated balance transfers due to accounting system limitation. These transfer amounts include both contract authority and obligation limitation and are available for use.

2/ FHWA anticipates transfers to NHTSA in FY 2016 and FY 2017 in amounts to be determined based on State penalty information.

3/ Reflects sequestration of 7.3 percent of contract authority exempt from obligation limitation per Sequestration Order dated March 10, 2014.

4/ Reflects sequestration of 6.8 percent of contract authority exempt from obligation limitation per Sequestration Order dated February 2, 2015.

5/ Cancellation of unobligated balances of contract authority apportioned to the States under chapter 1 of title 23, United States Code.

6/ The budget proposes the new 21st Century Clean Transportation Plan Investments, which is to be funded through a new, separate account. Includes $2 billion for the Climate-Smart Performance Formula Funds Program, $1 billion for the 21st Century Regions Grant Program, $1 billion for the Clean Communities Grant Program, $1.5 billion for the Resilient Transportation Grant Program, and $2 billion for the Future Freight System Program.

7/ FY 2017 payment to the Highway Trust Fund is to pay for the Department's proposed 21st Century Clean Transportation Plan Investments. The budget proposed redesignating the Highway Trust Fund as the Transportation Trust Fund.

EXHIBIT II-5
FY 2016 OUTLAYS
FEDERAL HIGHWAY ADMINISTRATION
($000)

ACCOUNTS	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Federal-aid Highways (TF)	41,651,736	41,810,802	43,045,865
Subject to Obligation Limitation	41,014,053	41,029,314	42,278,633
Exempt Contract Authority	616,848	736,463	721,438
Emergency Relief Supplementals	20,834	45,026	45,793
Appalachian Development Highway System (TF)	205	63	26
Miscellaneous Highway Trust Funds (TF)	6,238	21,112	22,676
Miscellaneous Trust Funds (TF)	21,800	40,516	43,316
Right of Way Revolving Fund (TF)	-----	4,279	-----
21st Century Clean Transportation Plan Investments (TF)	-----	-----	2,025,000
Emergency Relief Program (GF)	573,490	516,131	365,296
Appalachian Development Highway System (GF)	13,582	4,943	2,520
Miscellaneous Appropriations (GF)	46,028	45,656	51,359
Miscellaneous Appropriations (TIFIA upward reestimate GF)	158,680	216,000	-----
Highway Infrastructure Program (GF)	16,485	11,427	-----
Highway Infrastructure Investment, ARRA 2009 (GF)	107,962	-----	-----
TIFIA Program Accounts (GF)	10,000	2,000	2,000
TIFIA Upward Reestimate	-----	40,000	-----
General Fund Payment to Highway Trust Fund 1/	8,068,000	70,000,000	19,000,000
TOTALS	**50,674,206**	**112,712,930**	**64,558,057**
[Mandatory]	8,865,328	71,037,258	21,789,754
[Discretionary]	41,808,878	41,675,672	42,768,303

Note: Totals may not add due to rounding.

1/ FY 2015 payment to the Highway Trust Fund comprised of $6.068 billion to the Highway Account and $2.0 billion to the Mass Transit Account. FY 2016 payment to the Highway Trust Fund comprised of $51.9 billion to the Highway Account and $18.1 billion to the Mass Transit Account. The FY 2017 payment to the Highway Trust Fund is to pay for the Department's proposed 21st Century Clean Transportation Plan Investments. The budget proposes redesignating the Highway Trust Fund as the Transportation Trust Fund.

2/ The budget proposes the new 21st Century Clean Transportation Plan Investments, which is to be funded through a new account.

EXHIBIT II-6
SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
FEDERAL HIGHWAY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations

ADMINISTRATIVE EXPENSES
($000)

		Baseline Changes									
	FY 2016 Enacted	Annualization of 2016 Pay Raises	Annualization of 2016 FTE	2017 Pay Raises	Two Less Compensable Days	GSA Rent	WCF Increase/ Decrease	Inflation/ Deflation	FY 2017 Baseline Estimate	Program Increases/ Decreases	FY 2017 Request
PERSONNEL RESOURCES (FTE)											
Direct FTE	2,125								2,125		2,125
FINANCIAL RESOURCES											
Salaries and Benefits	$298,400	$981		$ 3,593	-$2,313				$300,661		$300,661
Travel	$7,700							$77	$7,777		$7,777
Transportation	$1,500							$15	$1,515		$1,515
GSA Rent	$27,925					$570			$28,495		$28,495
Rent, Communications & Utilities	$3,900							$39	$3,939		$3,939
Printing	$630							$6	$636		$636
Other Services:											
-WCF	$30,885						-$2,182		$28,703		$28,703
-Other	$46,162							$462	$46,624	$6,208	$52,832
Supplies	$2,000							$20	$2,020		$2,020
Equipment	$6,650							$67	$6,717		$6,717
Appalachian Regional Commission (ARC) [1/]	$3,248								$3,248	($748)	$2,500
Subtotal, Limitation on Administrative Expenses (LAE)	**$429,000**	**$981**	**$0**	**$3,593**	**-$2,313**	**$570**	**-$2,182**	**$686**	**$430,335**	**$5,460**	**$435,795**
OJT Support Services	$10,000										$10,000
Disadvantaged Bus. Enterprise	$10,000										$10,000
Highway Use Tax Evasion	$4,000										$4,000
GRAND TOTAL, Obligation Limitation	**$453,000**	**$981**	**$0**	**$3,593**	**-$2,313**	**$570**	**-$2,182**	**$686**	**$430,335**	**$5,460**	**$459,795**

1/ ARC is provided a separate sub-limitation for its administrative expenses in FY 2015 and FY 2016. The budget proposes to provide one limitation for FHWA's GOE and ARC. ARC amounts for FY 2017 are presented in the same row as the FY 2015 and FY 2016 amounts for comparison purposes.

EXHIBIT II-7
WORKING CAPITAL FUND
FEDERAL HIGHWAY ADMINISTRATION
($000)

	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST	CHANGE FY 2016-2017
DIRECT:				
Federal-aid Highways				
Limitation on Administrative Expenses	26,879	30,885	28,703	-2,182
Federal Lands Highways (Direct Construction)	1,414	1,400	1,400	-----
SUBTOTAL	28,294	32,285	30,103	-2,182
REIMBURSABLE:				
Federal-aid Highways				
Limitation on Administrative Expenses	-----	-----	-----	-----
SUBTOTAL	-----	-----	-----	-----
TOTAL	**28,294**	**32,285**	**30,103**	**-2,182**

EXHIBIT II-8
FEDERAL HIGHWAY ADMINISTRATION
RESOURCE SUMMARY -- PERSONNEL
TOTAL FULL-TIME EQUIVALENTS

	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
DIRECT FUND, BY APPROPRIATION			
Federal-aid Highways -- General Operating Expenses and Direct Construction -- FLH, ARC, & TIFIA	2,550	2,537	2,537
Miscellaneous Trust Funds	6	6	6
SUBTOTAL, DIRECT FUNDED	2,556	2,543	2,543
REIMBURSEMENT/ ALLOCATIONS/OTHERS			
Reimbursable Authority -- Federal-aid Highways	236	236	236
Allocation From OST, TIGER grants	3	3	3
SUBTOTAL, REIMBURSEMENTS/ALLOCATIONS/OTHER	239	239	239
TOTAL FTE	2,795	2,782	2,782

EXHIBIT II-9
FEDERAL HIGHWAY ADMINISTRATION
RESOURCE SUMMARY - STAFFING
FULL-TIME PERMANENT POSITIONS

	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
DIRECT FUND, BY APPROPRIATION			
Federal-aid Highways -- General Operating Expenses and Direct Construction -- FLH, ARC, & TIFIA	2,718	2,714	2,714
Miscellaneous Trust Funds	6	6	6
SUBTOTAL, DIRECT FUNDED	2,724	2,720	2,720
REIMBURSEMENT/ ALLOCATIONS/OTHERS			
Reimbursable Authority -- Federal-aid Highways	236	236	236
Allocation From OST, TIGER grants	3	3	3
SUBTOTAL, REIMBURSEMENT/ALLOCATION/OTHERS	239	239	239
TOTAL POSITIONS	2,963	2,959	2,959

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FEDERAL HIGHWAY ADMINISTRATION
HISTORICAL FUNDING LEVELS (2007-2016)
($000)

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Federal-Aid Highways										
Obligation Limitation	$39,086,465	$41,216,051 1/	$40,700,000 2/	$41,107,000	$41,107,000	$39,143,583	$39,699,000 3/	$40,256,000	$40,256,000	$42,361,000
Contract Authority Exempt from Obligation Limitation	$740,737	$739,000	$739,000	$739,000	$739,000	$739,000	$739,000 4/	$739,000 5/	$739,000 6/	$739,000 7/
Liquidation of Contract Authority	$36,032,344	$41,955,051	$41,439,000	$41,846,000	$41,846,000	$39,882,583	$39,699,000	$40,995,000	$40,995,000	$43,100,000
Admin Expenses - FHWA GOE [non-add]	360,992	377,556	390,000	413,533	413,533	412,000	416,126	416,100	415,000 8/	429,000
Payment to the Highway Account of the Highway Trust Fund		$8,017,000	$7,000,000	$14,700,000			$6,200,000 4/	$22,365,000 5/	$6,068,000	$51,900,000
Transfer from the Leaking Underground Storage Tank Trust Fund to the Highway Account of the Highway Trust Fund						$2,400,000		$1,000,000		$100,000
Supplemental Emergency Relief Funds (GF)	$871,022	$1,045,000				$1,662,000	$2,022,000 4/			
Appalachian Development Highway System (GF)	$19,800	$15,680	$9,500							
Miscellaneous Appropriations	$1,328	$15,148	$167,563	$346,515	$18,603	$4,655	$63,369	$388,975	$158,680	$216,000
Highway Infrastructure Programs (GF)				$650,000						
Highway Infrastructure Investment, Recovery Act (GF)			$27,500,000							

Note: This table reflects actual enacted amounts as appropriated.
1/ Does not reflect the following rescissions of new authority in FY 2008: Federal-aid $486.2 million and LAE $43.4 million.
2/ Does not reflect the following rescissions of new authority in FY 2009: $1.162 billion from the $3.15 billion FY 2009 appropriated rescission and $5.3 billion from the $8.7 billion FY 2009 SAFETEA-LU rescission.
3/ Does not reflect P.L. 113-6 rescission of 0.2 percent of contract authority subject to limitation and obligation limitation.
4/ Does not reflect sequestration of 5.1 percent of contract authority exempt from oblgiation limitation and payment to the Highway Trust Fund, and 5.0 percent of supplemental emergency relief funds per Sequestration Order dated dated March 1, 2013.
5/ Does not reflect sequestration of 7.2 percent of contract authority exempt from oblgiation limitation and $10.4 billion portion of the payment to the Highway Trust Fund per Sequestration Order dated dated April 10, 2013.
6/ Does not reflect sequestration of 7.3 percent of contract authority exempt from oblgiation limitation per Sequestration Order dated dated March 10, 2014.
7/ Does not reflect sequestration of 6.8 percent of contract authority exempt from oblgiation limitation per Sequestration Order dated dated February 2, 2015.
8/ FY 2015 annual appropriations (PL 113-235) provided an obligation limitation of $429.3 million for GOE and ARC. The Surface Transportation and Veterans Health Care Choice Improvement Act of 2015 (PL 114-41) provided contract authority of only $415 million.

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FEDERAL HIGHWAY ADMINISTRATION

FEDERAL-AID HIGHWAY PROGRAM AUTHORIZATIONS OF CONTRACT AUTHORITY UNDER THE FIXING AMERICA'S SURFACE TRANSPORTATION (FAST) ACT

Program	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total FY 2016-2020
Apportioned Programs	**39,727,500,000**	**40,547,805,000**	**41,424,020,075**	**42,358,903,696**	**43,373,294,311**	**207,431,523,082**
Highway Safety Improvement Program [1/]	2,454,094,512	2,508,561,630	2,556,259,770	2,603,054,152	2,655,923,445	12,777,893,509
National Highway Performance Program [2/]	22,332,260,060	22,827,910,827	23,261,963,879	23,741,388,895	24,235,621,114	116,399,144,775
Surface Transportation Block Grant Program [3/]	11,162,564,768	11,424,412,150	11,667,786,566	11,876,329,314	12,136,990,131	58,268,082,929
Congestion Mitigation & Air Quality Improvement Program	2,309,059,935	2,360,308,101	2,405,187,322	2,449,216,207	2,498,960,969	12,022,732,534
National Highway Freight Program	1,140,250,003	1,090,673,914	1,189,826,092	1,338,554,353	1,487,282,615	6,246,586,977
Metropolitan Transportation Planning	329,270,722	335,938,378	342,996,446	350,360,775	358,516,037	1,717,082,358
Nationally Significant Freight and Highway Projects	**800,000,000**	**850,000,000**	**900,000,000**	**950,000,000**	**1,000,000,000**	**4,500,000,000**
Federal Lands and Tribal Transportation Programs	**1,050,000,000**	**1,075,000,000**	**1,100,000,000**	**1,125,000,000**	**1,150,000,000**	**5,500,000,000**
Federal Lands Transportation Program	335,000,000	345,000,000	355,000,000	365,000,000	375,000,000	1,775,000,000
Federal Lands Access Program	250,000,000	255,000,000	260,000,000	265,000,000	270,000,000	1,300,000,000
Tribal Transportation Program	465,000,000	475,000,000	485,000,000	495,000,000	505,000,000	2,425,000,000
Research, Technology, and Education Program	**414,500,000**	**417,500,000**	**417,500,000**	**420,000,000**	**420,000,000**	**2,089,500,000**
Highway Research and Development Program	125,000,000	125,000,000	125,000,000	125,000,000	125,000,000	625,000,000
Technology and Innovation Deployment Program	67,000,000	67,500,000	67,500,000	67,500,000	67,500,000	337,000,000
Training and Education	24,000,000	24,000,000	24,000,000	24,000,000	24,000,000	120,000,000
Intelligent Transportation Systems Program	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	500,000,000
University Transportation Centers	72,500,000	75,000,000	75,000,000	77,500,000	77,500,000	377,500,000
Bureau of Transportation Statistics	26,000,000	26,000,000	26,000,000	26,000,000	26,000,000	130,000,000
Federal Allocation Programs	**404,000,000**	**404,000,000**	**404,000,000**	**404,000,000**	**404,000,000**	**2,020,000,000**
Construction of Ferry Boats and Ferry Terminal Facilities	80,000,000	80,000,000	80,000,000	80,000,000	80,000,000	400,000,000
Disadvantaged Business Enterprise	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	50,000,000
Emergency Relief [2/]	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	500,000,000
Highway Use Tax Evasion Projects	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	20,000,000
On-the-Job Training	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	50,000,000
Territorial and Puerto Rico Highway Program	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	1,000,000,000
TIFIA Program	**275,000,000**	**275,000,000**	**285,000,000**	**300,000,000**	**300,000,000**	**1,435,000,000**
Administrative Expenses [4/]	**429,000,000**	**435,795,000**	**442,691,925**	**449,692,304**	**456,797,689**	**2,213,976,918**
TOTAL, FHWA	**43,100,000,000**	**44,005,100,000**	**44,973,212,000**	**46,007,596,000**	**47,104,092,000**	**225,190,000,000**
CA Subject to Obligation Limitation	**42,361,000,000**	**43,266,100,000**	**44,234,212,000**	**45,268,596,000**	**46,365,092,000**	**221,495,000,000**
CA Exempt from Obligation Limitation	**739,000,000**	**739,000,000**	**739,000,000**	**739,000,000**	**739,000,000**	**3,695,000,000**

1/ Amounts for the Highway Safety Improvement Program include set aside for Railway-Highway Crossings Program ($225.0 million in FY 2016 and increasing by $5.0 million each year through FY 2020) and $3.5 million set aside each fiscal year for allocated funding to carry out certain safety-related activities.

2/ Amounts exempt from Obligation Limitation include $100,000,000 for Emergency Relief and $639,000,000 of the National Highway Performance Program apportionments. FY 2016 amounts do not reflect sequestration of 6.8% per Sequestration Order dated February 2, 2015.

3/ Amounts for Surface Transportation Block Grant Program include set aside for Transportation Alternatives equal to $835.0 million in FY 2016 and FY 2017 and $850.0 million in FY 2018 through FY 2020.

4/ Includes FHWA General Operating Expenses (GOE) and transfers to the Appalachian Regional Commission (ARC) for administrative activities associated with the Appalachian development highway system.

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FEDERAL-AID HIGHWAYS

(CANCELLATION)

(TRANSPORTATION TRUST FUND)

Of the unobligated balances of funds apportioned among the States under chapter 1 of title 23, United States Code, a total of $2,436,000,000 is hereby permanently cancelled: Provided, That such cancellation shall not apply to funds distributed in accordance with sections 104(b)(3) and 130(f) of title 23, United States Code; section 133(d)(1)(A) of such title; the first sentence of section 133(d)(3)(A) of such title, as in effect on the day before the date of enactment of MAP-21 (Public Law 112–141); sections 133(d)(1) and 163 of such title, as in effect on the day before the date of enactment of SAFETEA-LU (Public Law 109–59); and section 104(b)(5) of such title, as in effect on the day before the date of enactment of MAP-21 (Public Law 112–141): Provided further, That such cancellation shall not apply to funds that are exempt from the obligation limitation or subject to special no-year obligation limitation: Provided further, That the amount to be cancelled from a State shall be determined by multiplying the total amount of the cancellation by the ratio that the unobligated balances subject to the cancellation as of September 30, 2016, for the State; bears to the unobligated balances subject to the cancellation as of September 30, 2016, for all States: Provided further, That the amount to be canceled under this section from each program to which the cancellation applies within a State shall be determined by multiplying the cancellation amount calculated for such State by the ratio that the unobligated balance as of September 30, 2016, for such program in such State; bears to the unobligated balances as of September 30, 2016, for all programs to which the cancellation applies in such State.

LIMITATION ON ADMINISTRATIVE EXPENSES

(TRANSPORTATION TRUST FUND)
(INCLUDING TRANSFER OF FUNDS)

Not to exceed a total of $435,795,000, together with advances and reimbursements received by the Federal Highway Administration, shall be obligated for necessary expenses for administration and operation of the Federal Highway Administration or transferred to the Appalachian Regional Commission in accordance with section 104(a) of title 23, United States Code.

(LIMITATION ON OBLIGATIONS)

(TRANSPORTATION TRUST FUND)

Funds available for the implementation or execution of Federal-aid highway and highway safety construction programs authorized under titles 23 and 49, United States Code, and the provisions of the Fixing America's Surface Transportation Act shall not exceed total obligations of $43,266,100,000 for fiscal year 2017: Provided, That the

Secretary may collect and spend fees, as authorized by title 23, United States Code, to cover the costs of services of expert firms, including counsel, in the field of municipal and project finance to assist in the underwriting and servicing of Federal credit instruments and all or a portion of the costs to the Federal Government of servicing such credit instruments: Provided further, That such fees are available until expended to pay for such costs: Provided further, That such amounts are in addition to administrative expenses that are also available for such purpose, and are not subject to any obligation limitation or the limitation on administrative expenses under section 608 of title 23, United States Code.

(LIQUIDATION OF CONTRACT AUTHORIZATION)

(TRANSPORTATION TRUST FUND)

For the payment of obligations incurred in carrying out Federal-aid highway and highway safety construction programs authorized under title 23, United States Code, $44,005,100,000 derived from the Transportation Trust Fund (other than the Mass Transit Account), to remain available until expended.

ADMINISTRATIVE PROVISIONS - FEDERAL HIGHWAY ADMINISTRATION

Sec. 120.

(a) For fiscal year 2017, the Secretary of Transportation shall--

(1) not distribute from the obligation limitation for Federal-aid highways--

(A) amounts authorized for administrative expenses and programs by section 104(a) of title 23, United States Code; and

(B) amounts authorized for the Bureau of Transportation Statistics;

(2) not distribute an amount from the obligation limitation for Federal-aid highways that is equal to the unobligated balance of amounts--

(A) made available from the Transportation Trust Fund (other than the Mass Transit Account) for Federal-aid highway and highway safety construction programs for previous fiscal years the funds for which are allocated by the Secretary (or apportioned by the Secretary under sections 202 or 204 of title 23, United States Code); and

(B) for which obligation limitation was provided in a previous fiscal year;

(3) determine the proportion that--

(A) the obligation limitation for Federal-aid highways, less the aggregate of amounts not distributed under paragraphs (1) and (2) of this subsection; bears to

(B) the total of the sums authorized to be appropriated for the Federal-aid highway and highway safety construction programs (other than sums authorized to be appropriated for provisions of

law described in paragraphs (1) through (11) of subsection (b) and sums authorized to be appropriated for section 119 of title 23, United States Code, equal to the amount referred to in subsection (b)(12) for such fiscal year), less the aggregate of the amounts not distributed under paragraphs (1) and (2) of this subsection;

(4) distribute the obligation limitation for Federal-aid highways, less the aggregate amounts not distributed under paragraphs (1) and (2), for each of the programs (other than programs to which paragraph (1) applies) that are allocated by the Secretary under the Fixing America's Surface Transportation Act and title 23, United States Code, or apportioned by the Secretary under sections 202 or 204 of that title, by multiplying--

(A) the proportion determined under paragraph (3); by

(B) the amounts authorized to be appropriated for each such program for such fiscal year; and

(5) distribute the obligation limitation for Federal-aid highways, less the aggregate amounts not distributed under paragraphs (1) and (2) and the amounts distributed under paragraph (4), for Federal-aid highway and highway safety construction programs that are apportioned by the Secretary under title 23, United States Code (other than the amounts apportioned for the National Highway Performance Program in section 119 of title 23, United States Code, that are exempt from the limitation under subsection (b)(12) and the amounts apportioned under sections 202 and 204 of that title) in the proportion that--

(A) amounts authorized to be appropriated for the programs that are apportioned under title 23, United States Code, to each State for such fiscal year; bears to

(B) the total of the amounts authorized to be appropriated for the programs that are apportioned under title 23, United States Code, to all States for such fiscal year.

(b) EXCEPTIONS FROM OBLIGATION LIMITATION.-- The obligation limitation for Federal-aid highways shall not apply to obligations under or for--

(1) section 125 of title 23, United States Code;

(2) section 147 of the Surface Transportation Assistance Act of 1978 (23 U.S.C. 144 note; 92 Stat. 2714);

(3) section 9 of the Federal-Aid Highway Act of 1981 (95 Stat. 1701);

(4) subsections (b) and (j) of section 131 of the Surface Transportation Assistance Act of 1982 (96 Stat. 2119);

(5) subsections (b) and (c) of section 149 of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (101 Stat. 198);

(6) sections 1103 through 1108 of the Intermodal Surface Transportation Efficiency Act of 1991 (105 Stat. 2027);

(7) section 157 of title 23, United States Code (as in effect on June 8, 1998);

(8) section 105 of title 23, United States Code (as in effect for fiscal years 1998 through 2004, but only in an amount equal to $639,000,000 for each of those fiscal years);

(9) Federal-aid highway programs for which obligation authority was made available under the Transportation Equity Act for the 21st Century (112 Stat. 107) or subsequent Acts for multiple years or to remain available until expended, but only to the extent that the obligation authority has not lapsed or been used;

(10) section 105 of title 23, United States Code (as in effect for fiscal years 2005 through 2012, but only in an amount equal to $639,000,000 for each of those fiscal years);

(11) section 1603 of SAFETEA-LU (23 U.S.C. 118 note; 119 Stat. 1248), to the extent that funds obligated in accordance with that section were not subject to a limitation on obligations at the time at which the funds were initially made available for obligation; and

(12) section 119 of title 23, United States Code (but, for each of fiscal years 2013 through 2017, only in an amount equal to $639,000,000).

(c) REDISTRIBUTION OF UNUSED OBLIGATION AUTHORITY.-- Notwithstanding subsection (a), the Secretary shall, after August 1 of such fiscal year--

(1) revise a distribution of the obligation limitation made available under subsection (a) if an amount distributed cannot be obligated during that fiscal year; and

(2) redistribute sufficient amounts to those States able to obligate amounts in addition to those previously distributed during that fiscal year, giving priority to those States having large unobligated balances of funds apportioned under sections 144 (as in effect on the day before the date of enactment of Public Law 112-141) and 104 of title 23, United States Code.

(d) APPLICABILITY OF OBLIGATION LIMITATIONS TO TRANSPORTATION RESEARCH PROGRAMS.--

(1) IN GENERAL.-- Except as provided in paragraph (2), the obligation limitation for Federal-aid highways shall apply to contract authority for transportation research programs carried out under--

(A) chapter 5 of title 23, United States Code; and

(B) title VI of the Fixing America's Surface Transportation Act.

(2) EXCEPTION.-- Obligation authority made available under paragraph (1) shall--

(A) remain available for a period of 4 fiscal years; and

(B) be in addition to the amount of any limitation imposed on obligations for Federal-aid highway and highway safety construction programs for future fiscal years.

(e) REDISTRIBUTION OF CERTAIN AUTHORIZED FUNDS.--

(1) IN GENERAL.-- Not later than 30 days after the date of distribution of obligation limitation under subsection (a), the Secretary shall distribute to the States any funds (excluding funds authorized for the program under section 202 of title 23, United States Code) that--

(A) are authorized to be appropriated for such fiscal year for Federal-aid highway programs; and

(B) the Secretary determines will not be allocated to the States (or will not be apportioned to the States under section 204 of title 23, United States Code), and will not be available for obligation, for such fiscal year because of the imposition of any obligation limitation for such fiscal year.

(2) RATIO.-- Funds shall be distributed under paragraph (1) in the same proportion as the distribution of obligation authority under subsection (a)(5).

(3) AVAILABILITY.-- Funds distributed to each State under paragraph (1) shall be available for any purpose described in section 133(b) of title 23, United States Code.

Sec. 121. Notwithstanding 31 U.S.C. 3302, funds received by the Bureau of Transportation Statistics from the sale of data products, for necessary expenses incurred pursuant to chapter 63 of title 49, United States Code, may be credited to the Federal-aid highways account for the purpose of reimbursing the Bureau for such expenses: Provided, That such funds shall be subject to the obligation limitation for Federal-aid highway and highway safety construction programs.

Sec. 122. Not less than 15 days prior to waiving, under his or her statutory authority, any Buy America requirement for Federal-aid highways projects, the Secretary of Transportation shall make an informal public notice and comment opportunity on the intent to issue such waiver and the reasons therefor: Provided, That the Secretary shall provide an annual report to the House and Senate Committees on Appropriations on any waivers granted under the Buy America requirements.

Sec. 123. None of the funds in this Act to the Department of Transportation may be used to provide credit assistance unless not less than 3 days before any application approval to provide credit assistance under sections 603 and 604 of title 23, United States Code, the Secretary of Transportation provides notification in writing to the following committees: the House and Senate Committees on Appropriations; the Committee on Environment and Public Works and the Committee on Banking, Housing and Urban Affairs of the Senate; and the Committee on Transportation and Infrastructure of the House of Representatives: Provided*, That such notification shall include, but not be limited to, the name of the project sponsor; a description of the project; whether credit assistance will be provided as a direct loan, loan guarantee, or line of credit; and the amount of credit assistance.*

~~*Sec. 124. Section 127 of title 23, United States Code, is amended—*~~

~~*(1) in each of subsections (a)(11)(A) and (B) by striking "through December 31, 2013", and*~~

~~*(2) inserting at the end of the following*~~

~~*"(t) VEHICLES IN IDAHO.—A vehicle limited or prohibited under this section from operating on a segment of the Interstate System in the State of Idaho may operate on such a segment if such vehicle-*~~

~~*"(1) has a gross vehicle weight of 129,000 pounds or less,*~~

~~*"(2) other than gross vehicle weight, complies with the single axle, tandem axle, and bridge formula limits set forth in subsection (a), and*~~

~~*"(3) is authorized to operate on such segment under Idaho State Law.".*~~

[Reason for excluding Sec. 124 of the FY 2016 Department of Transportation Appropriations Act: Section 127 of title 23, United States Code, has already been amended accordingly pursuant to the FY 2016 Department of Transportation Appropriations Act.]

Sec. 124

(a) A State or territory, as defined in section 165 of title 23, United States Code, may use for any project eligible under section 133(b) of title 23 or section 165 of title 23 and located within the boundary of the State or territory any earmarked amount, and any associated obligation limitation, provided that the Department of Transportation for the State or territory for which the earmarked amount was originally designated or directed notifies the Secretary of Transportation of its intent to use its authority under this section and submits a quarterly report to the Secretary identifying the projects to which the funding would be applied. Notwithstanding the original period of availability of funds to be obligated under this section, such funds and associated obligation limitation shall remain available for obligation for a period of 3 fiscal years after the fiscal year in which the Secretary of Transportation is notified. The Federal share of the cost of a project carried out with funds made available under this section shall be the same as associated with the earmark.

(b) In this section, the term "earmarked amount" means—

(1) congressionally directed spending, as defined in rule XLIV of the Standing Rules of the Senate, identified in a prior law, report, or joint explanatory statement, which was authorized to be appropriated or appropriated more than 10 fiscal years prior to the fiscal year in which this Act becomes effective, and administered by the Federal Highway Administration; or

(2) a congressional earmark, as defined in rule XXI of the Rules of the House of Representatives identified in a prior law, report, or joint explanatory statement, which was authorized to be appropriated or appropriated more than 10 fiscal years prior to the fiscal year in which this Act becomes effective, and administered by the Federal Highway Administration.

(c) The authority under subsection (a) may be exercised only for those projects or activities that have obligated less than 10 percent of the amount made available for obligation as of the effective date of this Act, and shall be applied to projects within the same general geographic area within 50 miles for which the funding was designated, except that a State or territory may apply such authority to unexpended balances of funds from projects or activities the State or territory

certifies have been closed and for which payments have been made under a final voucher.

(d) The Secretary shall submit consolidated reports of the information provided by the States and territories each quarter to the House and Senate Committees on Appropriations.

~~*Sec. 126 Notwithstanding any other provision of law, the amount that the Secretary sets aside for fiscal year 2016 under section 130(e)(1) of title 23, United States Code, for the elimination of hazards and the installation of protective devices at railway-highway crossings shall be $350,000,000.*~~

[Reason for excluding Sec. 126 of the FY 2016 Department of Transportation Appropriations Act: This provision does not align with the amount in the Fixing America's Surface Transportation Act, which is the basis for the FY 2017 budget for the Federal-aid Highways account.]

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EXHIBIT III-1
FEDERAL-AID HIGHWAYS
Summary by Program Activity
Appropriations, Obligation Limitations, and Exempt Obligations
($000)

	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST	CHANGE FY 2016-2017
Federal-aid Highways				
[Limitation on Administrative Expenses] [1/]	[415,000] [2/]	[429,000]	[435,795]	[6,795]
(Obligation Limitation)	(40,256,000)	(42,361,000)	(43,266,100)	905,100
Exempt Programs	685,053 [3/]	688,748 [4/]	739,000	50,252
Flex Transfers to/from FTA	-1,429,885 [5/]	-1,300,000	-1,300,000	-----
Transfer to NHTSA	-82,581 [6/]	-----	-----	-----
Total, Obligation Limitation & Authority	**$39,428,587**	**$41,749,748**	**$42,705,100**	**$955,352**
FTE				
Direct Funded	2,550	2,537	2,537	-----
Reimbursable	236	236	236	-----
Total, FTE	**2,786**	**2,773**	**2,773**	-----

Program and Performance Statement

This account provides necessary resources to support Federal-aid Highway program activities and maintain the agency's administrative infrastructure. Funding will maintain and improve the safety, condition, and performance of our national highway system. These funds will help create a well-coordinated, well-maintained transportation network that supports our economy, creates jobs, provides the ladders of opportunity that improve quality of life for all Americans, and leads us into the future.

[ ] Non-add

1/ Includes FHWA General Operating Expenses (GOE) and transfers to the Appalachian Regional Commission (ARC) for administrative activities associated with the Appalachian development highway system. ARC is provided a separate sub-limitation for its administrative expenses in FY 2015 and FY 2016. The budget proposes one overall limitation on administrative expenses for both FHWA GOE and ARC administrative expenses in FY 2017. For FY 2015 and FY 2016, the ARC limitation is shown as part of the overall Limitation on Administrative Expenses for comparison purposes. All fiscal years do not include amounts for other non-administrative programs authorized under Administrative Expenses.

2/ FY 2015 annual appropriations (PL 113-235) provided an obligation limitation of $429.3 million for GOE and ARC. The Surface Transportation and Veterans Health Care Choice Improvement Act of 2015 (PL 114-41) provided contract authority of only $415 million.

3/ Reflects sequestration of 7.3 percent of contract authority exempt from obligation limitation per Sequestration Order dated March 10, 2014.

4/ Reflects sequestration of 6.8 percent of contract authority exempt from obligation limitation per Sequestration Order dated February 2, 2015.

5/ Includes transfer amounts that are recorded as unobligated balance transfers due to accounting system limitation. These transfer amounts include both contract authority and obligation limitation and are available for use.

6/ FHWA anticipates transfers to NHTSA in FY 2016 and FY 2017 in amounts to be determined based on State penalty information.

EXHIBIT III-1a
FEDERAL-AID HIGHWAYS
SUMMARY ANALYSIS OF CHANGE FROM FY 2016 TO FY 2017
Appropriations, Obligation Limitations, and Exempt Obligations
($000)

Item	Change from FY 2016 to FY 2017 ($000)	Change from FY 2016 to FY 2017 FTE
FY 2016 Base (Obligation Limitation + Exempt CA)	**$43,100,000**	**2,537**
Federal-aid Highways		
Adjustments to Base		
Annualization of 2016 President's Raise (1.3%)	$981	
2017 President's Raise (1.6%)	$3,593	
Two Less Compensible Days - FY 2017	-$2,313	
GSA Rent	$570	
Working Capital Fund (WCF)	-$2,182	
Inflation	$686	
Subtotal, Adjustments to Base	**$1,335**	**0**
Program Increases/Decreases		
Federal-aid Highway Program	$898,305	
DP2 Maintenance	$1,888	
Restoration of PDP program	$1,270	
UPACS modernization	$1,000	
Discipline conference restoration	$800	
Mobile device deployment	$750	
Federal Lands data center consolidation	$500	
Adjustment to ARC	-$748	
Subtotal, New or Expanded Programs	**$903,765**	**0**
FY 2017 Total Request [Ob. Lim. + Exempt CA]	**$44,005,100**	**2,537**

EXHIBIT III-2

ANNUAL PERFORMANCE RESULTS AND TARGETS

FEDERAL HIGHWAY ADMINISTRATION

The Federal Highway Administration (FHWA) integrates performance results into its budget request to demonstrate alignment with the Department of Transportation's *FY 2014-2018 Strategic Plan*. The FHWA tracks the following DOT-level performance goals and indicators to demonstrate program results.

Goal: Safety

Strategic Objective: Improve the safety of the transportation system by addressing behavioral, vehicular, and infrastructure safety issues through prevention, minimization, mitigation, and response using innovative and effective partnerships, programs, and resources.

Performance Goal: Reduce the rate of roadway fatalities to 1.02 per hundred million VMT by FY 2016 (Agency Priority Goal, APG).

Indicator: Highway Fatality Rate per 100 million VMT.								
	2010	2011	2012	2013	2014	2015	2016	2017
Target	1.30	1.10	1.05	1.03	1.02	1.02	1.02	1.02
Actual	1.11	1.10 (r)	1.14 (r)	1.09 (r)	1.07	1.08 *	Available June 2017	Available June 2018
(r) – revised; * – preliminary								

Goal: State of Good Repair

Strategic Objective: Maintain or improve the availability, reliability, and performance of the Nation's transportation infrastructure, equipment, and facilities by ensuring that they are functioning as designed within their useful lives.

Performance Goal: Increase percentage of VMT on the National Highway System (NHS) with good to very good ride quality to 64.3 percent or higher by 2018.

Indicator: Percent VMT on NHS with good to very good ride quality								
	2010	2011	2012	2013	2014	2015	2016	2017
Target	54.0%	55.8%	56.0% (r)	57.0% (r)	58.4% (r)	60.0% (r)	61.4%	62.7%
Actual	55.0%	54.3%	57.1%	57.7% (r)	58.7% (r)	Available Jan. 2017	Available Jan. 2018	Available Jan. 2019
(r) – revised								

Performance Goal: Decrease the percentage of deck area on NHS Structurally Deficient bridges to less than 6.0 percent by 2018.

Indicator: Percent of deck area on NHS Structurally Deficient bridges.								
	2010	2011	2012	2013	2014	2015	2016	2017
Target	8.0%	7.9%	7.8%	7.7%	6.6% (r)	5.9% (r)	5.5% (r)	5.4%
Actual	8.3%	7.8%	7.1%	6.8%	6.0%	5.6%	Available Jan. 2017	Available Jan. 2018
(r) – revised								

Goal: Economic Competitiveness

Strategic Objective: Improve the contribution of the transportation system to the Nation's productivity and economic growth by supporting strategic, multi-modal investment decisions and policies that reduce costs, increase reliability and competition, satisfy consumer preferences more efficiently, and advance U.S. transportation interests worldwide.

Performance Goal: Maintain Travel Time Reliability in urban areas as measured by a reduction in the Travel Time Index to no more than 1.36 in 2018.

Indicator: Travel Time Index (TTI). (Note: This is the ratio of the average peak period travel time compared to a free-flow travel time. A ratio above 1.0 is an indication that traffic congestion exists; the higher the number, the more extensive the congestion.)

	FY 2014	FY 2015	FY 2016	FY 2017
Target	1.36	1.36	1.36	1.36
Actual	1.36	1.37	Available Oct. 2016	Available Oct. 2017

Performance Goal: Maintain Travel Time Reliability in Top 25 Domestic Trade Corridors at or below 17.0 through 2018. (Note: This goal was revised in FY 2013. The previous goal was to maintain Travel Time Reliability in key freight significant corridors at 15.0 or below).

Indicator: Freight Buffer Index - The Buffer Index (BI) represents the extra time, or time cushion, that would have to be added to the average travel time to ensure on-time arrival 95 percent of the time.

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Target	n/t	17.0	18.5	18.5	18.5
Actual	16.3	18.6	18.8	Available Oct. 2016	Available Oct. 2017
n/t – no target established					

Performance Goal: All Metropolitan Planning Organizations (MPOs) serving a Transportation Management Area (TMA) develop and utilize a congestion management process (CMP) in making programming and project decisions within five years (Note: this is a new performance goal in FY 2014). This measure is discontinued because it is superseded by requirements in the proposed Final Rule for performance-based planning.

Indicator: Percent of TMAs using CMPs in making programming and project decisions (currently there are 181 TMAs).			
	FY 2014	FY 2015	FY 2016
Target	n/t	20%	Discontinued
Actual	10%	90%	Discontinued
n/t – no target established			

Goal: Quality of Life in Communities

Strategic Objective: Expand convenient, safe, and affordable transportation choices for all users by directing federal investments in infrastructure towards projects that more efficiently meet transportation, land use, goods movement, and economic development goals developed through integrated planning approaches.

Performance Goal: Increase the number of created and/or significantly improved pedestrian and bicycle transportation networks in communities (i.e., local, regional, and State) that provide functional connections and enhance transportation choice to 65 by FY 2018. (Note: This performance goal was revised in FY 2013. The previous goal was to increase the number of States with policies that improve transportation choices for walking and bicycling. This performance goal was revised again beginning in FY 2016).

	FY 2015	FY 2016	FY 2017
Target	n/t	15	20
Actual	n/a	Available January 2017	Available January 2018
n/t – no target established			

Strategic Objective: Ensure federal transportation investments benefit all users by emphasizing greater public engagement, fairness, equity, and accessibility in transportation investment plans, policy guidance, and programs.

Performance Goal: Improve accessibility on Public Rights of Way by increasing the number of State DOTs with ADA transition plans that include the Public Rights of Way to 48 by FY 2018.

Indicator: Number of State DOTs with ADA transition plans that include the Public Rights of Way.

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Target	9	12	17	25	31	37	42
Actual	13	15	23	24	26	Available Jan. 2017	Available Jan. 2018

Goal: Environmental Sustainability

Strategic Objective: Reduce foreign oil dependence and carbon emissions through research and deployment of new technologies including alternative fuels, and by promoting more energy-efficient modes of transportation (i.e. Promote Energy Efficiency).

Performance Goal: Lead FHWA implementation of MAP-21 and future reauthorization environmental provisions through FY 2018 (Note: This is a new performance goal in FY 2014).

Indicator: Submit three reports to Congress annually on MAP-21 Section 1306 regarding the status of environmental impact statement and environmental assessment processes.				
	FY 2014	FY 2015	FY 2016	FY 2017
Target	3	3	3	3
Actual	3	3	Available Oct. 2016	Available Oct. 2017

Strategic Objective: Avoid and mitigate transportation-related impacts to climate, ecosystems, and communities by helping partners make informed project planning decisions through an analysis of acceptable alternatives, balancing the need to obtain sound environmental outcomes with demands to accelerate project delivery.

Performance Goal: Encourage at least 69 State DOTs, MPOs serving a Transportation Management Area (TMA), and Federal land management agencies to undertake an assessment of vulnerabilities of the highway system by FY 2018. This measure is anticipated to be discontinued after FY 2016. (Note: This was a new performance goal in FY 2014).

Indicator: Number of State DOTs, MPOs serving a TMA, and Federal land management agencies that have conducted vulnerability assessments of the highway system to climate change and/or extreme weather events.				
	FY 2014	FY 2015	FY 2016	FY 2017
Target	47	69	79	n/t
Actual	65	71	Available Oct. 2016	Available Oct. 2017
n/t – no target established				

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL-AID HIGHWAYS

PROGRAM AND FINANCING SCHEDULE
in millions of dollars

Identification code: 69-8083-0-7-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Obligations by program activity:				
	Obligations by program activity:			
0010	Surface transportation block grant program	11,509	12,507	12,770
0014	National highway performance program	18,459	20,060	20,482
0015	Congestion mitigation and air quality improvement program	1,250	1,358	1,387
0016	Highway safety improvement program	2,699	2,933	2,995
0017	Metroploitan transportation planning	204	222	226
0018	Transportation alternatives program	319	……	……
0019	National highway freight program	……	1,072	1,026
0020	Nationally significant freight and highway projects	……	752	799
0024	Federal lands and tribal programs	571	700	750
0029	Research, technology and education program	302	327	352
0032	Administration - LAE	407	426	434
0033	Administration - ARC	2	3	3
0058	Other programs	3,875	1,953	1,476
0091	Programs subject to obligation limitation	39,597	42,313	42,700
0211	Exempt programs	650	703	723
0500	Total direct program	40,247	43,016	43,423
	Credit program obligations:			
0701	Direct loan subsidy	223	252	251
0709	Administrative expenses	4	7	7
0791	Direct program activities, subtotal	227	259	258
0799	Total direct obligations	40,474	43,275	43,681
0801	Reimbursable program	132	340	340
0900	Total new obligations	40,606	43,615	44,021
Budgetary resources:				
	Unobligated balance:			
1000	Unobligated balance brought forward, Oct 1	26,148	24,841	23,316
1001	Discretionary unobligated balance brought fwd, Oct 1	519	258	……
1013	Unobligated balance of contract authority transferred to or from other accounts [69-8350]	15	……	……
1020	Adjustment of unobligated balance brought forward, Oct1	-3	……	……
1050	Unobligated balance (total)	26,160	24,841	23,316
	Budget authority:			
	Appropriations, discretionary:			
1101	Appropriation (trust fund)	40,995	43,100	44,005
1120	Appropriations transferred to other accounts [69-8350]	-1,246	-1,482	-1,465
1120	Appropriations transferred to other accounts [69-8020]	-83	……	……
1121	Appropriations transferred from other accounts [69-8350]	29	……	……
1137	Appropriations applied to liquidate contract authority	-39,695	-41,618	-42,540
1160	Appropriations, discretionary (total)	……	……	……
	Contract authority, discretionary:			
1520	Contract authority and/or unobligated balances of contract authority permanently reduced	……	……	-2,436
1540	Contract authority, discretionary (total)	……	……	-2,436
	Contract authority, mandatory:			
1600	Contract authority	40,995	43,100	44,005
1610	Transfer to other accounts [69-8350]	-1,459	-1,300	-1,300
1610	Transfer to other accounts [69-8020]	-83	……	……
1611	Transfer from other accounts [69-8350]	13	……	……
1621	Contract authority temporarily reduced	-54	-50	……
1640	Contract authority, mandatory (total)	39,412	41,750	42,705
	Spending authority from offsetting collections, discretionary:			
1700	Collected	165	340	340
1701	Change in uncollected payments, Federal sources	-290	……	……
1750	Spending authority from offsetting collections, discretionary (total)	-125	340	340
1900	Budget authority (total)	39,287	42,090	40,609
1930	Total budgetary resources available	65,447	66,931	63,925
	Memorandum (non-add) entires:			
1941	Unexpired unobligated balance, end of year	24,841	23,316	19,904

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL-AID HIGHWAYS

PROGRAM AND FINANCING SCHEDULE
in millions of dollars

Identification code: 69-8083-0-7-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Change in obligated balance				
	Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	65,694	64,483	65,947
3010	Obligations incurred, unexpired accounts	40,606	43,615	44,021
3020	Outlays (gross)	-41,817	-42,151	-43,386
3050	Unpaid obligations, end of year	64,483	65,947	66,582
	Uncollected payments:			
3060	Uncollected payments, Federal sources, brought forward, Oct 1	-754	-464	-464
3070	Change in uncollected payments, Federal sources, unexpired	290	……	……
3090	Uncollected payments, federal sources, end of year	-464	-464	-464
	Memorandum (non-add) entries			
3100	Obligated balance, start of year	66,940	64,019	65,483
3200	Obligated balance, end of year	64,019	65,483	66,118
Budget authority and outlays, net				
	Discretionary:			
4000	Budget authority, gross	-125	340	-2,096
	Outlays, gross:			
4010	Outlays from new discretionary authority	11,124	11,426	11,671
4011	Outlays from discretionary balances	30,076	29,988	30,994
4020	Outlays, gross (total)	41,200	41,414	42,665
	Offsets against gross budget authority and outlays:			
	Offsetting collections (collected) from:			
4030	Federal sources	-92	-340	-340
4040	Offsets against gross budget authority and outlays	-165	-340	-340
	Additional offsets against gross budget authority only:			
4050	Change in uncollected payments, Federal sources, unexpired	290	……	……
4070	Budget authority, net (discretionary)	……	……	-2,436
4080	Outlays, net (discretionary)	41,035	41,074	42,325
	Mandatory:			
4090	Budget authority, gross	39,412	41,750	42,705
	Outlays, gross:			
4100	Outlays from new mandatory authority	190	186	200
4101	Outlays from mandatory balances	427	551	521
4110	Outlays, gross (total)	617	737	721
4160	Budget authority, net (mandatory)	39,412	41,750	42,705
4170	Outlays, net (mandatory)	617	737	721
4180	Budget authority, net (total)	39,412	41,750	40,269
4190	Outlays, net (total)	41,652	41,811	43,046

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL-AID HIGHWAYS

OBJECT CLASSIFICATION
in millions of dollars

Identification code: 69-8083-0-7-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct obligations:				
	Personnel compensation:			
11.1	Full-time permanent	301	301	295
11.3	Other than full-time permanent	3	3	3
11.5	Other personnel compensation	39	39	39
11.9	Total personnel compensation	343	343	337
12.1	Civilian personnel benefits	97	97	98
21.0	Travel and transportation of persons	22	22	22
22.0	Transportation of things	0	0	0
23.1	Rental payments to GSA	31	32	30
23.2	Rental payments to others	1	1	1
23.3	Communications, utilities, and misc. charges	9	9	9
24.0	Printing and reproduction	1	1	1
25.1	Advisory and assistance services	67	67	67
25.2	Other services from non-federal sources	519	519	519
25.3	Other goods and services from federal sources	347	347	347
25.4	Operation and maintenance of facilities	48	48	48
25.7	Operation and maintenance of equipment	44	44	44
26.0	Supplies and materials	12	12	12
31.0	Equipment	19	19	19
32.0	Land and structures	32	32	32
33.0	Investments and loans	236	252	251
41.0	Grants, subsidies, and contributions	38,646	41,430	41,844
99.0	Direct obligations	40,474	43,275	43,681
99.0	Reimbursable obligations	132	340	340
99.9	Total new obligations	40,606	43,615	44,021

FEDERAL-AID HIGHWAYS

EMPLOYMENT SUMMARY

Identification code: 69-8083-0-7-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
	Direct:			
10.01	Civilian full-time equivalent employment	2,550	2,537	2,537
	Reimbursable:			
20.01	Civilian full-time equivalent employment	236	236	236
	Allocation account:			
30.01	Civilian full-time equivalent employment	3	3	3

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Executive Summary
Highway Safety Improvement Program (HSIP)

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget requests a $2.51 billion Federal-aid safety program to significantly reduce traffic fatalities and serious injuries on all public roads. The HSIP is leading the transition to a performance-based program, which will require that Federal-aid investments support State-set targets for safety, and will hold States accountable to achieving safety performance targets. Improving roadway safety is a top priority of the Department and one of the Agency Priority Goals. The HSIP is funded at the enacted level of $2.45 billion in FY 2016.

What Is The Program And Why Is It Necessary?
The HSIP is a performance-driven, strategic program that will reduce fatalities and serious injuries for all road users. The program emphasizes coordination among all highway safety modes, including the National Highway Traffic Safety Administration (NHTSA) and the Federal Motor Carrier Safety Administration (FMCSA). A primary component of the HSIP is the requirement that each State utilize a Strategic Highway Safety Plan. This statewide, coordinated safety plan provides a comprehensive framework for establishing statewide goals and objectives to reduce fatalities and serious injuries. The HSIP includes dedicated funding for States to collect roadway safety data to improve decisions on the most effective safety improvements.

The HSIP will continue to save lives and prevent serious injuries for all road users, including pedestrians and bicyclists. Data from 2014 indicates that 32,675 people died in motor vehicle crashes on the nation's highways. The Department must continue to take action to address this serious public safety problem. The financial burden of highway crashes is at least $242 billion per year – a sign of the economic magnitude of highway crashes.

Why Do We Need To Fund The Program At The Requested Level?
Our $2.51 billion request for HSIP represents an increase in existing funding to maintain the substantial benefits of the HSIP. Since safety is the Department's top priority, it is critical that sufficient resources are provided to achieve an even better safety record on U.S. highways.

What Benefits Will Be Provided To The American Public Through This Request?
This program saves lives and reduces serious injuries for all road users. The number of highway-related fatalities decreased nearly 25 percent between 2005 and 2014. This decrease in highway fatalities coincides with the establishment of the HSIP as a core Federal-Aid program. An extrapolation of the data indicates that the full benefits of a $2.51 billion program are 5,600 lives saved and 19,000 serious injuries prevented over the average 10-year lifecycle of the safety infrastructure countermeasures funded by the HSIP.

A single death on our roadways, sidewalks, or bicycles paths is a tragedy; almost 90 deaths a day is unacceptable when we possess the tools and capability to help prevent them. This program will significantly reduce deaths and serious injuries for all road users. This data-driven, coordinated approach has played a significant role in achieving the nearly 25 percent reduction in highway fatalities and serious injuries in 2014 when compared to 2005, the year that the HSIP was enacted.

Detailed Justification
Highway Safety Improvement Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Highway Safety Improvement Program ($2.51 billion)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Highway Safety Improvement Program			
Highway Safety Improvement Program	2,454,095	2,508,562	54,467
Total	**2,454,095**	**2,508,562**	**54,467**

What Is This Program And Why Is It Necessary?

The HSIP is a safety-focused program that targets funds to achieve a significant reduction in fatalities and serious injuries on all public roads for all road users including pedestrians and bicyclists. It is directly tied to the Department's safety strategic goal. The HSIP includes a performance-driven, strategic approach to improving highway safety and assists the States in improving their roadway safety data. HSIP projects are consistent with the emphasis areas in the State Strategic Highway Safety Plan (SHSP), although the HSIP also includes set-asides for railway-highway safety and for other safety related programs. Safety investments from the HSIP tend to be infrastructure projects that save lives. Anticipated FY 2017 accomplishments include State implementation of projects and strategies through a performance-based approach, improved safety data collection, analysis and use, improved program reporting, and compliance with requirements from the FAST Act.

Program Features:

- **Performance-based Framework –** HSIP is leading the implementation of FHWA's overall transportation performance management framework. The features of the framework include:
  - A coordinated set of performance measures for the number and rate of fatalities and serious injuries, which are synchronized with the performance measures States report to NHTSA.
  - Performance management-based evaluation of program results.
  - Investments dedicated to safety for those States that do not meet or make significant progress towards meeting their targets.
  - Technical assistance aimed towards the achievement of State and MPO performance targets.

- **Statewide Strategic Highway Safety Plan (SHSP)** – Each State's SHSP is a statewide coordinated plan developed in cooperation with a broad range of multidisciplinary stakeholders that provides a comprehensive framework for safety. The data-driven State

SHSP defines State safety goals and integrates the 4 "E's" – engineering, education, enforcement and emergency medical services. The States are guided by the plan and their data in using HSIP and other funds to solve relevant safety problems and save lives. The SHSP provides the overarching strategic framework within which the annual, more tactically oriented, NHTSA and FMCSA plans can be developed.

- **Data and Analysis –** As part of the HSIP, States are required to develop and maintain a safety data system or advance their capabilities to collect, maintain, and share a record of safety data on all public roads for all road users including pedestrians and bicyclists; create or enhance a highway basemap of all public roads; collect a subset of the Model Inventory of Road Elements (MIRE); develop analytical processes for safety data elements; acquire and implement roadway safety analysis tools; identify roadway features that constitute a danger to all road users and perform safety problem identification and countermeasure analysis.

- **HSIP Reporting and Evaluation** – Each State prepares an annual report on their highway safety improvement program that describes the projects implemented under the program, assesses the effectiveness of those projects and describes the extent to which the funded improvements contribute to meeting their targets and reducing the number and rate of fatalities and serious injuries on all public roads in the State. The results feed the next iteration of the SHSP.

- **High-Risk Rural Roads (HRRR)** – If the fatality rate on rural roads in a State increases over the most recent 2-year period for which data are available, that State will be required to obligate in the following year an amount equal to at least 200 percent of the amount of funds the State received for FY 2009 for high-risk rural roads.

- **Older Drivers and Pedestrians** – If traffic fatalities and serious injuries per capita for drivers and pedestrians age 65 and older in a State increases during the most recent 2-year period for which data are available, that State will be required to include, in the subsequent SHSP, strategies to address the increases in those rates, taking into account the recommendations included in FHWA's latest "Highway Design Handbook for Older Drivers and Pedestrians".

- **Railway-Highway Crossing Funds** – $230 million of HSIP funds are set aside to address safety at railway-highway crossings.

- **Safety-related Programs** - $3.5 million of HSIP funds are set aside for transportation safety outreach, training, and education through the following activies: Operation Lifesaver, the Public Road Safety Clearinghouse, Work Zone Safety Grants, the National Work Zone Safety Information Clearinghouse, and guardrail training.

Why Do We Need To Fund The Program At The Requested Level?

Our $2.51 billion request for HSIP represents a modest increase in existing funding to maintain the substantial benefits of the HSIP. Since safety is the Department's top priority, it is critical that sufficient resources are provided to achieve a better safety record on U.S. highways. The HSIP is the main instrument for infrastructure safety for achieving the Department of Transportation (DOT)'s Safety Goal to improve public health and safety by reducing transportation related fatalities and injuries for all transportation users, working toward no fatalities across all modes of travel. Achieving this goal requires undertaking various strategies in the focus areas of safer vehicles, safer driver behavior, and safer highway infrastructure. In MAP-21 the Congress supported that vision by confirming the purpose of the HSIP - "to achieve a significant reduction in traffic fatalities and serious injuries". The new FAST Act and this budget request work to achieve this goal.

FHWA contributes a large portion towards the achievement of the Safety Goal through the close working relationship with other safety modes, State, Tribal, and local governments, and other partners. While NHTSA and FMCSA focus their resources on improved vehicle and user safety, FHWA concentrates on ensuring the safety of the highway infrastructure. This balance of coordinated efforts enables the DOT modes to concentrate on their areas of expertise while working towards a single goal. This coordination encourages and enables greater unity of effort. Coupled with a comprehensive focus on shared reliable safety data, the efforts of all modes will ensure that the federal efforts are implemented to their greatest potential.

The SHSP process has fostered an unprecedented level of partnership among a variety of safety stakeholders. As life-saving initiatives are identified the demand for dedicated safety resources grows. Furthermore, with an additional emphasis on safety and roadway design characteristics data, States will be able to more effectively use existing and future analysis tools for problem identification, trend analysis, safety projects, and systemic improvement planning.

Safety infrastructure investments are effective and cost-beneficial. FHWA identifies and promotes proven safety countermeasures that have a demonstrated ability to reduce crashes. FHWA helps document these at the Crash Modification Clearinghouse (http://www.cmfclearinghouse.org), a web-based database with supporting documentation to help transportation engineers identify the most appropriate countermeasure for their safety needs. A crash modification factor (CMF) is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site. For example, the installation of centerline rumble strips on a 2-lane roadway can lead to a 14 percent reduction in all crashes and a 55 percent reduction in head-on crashes. Cable median barriers on multi-lane divided roadways can reduce injury crashes by 29 percent.

FHWA's Roadway Safety Data Program, as summarized at http://safety.fhwa.dot.gov/rsdp/toolbox-home.aspx, invests more than $1 million per year to provide outreach guidance, technical support, training, and case studies on the use of the Highway Safety Manual, the CMF Clearinghouse and other related analysis tools such as the systemic safety project selection tool (http://safety.fhwa.dot.gov/systemic/) to support more scientifically rigorous safety investment decision making. FHWA also works with State and

local agencies to improve the safety data systems that are the foundation for data-driven, evidence based decision-making.

What Benefits Will Be Provided To The American Public Through This Request?

HSIP could reduce fatalities by at least 560 per year and serious injuries by at least 1,900 per year and is estimated to save more than 5,600 lives and 19,000 serious injuries over the average 10-year lifecycle of the safety infrastructure countermeasures funded by the HSIP. Funding the program at a lower level would reduce the States' ability to make the most effective safety investment decisions and result in fewer safety investments. Therefore, less funding will result in fewer lives saved and fewer serious injuries prevented. The $2.51 billion HSIP request would provide an estimated economic benefit of over $56 billion, a benefit-cost ratio of roughly 22 to 1.

After States set safety targets, the performance-based aspects of HSIP will hold them accountable for achieving those targets. The public investment in transportation safety will be more effectively managed through improved decision making as a result of an increased focus on goals and a greater level of transparency and accountability.

A single death on our roadways, sidewalks and bicycles paths is a tragedy; almost 90 deaths a day is unacceptable when we possess the tools and capability to help prevent them. This program will significantly reduce deaths and serious injuries for all road users. This data-driven, coordinated approach has played a significant role in achieving a nearly 25 percent reduction in highway fatalities and serious injuries in 2014 when compared to 2005, the year that the HSIP was enacted.

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Executive Summary
National Highway Performance Program

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget requests $22.83 billion for the National Highway Performance Program (NHPP) to improve the condition and performance of the National Highway System (NHS). A key component of the NHPP is performance management requirements to focus Federal-aid investments to support progress toward the achievement of performance targets for the NHS. These requirements will hold States accountable for achieving performance targets while continuing to give them the flexibility to make transportation investment decisions. Our FY 2017 request is a slight increase over the FY 2016 enacted level of $22.33 billion, and is aligned with the FAST Act authorization.

What Is This Program And Why Is It Necessary?
The NHPP provides funds to the States on a formula basis. Its purpose is to preserve and improve the NHS. Due to expected population and economic growth, freight and passenger transportation demands are projected to increase 250 percent by 2050. Modernizing and preserving an efficient transportation system in this environment are critical to maintain the competitiveness of our economy.

In 2015, 60 percent of vehicle miles travelled on the NHS occurred on pavements with good ride quality. The condition of pavement and bridges across the country varies considerably as many States struggle to maintain current conditions. Investment in our nation's transportation infrastructure is needed right now if we expect to maintain a global competitive edge.

Why Do We Need To Fund The Program At The Requested Level?
In FY 2017, the NHPP needs to be funded at $22.83 billion in order to make improvements toward achieving a state of good repair and improved operations on the NHS, consistent with the analyses presented in the biennial Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance report to Congress (2013 C&P report). Maintaining a state of good repair on the NHS reduces more costly improvements if infrastructure is allowed to deteriorate.

What Benefits Will Be Provided To The American Public Through This Request?
Preserving and improving the NHS keeps America's highways and bridges safe, supports U.S. competitiveness in world trade, and improves the U.S. economy. It binds the country together by making interstate and intra-state commerce possible, while allowing Americans to visit other parts of the country to experience its wonders. It creates ladders of opportunity by enabling disadvantaged populations to connect to opportunities and services such as education, employment, healthcare, housing, healthful food and recreation. It creates employment opportunities to support development of a skilled and diverse transportation workforce through FHWA's existing On-the-Job Training and workforce development programs. The NHPP emphasizes preservation of the NHS while giving States flexibility to make additional investments to enhance NHS condition and operational performance and to build new capacity. The NHPP addresses all areas of the United States including mobility and access in rural areas, ensuring that improvements to the NHS benefit both urban and rural settings.

Detailed Justification
National Highway Performance Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – National Highway Performance Program ($22.83 billion)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
National Highway Performance Program			
National Highway Performance Program [1/]	22,332,260	22,827,911	495,651
Total	**22,332,260**	**22,827,911**	**495,651**

1/ $639 million in each fiscal year is exempt from obligation limitation of which $43.5 million was sequestered in FY 2016 (sequestration not reflected in table).

What Is This Program And Why Is It Necessary?

The NHPP is a formula-based program that supports the Department's state of good repair outcome to increase the proportion of highways and bridges in good physical and operating condition. It helps to keep our roads and bridges safe; improves our Nation's competitiveness in global trade; and maximizes the economic returns from transportation policies and investments.

This justification requests that the NHPP be funded at $22.83 billion to continue progress towards achieving a state of good repair on the NHS. The structure of the NHPP, as amended by the FAST ACT, builds on the initiatives introduced in MAP-21.

Key features of the program include:

- a focus on improving and preserving the NHS;
- a performance-based framework;
- increased flexibility to the States for making transportation investment decisions; and
- requirements for risk-based asset management plans.

The NHPP requires a risk-based asset management approach to ensure that States have a strategic and systematic process for operating, preserving, and improving physical assets on the NHS. It focuses on engineering and economic analysis using quality information to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve a desired state of good repair over the lifecycle of the assets at minimum possible cost. The intent of this approach is to better manage system condition and performance.

The National Highway System (NHS)

The Federal Government has periodically defined and focused resources on the roads that were critical to national interests and that enhanced mobility, security, economic growth and quality of life. Each time, the decision was made to emphasize a limited network of roads of critical

national priority – the Federal-aid system (1921), the Interstate System (1956), and the National Highway System (1995). MAP-21 defined the NHS as a network composed of the Interstate System, all principal arterials, intermodal connectors, and roads important to national defense. The FAST Act maintains this network and has added provisions for removing some principal arterials from the NHS after review and reclassification by the States and FHWA.

The NHS totals approximately 220,000 miles. The NHS provides mobility to the vast majority of the Nation's population and almost all of its commerce. It supports national defense and promotes intermodal connectivity. While NHS mileage is only a small portion of the nation's overall public road mileage, it carries 58 percent of all vehicular traffic. The majority of truck-borne freight uses it at some point in its journey. While it comprises 53 percent of U.S. highway border crossings, it handles 98 percent of the value of total truck trade with Canada and Mexico.

The key elements of NHS include:

- **Principal Arterials** (including the Interstate System) serving regional and national needs as conduits for major traffic flow and freight movement. In urban areas, all high volume corridors are included in the NHS. In rural areas, the NHS carries over 47 percent of all vehicle miles traveled and provides critical access for jobs, health care, and commerce.
- **Intermodal Connectors** providing access between major intermodal facilities and the principal arterial system. These roads are often the important "last mile" connecting critical intermodal facilities, such as rail, bus, ports, etc. This also provides critical access for jobs, health care, and commerce.
- **Strategic Highway Network Roadways** (STRAHNET) providing defense access, network continuity and emergency capabilities for defense purposes. It contains all of the routes, including connectors to major military installations, designated by the Department of Defense as essential for national defense.
- **Border Crossings on Principal Arterials** providing vital links with our largest trading partners. Maintaining efficient and effective transportation system connections to U.S. ports of entry is essential for global competitiveness and U.S. economic growth.

Eligibility:

NHPP projects must be on an eligible facility and support progress toward achievement of national performance goals for improving infrastructure condition, safety, congestion reduction, system reliability, or freight movement on the NHS, and be consistent with metropolitan and statewide planning requirements. Eligible activities include:

- Construction, reconstruction, resurfacing, restoration, rehabilitation, preservation, operational improvements, and protection against extreme events of NHS segments.
- Construction, replacement, rehabilitation, preservation, and protection (including scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events) of NHS bridges and tunnels.
- Reconstruction, resurfacing, restoration, rehabilitation, or preservation of a bridge on a Federal-aid highway that is not on the NHS.
- Inspection and evaluation of bridges and tunnels on the NHS and inspection and evaluation of other NHS highway infrastructure assets.
- Training of bridge and tunnel inspectors.

- Construction, rehabilitation, or replacement of existing ferry boats and facilities, including approaches that connect road segments of the NHS.
- Construction, reconstruction, resurfacing, restoration, rehabilitation, and preservation of, and operational improvements for, a Federal-aid highway not on the NHS, and construction of a transit project eligible for assistance under chapter 53 of title 49, if the project is in the same corridor and in proximity to a fully access-controlled NHS route, if the improvement is more cost-effective (as determined by a benefit-cost analysis) than an NHS improvement, and will reduce delays or produce travel time savings on the NHS route and improve regional traffic flow.
- Bicycle transportation and pedestrian walkways.
- Highway safety improvements on the NHS.
- Capital and operating costs for traffic and traveler information, monitoring, management, and control facilities and programs.
- Development and implementation of a State NHS Asset Management Plan including data collection, maintenance and integration, software costs, and equipment costs.
- Infrastructure-based intelligent transportation systems capital improvements, including the installation of vehicle-to-vehicle-infrastructure communication equipment.
- Environmental restoration and pollution abatement.
- Control of noxious weeds and establishment of native species.
- Environmental mitigation related to NHPP projects.
- Construction of publicly owned intracity or intercity bus terminals servicing the NHS.
- Subsidy and administrative costs associated with providing Federal credit assistance for Transportation Infrastructure Finance and Innovation Act TIFIA projects.
- Projects to reduce the risk of failure of critical infrastructure in the State whose incapacity or failure would have a debilitating impact on national or regional economic security, national or regional energy security, national or regional public health or safety, or any combination of those matters.
- Payments made pursuant to a long term concession agreement, such as availability payments.

Funding:
Funds are apportioned by formula and the majority are subject to the overall Federal-aid obligation limitation. State DOTs can spend NHPP funds on eligible projects on the NHS subject to meeting the performance targets. Projects must be included in the Statewide Transportation Improvement Program (STIP) and in the Transportation Improvement Program (TIP) for urbanized areas.

Two percent of each State's NHPP apportionment is set aside for State Planning and Research.

Federal Share:
The Federal government generally provides 90 percent of eligible project costs of projects on the Interstate system that do not add single occupant vehicle capacity. Otherwise, the federal share is generally 80 percent of eligible project costs of projects on the NHS.

Why Do We Need To Fund The Program At The Requested Level?

In FY 2017, the NHPP program needs to be funded at $22.83 billion to continue progress in achieving a state of good repair and improved operations of the NHS.

Previous programs that were focused on the NHS significantly improved the condition of the NHS. The NHPP program will continue to focus federal funds to address national performance goals for the NHS. Among these are the condition of pavements and bridges. Past performance has demonstrated that sustained investment in our Nation's roads and bridges leads to better roadway and bridge conditions. A couple examples of this include:

- The share of travel on NHS pavements with good ride quality rose from 48 percent in 2001 to 60 percent in 2015 despite MAP-21 increasing NHS mileage by almost 60,000 miles. Bringing pavements up to a state of good repair yields benefits to system users in the form of decreased wear and tear on vehicles and resulting repair costs; reduced traveler delays; and lower crash rates.

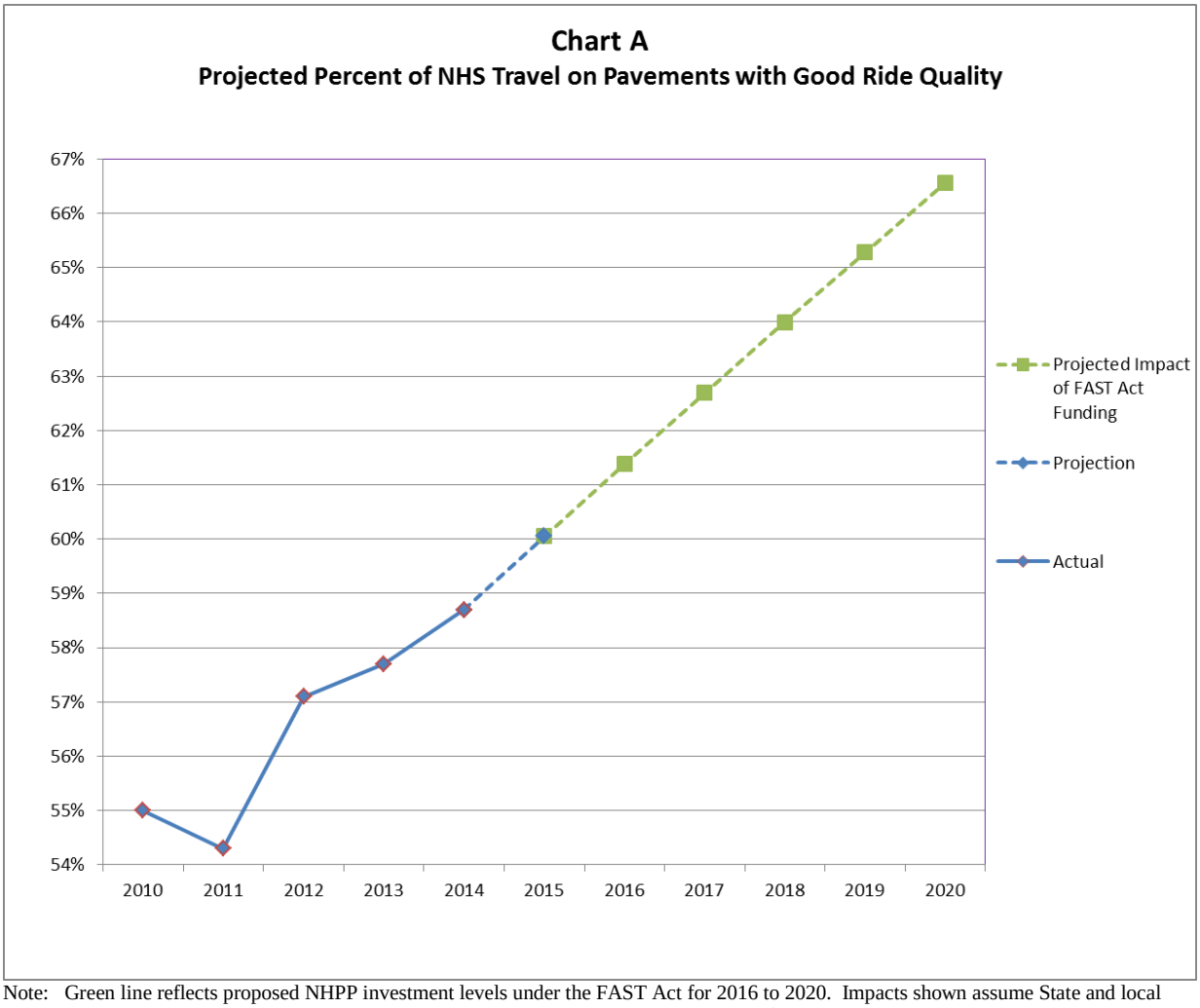
- Even as the total number of NHS bridges in the Nation's inventory increased from 115,202 in 2006 to 143,139 in 2015, the percentage of NHS bridges classified as structurally deficient dropped from 5.5 percent to 3.8 percent. Similarly, the percentage of the deck area (a measure of bridge size) on NHS bridges classified as structurally deficient has dropped from 8.4 percent in 2006 to 5.6 percent in 2015.

In addition to continued funding, the NHPP has performance provisions that will improve investment decision-making through a greater level of accountability for States to improve or preserve the condition of NHS pavements and bridges and the performance of the system. These provisions require States to carry out a risk-based asset management process to monitor and evaluate conditions, establish future condition targets, plan investment strategies, and program funding in support of these strategies. The NHPP has additional requirements for States to maintain minimum levels of condition for NHS bridges and interstate pavements and to make significant progress toward the achievement of their NHPP condition and performance targets. FHWA is currently conducting rulemaking to implement these new requirements. It is anticipated that by FY 2017 States will intitate efforts to implement these new NHPP requirements.

In 2015, 60 percent of NHS vehicle miles travelled occurred on pavements with good ride quality. As shown in Chart A, the proposed FAST Act investment level for NHPP is projected to increase this share to almost 67 percent by 2020. This forecast is based on analyses developed for the biennial C&P report, and assumes a mix of highway and bridge investments generally consistent with recent trends. The increased funding requested for the NHPP program relative to the FY 2015 level is projected to increase this share by almost 1 percentage point by 2020. Given that the NHS carries a majority of all vehicular traffic, this translates into 9 billion more vehicle miles travelled occurring on pavements with good ride quality.

The 2013 C&P report's Improve Highway Conditions and Performance scenario indicated that making all cost-beneficial investments on the NHS over 20 years would increase the percentage of NHS vehicle miles travelled on pavements with good ride quality to 90 percent by 2030. Assuming a steady glidepath of improvement, this scenario would improve this ride quality

metric to 72 percent in 2020. The proposed investment level for the NHPP, which is FAST Act funding level, is projected to achieve roughly three-quarters of the progress reflected under this idealized scenario for the period from 2015 to 2020, representing significant progress towards achieving a state of good repair for NHS pavements.

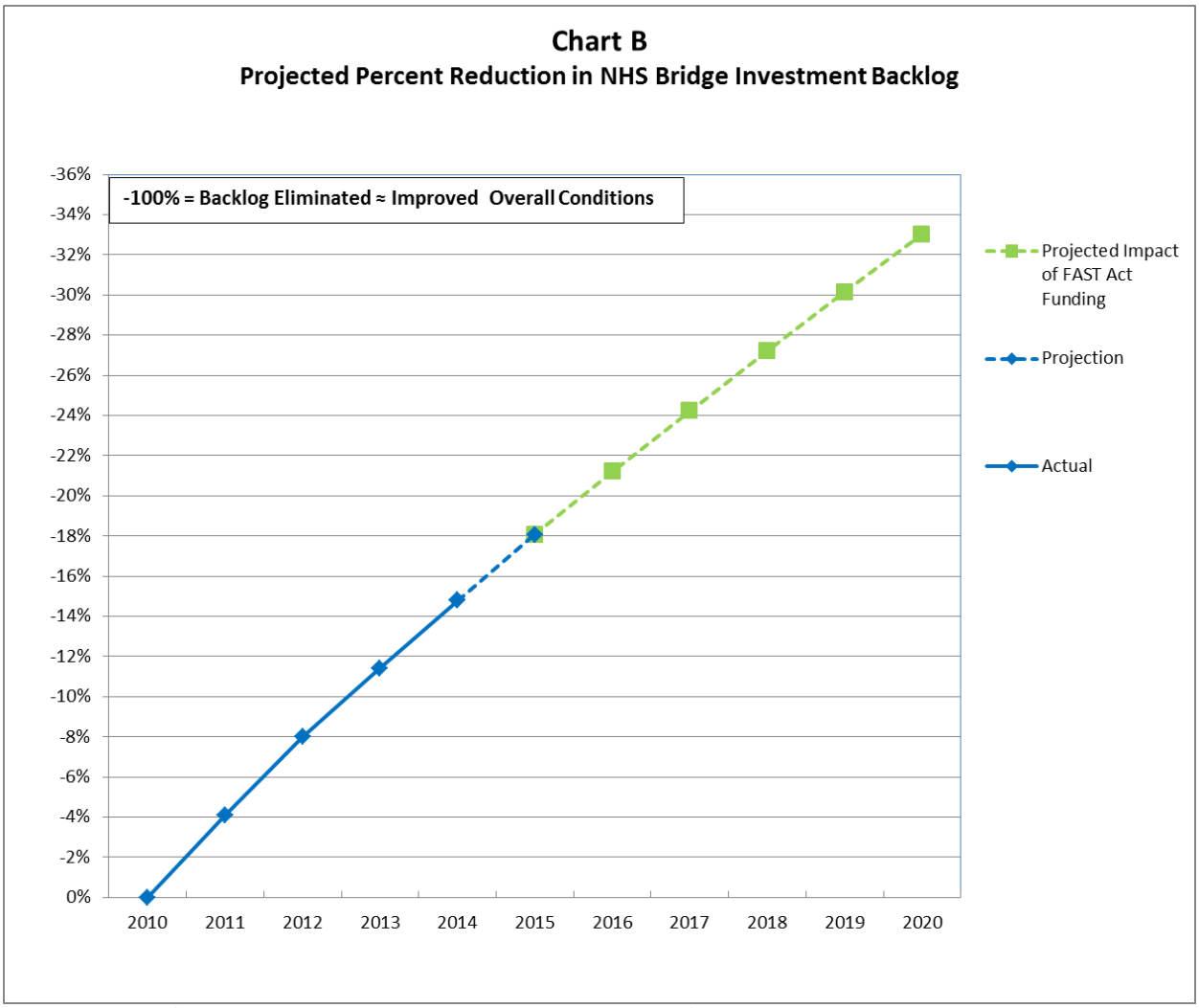


Note: Green line reflects proposed NHPP investment levels under the FAST Act for 2016 to 2020. Impacts shown assume State and local highway capital spending patterns are consistent with recent years, but that a greater share of national investment is directed towards improving operational performance for freight movements

Each biennial C&P report identifies a backlog of needed bridge rehabilitation investments, consisting of all potential improvements to bridges that appear to be cost-beneficial, based solely on their current conditions. Any reductions in this backlog over time would reflect improvements to overall bridge conditions; increases in this backlog would be consistent with a worsening of system-wide bridge conditions. Based on analyses developed for the latest biennial C&P report, the portion of the backlog attributable to bridges on the enhanced NHS was estimated to be $59.2 billion. The proposed investment level for NHPP is projected to help reduce this economic investment backlog for NHS bridges by 33 percent by 2020, as shown in Chart B that follows.

An objective of the 2013 C&P report's Improve Highway Conditions and Performance scenario was to eliminate the NHS bridge investment backlog by 2030. Assuming a steady glidepath of

improvement, this scenario would reduce the backlog by 50 percent by 2020. The proposed FAST Act investment level is projected to achieve almost three-fifths of the progress reflected under this idealized scenario for the period 2015 to 2020, representing significant progress towards achieving a state of good repair for NHS bridges. However, this progress is only a down payment towards achieving a state of good repair for NHS bridges. This is an ongoing need that will require continuing efforts and funding to address.



Note: Green line reflects proposed NHPP investment levels under the FAST ACT for 2016 to 2020. Impacts shown assume State and local highway capital spending patterns are consistent with recent years, but that a greater share of national investment is directed towards improving operational improvements for freight moveements.

Charts A and B assume that future State and local investment patterns continue recent trends. If recent trends for the relative amounts of funds spent on bridges and pavements change, then trends in Charts A and B would also change.

Future pavement and bridge performance will also be affected by other factors, including the overall level of highway capital investment funded by States and local governments as well as future changes in the prices of highway construction materials. To the extent that future State

and local highway capital spending does not keep pace with inflation, this would negatively affect future highway and bridge performance.

What Benefits Will Be Provided To The American Public Through This Request?

Preserving and improving the NHS keeps America's highways and bridges safe, supports U.S. economic world trade competiveness, and improves the U.S. economy. The NHPP emphasizes preservation of the NHS while giving States the flexibility to make additional investments to enhance NHS condition and operational performance and to build new capacity while holding them accountable to minimum infrastructure condition requirements and the achievement of condition and performance NHPP targets. The NHPP addresses all areas of the United States, including mobility and access in rural areas, ensuring that improvements to the NHS benefit both urban and rural settings. It creates ladders of opportunity by enabling disadvantaged populations to connect to opportunities and services such as education, employment, healthcare, housing, healthful food and recreation. It creates employment opportunities to support development of a skilled and diverse transportation workforce through FHWA's existing On-the-Job Training and workforce development programs. The public investment in transportation will be more effectively invested through improved decision-making as a result of an increased focus on national goals and a greater level of accountability on system condition and performance.

Executive Summary
Surface Transportation Block Grant Program

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget request of $11.42 billion for the Surface Transportation Block Grant Program (STBG) provides flexible funding that States and localities can use to improve the condition and performance of their roads and bridges through a wide range of eligible projects. Our request is a slight increase over the FY 2016 enacted level of $11.16 billion.

What Is This Program And Why Is It Necessary?
The STBG is a formula-based program that helps States and localities to invest in Federal-aid highways and support safe, multimodal transportation networks within communities.

The FAST Act amended the Surface Transportation Program, which was first authorized in ISTEA, by renaming the program the Surface Transportation Block Grant (STBG) Program to acknowledge that this program has the greatest flexibility of FHWA's core highway programs and to better align the name with how the program is (and has been) administered. The FAST Act also sets aside funding for Transportation Alternatives and Recreational Trails. Whereas the National Highway Performance Program (NHPP) program is limited to the approximately 220,000 mile National Highway System (NHS); the STBG program is available for the roughly 1,000,000 miles of Federal-aid highways, for bridges on any public road and for transit capital projects. This program gives transportation agencies, local governments, and communities the ability to target funding to address State and local priorities.

Why Do We Need To Fund The Program At The Requested Level?
In FY 2017, the STBG program needs to be funded at $11.42 billion to make progress towards improving the condition and performance of Federal-aid highways.

This program provides flexible funding that States and localities can use for projects to preserve and improve the condition and performance on any Federal-aid highway, bridges on any public road, and transit capital projects, including intercity bus terminals and vehicles. Additionaly, this program will develop and improve interconnected, multimodal transportation networks, help improve roadway safety for all road users, especially pedestrians and bicyclists, improve air quality, reduce congestion, foster affordable transportation, and improve quality of life.

What Benefits Will Be Provided To The American Public Through This Request?
The flexibility of the STBG provides transportation agencies with the ability to target funding to State and local priorities. It also provides incentives for Metropolitan Planning Organizations (MPOs) serving urbanized areas over 200,000 in population to improve decision making through encouragement of more equitable and regional approaches to decision making.

It also responds to the public's desire to reduce auto dependency while increasing mobility, access to opportunities, and improved quality of life for all ages, abilities, and incomes. Projects funded through this program enjoy broad popularity with communities across the country.

Detailed Justification
Surface Transportation Block Grant Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Surface Transportation Block Grant Program ($10.59 billion)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Surface Transportation Block Grant Program			
Surface Transportation Block Grant Program	11,162,565	11,424,412	261,847
Total	**11,162,565**	**11,424,412**	**261,847**

What Is This Program And Why Is It Necessary?

An efficient transportation system is critical to maintaining the competitiveness of our economy. The highly developed U.S. transportation system played a key role in allowing GDP per capita to grow faster in the U.S. than comparable rates abroad. Additional transportation infrastructure investment is needed. This program will give transportation agencies the ability to target funding to State and local priorities.

While the NHS is the Nation's primary highway system, a second level of roadways plays an important role in funneling the flow of people and goods onto the NHS. These roads connect the Nation's communities, high-tech research facilities, farms, and recreational areas to the NHS and play an important role in our nation's vitality and ability to move goods and people efficiently throughout the nation.

The STBG program is the most flexible of the core highway programs. While the NHPP is limited to the approximately 220,000 mile NHS, the STBG program is available for the roughly 1,000,000 miles of Federal-aid highways that include those public roads that are not functionally classified as rural minor collectors or local roads and for bridges on any public road and for pedestrian and bicycle facilities and projects eligible under the Transportation Alternatives set-aside. It provides funding to both urban and rural areas of the States. The biennial Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance report to Congress (2013 C&P report) identified significant opportunities for additional investment to help achieve a state of good repair and improve the operational performance of Federal-aid highways.

The STBG provides additional eligibilities for transit capital projects, transportation alternative type projects, recreational trail projects, surface transportation projects within port terminal boundaries, truck parking facilities projects, and planning and research. STBG funds can be used to address local needs rather than those of the NHS. Many States will sub-grant STBG funds to cities, counties and towns to help them connect to the nation's transportation system. STBG funds improve access and connectivity to jobs and services in rural areas and reduce congestion and improve quality of life in urban areas. These funds give States the flexibility to

make decisions on transportation investments. STBG funds can be used to improve highway infrastructure condition and performance on and off the NHS.

The STBG provides funds to the States to invest in Federal-aid eligible highways to replace, rehabilitate, and preserve roads, bridges, and other highway infrastructure and to expand or build new transportation facilities. The STBG provides a set-aside to rehabilitate or replace bridges on public roads that are not located on a Federal-aid highway. Other illustrative activities include the removal of bottlenecks; projects and strategies to support congestion pricing, electronic toll collection, travel demand management strategies and programs; collection and dissemination of real-time travel information; deployment and integration of Intelligent Transportation System (ITS) technologies; and greater use of traffic incident management practices in corridors. Additionally, these funds will help to enhance access to educational opportunities, health care, recreation, and other quality of life needs in rural areas.

Under 23 USC Section 504(e), States may obligate STBG funds for surface transportation workforce development, training, and education. The application of 504(e) funds may be used to support a broad range of training and education activities, including targeted workforce skilled training; training for State and local transportation agency employees (excluding salaries); university or community college support; outreach to promote surface transportation career awareness, among others. The 504(e) funding may also be used to supplement On-the-Job-Training Supportive Services activities authorized under 23 USC Section 140(b), which are targeted to address the historical under-representation of minorities, women, and other disadvantaged individuals these groups in highway construction skilled crafts.

A long term commitment to funding this program has resulted in the following benefits:

- The share of vehicle miles travelled on Federal-aid highway pavements with good ride quality rose from 43 percent in 2000 to 45 percent in 2013.
- The percentage of bridges classified as structurally deficient dropped from 12.6 percent in 2006 to 9.6 percent in 2015 even as the total number of bridges in the Nation's inventory increased from 597,561 to 611,845. Similarly, the percentage of the deck area (a measure of bridge size) on bridges classified as structurally deficient has dropped from 9.6 percent in 2006 to 6.7 in 2015.

STBG funds are primarily eligible for use on projects on Federal-aid highways that include those public roads that are not functionally classified as rural minor collectors or local roads. Federal-aid highways are roads on the National Highway System (including the Interstate system), other arterial roads, urban collectors, and major rural collectors. It accounts for approximately one million of the Nation’s four million miles of public roads. STBG funds also may be used on:

- Set-aside funding for bridges on public roads that are not Federal-aid highways.
- Pedestrian and bicycle facilities, trails, and projects eligible under the Transportation Alternatives set-aside.
- Fifteen percent of the funds suballocated for areas with a population of less than 5,000 may be used on rural minor collectors.
- Funds may be used for Appalachian local access roads designated in 40 U.S.C. 14501.

Eligibility:

- Construction of highways, bridges, tunnels, including designated routes of the Appalachian development highway system and local access roads under section 14501 of title 40; ferry boats and terminal facilities eligible for funding under section 129(c); transit capital projects eligible for assistance under chapter 53 of title 49; infrastructure-based intelligent transportation systems capital improvements, including the installation of vehicle-to-infrastructure communication equipment; truck parking facilities eligible for funding under section 1401 of MAP-21 (23 U.S.C. 137 note); and border infrastructure projects eligible for funding under section 1303 of SAFETEA-LU.
- Operational improvements and capital and operating costs for traffic monitoring, management, and control facilities and programs.
- Environmental measures eligible under sections 119(g), 328, and 329 and transportation control measures listed in section 108(f)(1)(A) (other than clause (xvi) of that section) of the Clean Air Act (42 U.S.C. 7408(f)(1)(A)).
- Highway and transit safety infrastructure improvements and programs, including railway-highway grade crossings.
- Fringe and corridor parking facilities and programs in accordance with section 137 and carpool projects in accordance with section 146.
- Recreational trails projects eligible for funding under section 206, pedestrian and bicycle projects in accordance with section 217 (including modifications to comply with accessibility requirements under the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.)), and the safe routes to school program under section 1404 of SAFETEA-LU (23 U.S.C. 402 note).
- Planning, design, or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.
- Development and implementation of a State asset management plan for the National Highway System and a performance-based management program for other public roads.
- Protection (including painting, scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events) for bridges (including approaches to bridges and other elevated structures) and tunnels on public roads, and inspection and evaluation of bridges and tunnels and other highway assets.
- Surface transportation planning programs, highway and transit research and development and technology transfer programs, and workforce development, training, and education under chapter 5 of title 23 U.S.C.
- Surface transportation infrastructure modifications to facilitate direct intermodal interchange, transfer, and access into and out of a port terminal.
- Projects and strategies designed to support congestion pricing, including electronic toll collection and travel demand management strategies and programs.
- At the request of a State, and upon Secretarial approval of credit assistance under chapter 6 of title 23, subsidy and administrative costs necessary to provide an eligible entity Federal credit assistance under chapter 6 of title 23 with respect to a project eligible for assistance under section 133 of title 23.
- The creation and operation by a State of an office to assist in the design, implementation, and oversight of public-private partnerships eligible to receive funding under this title and chapter 53 of title 49, and the payment of a stipend to unsuccessful private bidders to

offset their proposal development costs, if necessary to encourage robust competition in public-private partnership procurements.

- Any type of project eligible under this section as in effect on the day before the date of enactment of FAST Act, including projects described under section 101(a)(29) as in effect on such day.
- Construction of any bridge in accordance with 23 U.S.C. 144(f) that replaces any low water crossing (regardless of the length of the low water crossing); any bridge that was destroyed prior to January 1, 1965; any ferry that was in existence on January 1, 1984; or any road bridge that is rendered obsolete as a result of a Corps of Engineers flood control or channelization project and is not rebuilt with funds from the Corps of Engineers.
- Actions in accordance with the definition and conditions in 23 U.S.C. 144(g) to preserve or reduce the impact of a project on the historic integrity of a historic bridge if the load capacity and safety features of the historic bridge are adequate to serve the intended use for the life of the historic bridge.

The eligible activities for the Transportation Alternatives set-aside include but are not limited to:

- Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act.
- Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers.
- Conversion and use of abandoned railroad corridors for trails.
- Construction of turnouts, overlooks, and viewing areas.
- Community improvement activities, which include but are not limited to:
    - Inventory, control, or removal of outdoor advertising.
    - Historic preservation and rehabilitation of historic transportation facilities.
    - Vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control.
    - Archaeological activities relating to impacts from implementation of transportation projects eligible under this title.
- Any environmental mitigation activity, including pollution prevention, abatement, and mitigation to address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff; reduce vehicle-caused wildlife mortality; or restore and maintain connectivity among terrestrial or aquatic habitats.
- Recreational trails, including a set-aside for the recreational trails program.
- Safe routes to school projects.
- Planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

Funding:
Funds are apportioned by formula and are subject to the overall Federal-aid obligation limitation.

The following amounts are set aside from each State's STBG apportionment:

- 2 percent for State Planning and Research (SP&R).
- An amount for Tranportation Alternatives this is $835.0 million in FY 2016 and FY 2017 and $850.0 million in FY 2018 through FY 2020.
- 15 percent of the State's FY 2009 Highway Bridge Program apportionment for bridges on public roads that are not Federal-aid highways. This set aside may not be taken from the suballocations described below.

The STBG suballocates 51 percent (in FY 2016, increases by 1 percent each year through FY 2020) of a State's annual apportionment, after the SP&R and Transportation Alternatives set-asides, for obligation in the following areas in proportion to their relative shares of a State's population--

- Urbanized areas with population greater than 200,000.
- Areas with population greater than 5,000 but no more than 200,000.
- Areas with population of 5,000 or less.

The remaining 49 percent (in FY 2016, decreases by 1 percent each year through FY 2020) may be used in any area of the State.

- The Governor of a land border State may designate up to 5 percent of STBG funds available for use in any area of the State for border infrastructure projects eligible under the SAFETEA-LU border program.
- STBG funds available for use in any area of the State are subject to transfer penalties under section 154 (Open Container Requirements) and 164 (Minimum Penalties for Repeat DWI or DUI Offenders) of title 23, USC, which then at the election of the State are released as HSIP funds and/or transferred to the National Highway Traffic Safety Administration.

The Transportation Alternaitves set-aside suballocates 50 percent of funds (after the set-aside for the recreational trails program, unless a State opts out) for obligation in the following areas in proportion to their relative shares of a State's population--

- Urbanized areas with population greater than 200,000.
- Areas with population greater than 5,000 no more than 200,000.
- Areas with population of 5,000 or less.

The remaining 50 percent may be used in any area of the State.

Federal Share:
The Federal government generally provides 90 percent of eligible project costs for projects on the Interstate system that do not add single occupant vehicle capacity. Otherwise, the federal share is generally 80 percent of eligible project costs, with a sliding scale providing a higher Federal share mostly affecting western States.

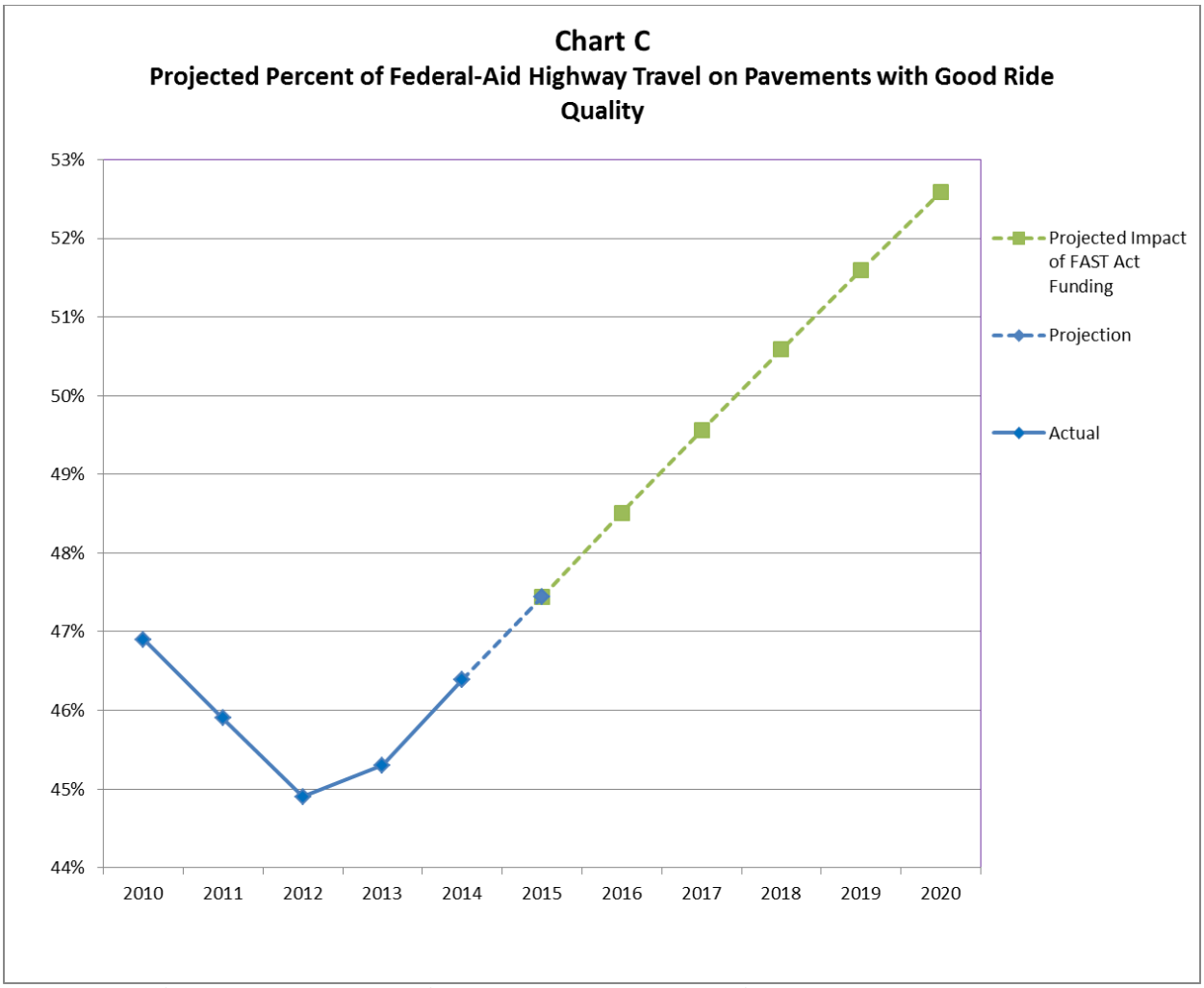
Why Do We Need To Fund The Program At The Requested Level?

In FY 2017, the STBG program will need to be funded at $11.42 billion to make progress in achieving improved conditions and performance of Federal-aid highways. Our request will provide flexible funding that may be used by States and localities for projects to preserve and

improve Federal-aid highways, bridges on any public road, and transit capital projects, including intercity bus terminals and vehicles.

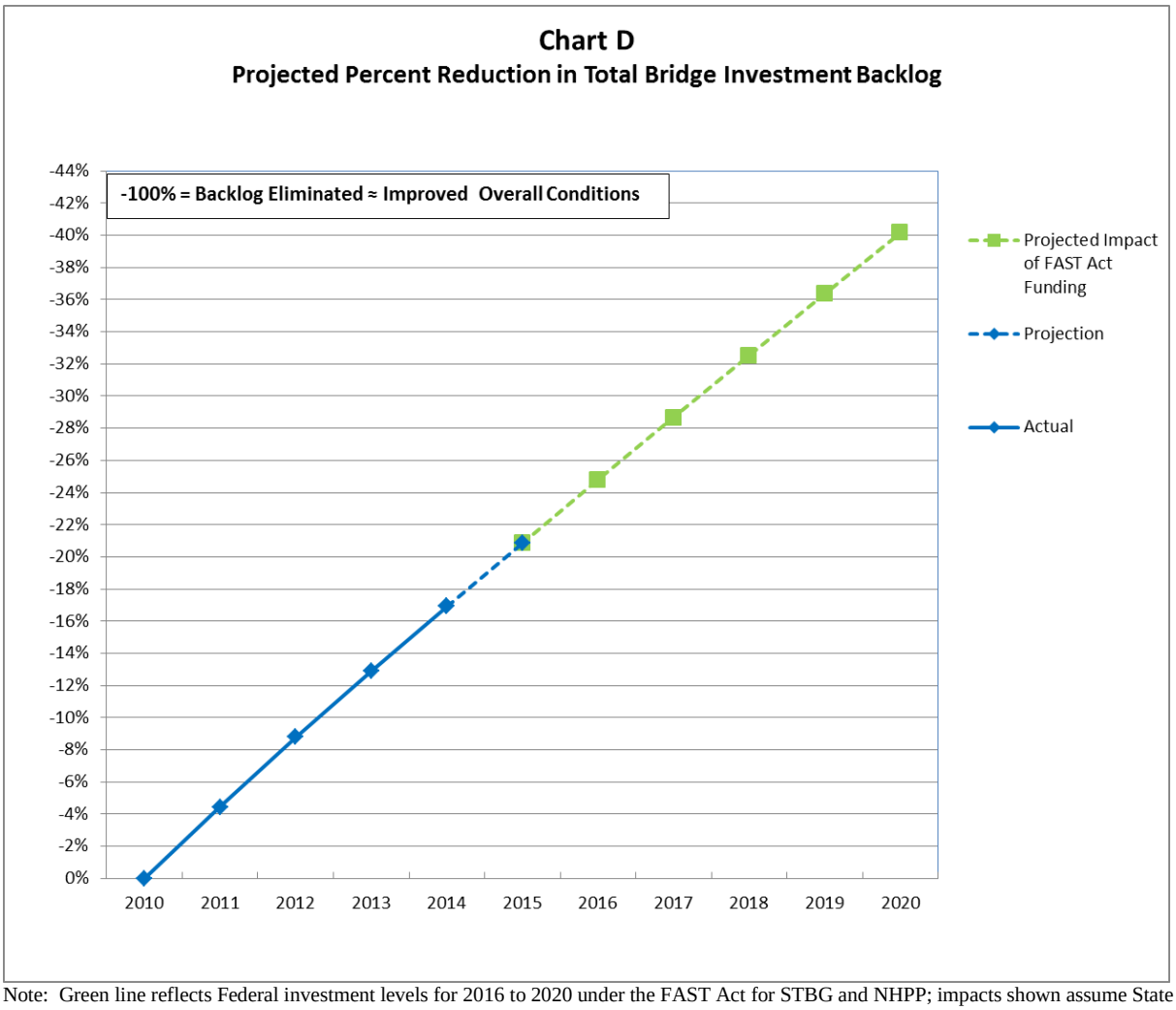
In 2013, 45 percent of vehicle miles travelled on Federal-aid highways occurred on pavements with good ride quality. As shown in Chart C, the proposed FAST Act investment level is projected to increase this share to almost 53 percent by 2020. This forecast is based on analyses developed for the biennial C&P report, and takes into account increased funding requested for the STBG and NHPP programs. The proposed funding levels under the FAST Act alone is projected to increase this share by almost 1 percentage point by 2020, which translates into 17 billion more vehicle miles travelled occurring on pavements with good ride quality.

The 2013 C&P report's Improve Highway Conditions and Performance scenario indicated that making all cost-beneficial investments on Federal-aid highways over 20 years would increase the percentage of vehicle miles travelled on pavements with good ride quality to 76 percent by 2030. Assuming a steady glidepath of improvement, this scenario would improve this ride quality metric to 61 percent in 2020. The proposed FAST Act investment level for STBG and NHPP combined is projected to achieve nearly five-sevenths of the progress reflected under this idealized scenario for the period from 2015 to 2020, representing significant progress towards achieving a state of good repair for Federal-aid highways pavements.



Note: Green line reflects Federal investment levels for 2016 to 2020 under the FAST Act for STBG and NHPP; impacts shown assume State and local highway capital spending patterns are consistent with recent years, but that a greater share of national investment is directed towards improving operational performance for freight movements.

Each biennial C&P report identifies a backlog of needed bridge rehabilitation investments, consisting of all potential improvements to bridges that appear to be cost-beneficial, based solely on their current conditions. Any reductions in this backlog over time would reflect improvements to overall bridge conditions; increases in this backlog would be consistent with a worsening of system-wide bridge conditions. The 2013 C&P report estimated this backlog to be $106.4 billion. The proposed funding levels under the FAST Act, including funding requested for the STBG and NHPP programs, is projected to help reduce this economic investment backlog for bridges by 40 percent by 2020, as shown in Chart D that follows.



Note: Green line reflects Federal investment levels for 2016 to 2020 under the FAST Act for STBG and NHPP; impacts shown assume State and local highway capital spending patterns are consistent with recent years, but that a greater share of national investment is directed towards improving operational performance for freight movements.

An objective of the 2013 C&P report's Improve Highway Conditions and Performance scenario was to eliminate the bridge investment backlog by 2030. Assuming a steady glidepath of improvement, this scenario would reduce the backlog by 55 percent by 2020. The proposed FAST Act investment level for STBG and NHPP combined is projected to achieve roughly seven-ninths of the progress reflected under this idealized scenario for the period 2015 to 2020, representing significant progress towards achieving a state of good repair for bridges. However, this progress is only a down payment towards achieving a state of good repair for our Nation's bridges. This is an ongoing need that will require continuing efforts and funding to address.

Charts C and D assume that future State and local investment patterns continue recent trends. As STBG is the most flexible of FHWA's core highway programs. How States choose to utilize their STBG funds will affect the relative amount of progress made on these different measures of performance.

Other factors will also affect future performance, including the overall level of State and locally funded highway capital investment, as well as future changes in the prices of highway

construction materials. To the extent that future State and local highway capital spending does not keep pace with inflation, this would negatively affect future highway and bridge performance.

What Benefits Will Be Provided To The American Public Through This Request?

An efficient transportation system is critical to maintaining our economic competitiveness. The highly developed U.S. transportation system played a key role in allowing GDP per capita to grow faster in the U.S. over the past century than in countries with less developed transportation systems. However, additional transportation infrastructure investment is needed to support a globally competitive economy.

The STBG responds to the public's desire to increase mobility, access to opportunities, and improve quality of life for all ages, abilities, and incomes. These projects are vital to improving the safety of all roadway users, including pedestrians and bicyclists, as well as providing accessible transportation choices and connections. The Transportation Alternatives set-aside provides States and communities opportunities to fund small projects at the community level that might not otherwise be funded.

It creates ladders of opportunity that enable disadvantaged populations to connect to opportunities and services such as education, employment, healthcare, housing, healthful food and recreation. It creates opportunities to support the development of a skilled and diverse transportation workforce through the use of 504(e) funds to supplement and expand upon FHWA's existing On-the-Job Training and workforce development programs.

The STBG is the most flexible of the core highway programs. This flexibility provides transportation agencies with the ability to target funding to State and local priorities. Furthermore, the STBG targets a significant portion of the funds to both rural and urban areas ensuring that all areas of the U.S. have an opportunity to improve their transportation priorities.

Executive Summary
Congestion Mitigation & Air Quality Improvement Program

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 request level of $2.36 billion for the Congestion Mitigation and Air Quality Improvement (CMAQ) Program will help States and local governments reduce highway congestion and harmful emissions, and also assist many areas in reaching attainment of the National Ambient Air Quality Standards (NAAQS). Our request is a slight increase over the FY 2016 enacted level of $2.31 billion.

What Is The Program And Why Is It Necessary?
The CMAQ program provides a funding source for State and local governments to fund transportation projects and programs that help meet the requirements of the Clean Air Act, and that help reduce regional congestion on transportation networks. CMAQ investments support transportation projects that reduce the mobile source emissions for which an area has been designated nonattainment or maintenance for the ozone, carbon monoxide and particulate matter NAAQS by the Environmental Protection Agency (EPA). Many CMAQ-funded projects also reduce highway congestion that impedes economic development. FHWA will continue to support these types of projects in FY 2017.

Why Do We Need To Fund The Program At The Requested Level?
Reductions in both harmful emissions and traffic congestion are goals of the Department's initiative supporting quality of life in communities. The CMAQ program is the only highway program that specifically targets investments to reduce harmful vehicular emissions.

Additionally, funding the program at the request level of $2.36 billion will provide consistency and continuity for States and metropolitan governments that have planned and programmed the types of projects which contribute to the Department's environmental and quality of life goals.

What Benefits Will Be Provided To The American Public Through This Request?
The CMAQ program provides funding for projects that improve air quality; providing cleaner air and a more healthful environment in areas with air quality challenges. The CMAQ program is the only element of the Federal-aid Highway Program that specifically targets areas with air quality challenges. Through its statutory focus on transportation efforts that reduce harmful emissions, the CMAQ program enhances livability and improves health nationwide through its contributions to attainment and maintenance of the NAAQS that act as a public health benchmark for many of the more densely populated areas of the country.

Detailed Justification
Congestion Mitigation & Air Quality Improvement Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Congestion Mitigation & Air Quality Improvement Program ($2.36 billion)

($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Congestion Mitigation & Air Quality Improvement Program			
Congestion Mitigation & Air Quality Improvement Program	2,309,060	2,360,308	51,248
Total	**2,309,060**	**2,360,308**	**51,248**

What Is This Program And Why Is It Necessary?

The CMAQ Program provides broad flexibility in project selection for States and communities that need to reduce emissions from their transportation sources. The program's statutory focus on congestion- and emissions-reducing efforts is unique in the Federal-aid Highway Program as it seeks to employ tailored transportation investments to combat formidable air quality challenges around the country. Reductions in both harmful emissions and traffic congestion are goals of the Department's initiative supporting quality of life in communities. Some of the eligible project categories available to States and local governments include:

- Traffic management centers
- Congestion relief efforts, e.g. high occupancy vehicle/high occupancy toll lanes
- Intermodal freight projects
- Diesel retrofit projects
- Transit capital investments
- Transit and rail operating costs
- Travel demand management strategies
- Bicycle and pedestrian programs
- Vehicle inspection and maintenance programs
- Electric vehicle and natural gas vehicle infrastructure

Projects supported with CMAQ funds must demonstrate the three primary requirements that have been a part of the program since its inception under the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991.

An eligible project must:

- Reduce emissions.
- Be located in or benefit an EPA-designated nonattainment or maintenance area.
- Be identified as a transportation project.

The Federal share for most CMAQ projects, with a few exceptions, is 80 percent. While most States must use program funds in either nonattainment or maintenance areas, States with small populations in these designated areas, or with none of these areas, have additional flexibility to use CMAQ funds anywhere in the State for any project eligible under the STP or CMAQ program.

The CMAQ program establishes a statutory link to funding projects that reduce harmful emissions and contribute to the attainment of the NAAQS. MAP-21 emphasized the importance of reducing PM2.5 emissions in areas that are nonattainment or maintenance for the PM2.5 NAAQS by setting aside a portion of the CMAQ funds to support projects that would reduce PM2.5 emissions. The FAST Act continues this emphasis on reducing PM2.5 emissions.

CMAQ is less traditional than other FHWA capital programs, and serves a crossover function between transportation capital investments and environmental stewardship. Projects supported with CMAQ funds are required to demonstrate an emissions reduction projection. In addition, States provide an annual report on all CMAQ investments that covers the fiscal year's obligations of program funds and provides insight on the program's potential impact on air quality, congestion, multimodal choice, and its contribution to a region's quality of life. The program continues to provide incremental benefits through enhanced regional and local air quality, and through contributions to congestion relief. Both these areas—air pollution and highway congestion—are considered to be worsening externalities that affect quality of life in many metropolitan areas of the country.

Why Do We Need To Fund The Program At The Requested Level?

Our FY 2107 CMAQ request of $2.36 billion is a slight increase over the FY 2016 enacted level. An estimated 142.2 million Americans live in places where the levels of one or more air pollutants exceed national air quality standards, threatening public health. The program will continue to help ensure continuity with State and local programming and provide adequate resources to maintain the air quality progress in many areas as they strive towards attainment of the NAAQS. The $51 million of additional funding over the 2016 level will result in approximately 50 more projects that will improve air quality in these areas.

What Benefits Will Be Provided To The American Public Through This Request?

The CMAQ program provides funding for projects that improve air quality; providing cleaner air and a more healthful environment in areas with air quality challenges. The CMAQ program is the only element of the Federal-aid Highway Program that specifically targets areas with air quality challenges. Through its statutory focus on transportation efforts that reduce harmful emissions, the program enhances livability and improves health nationwide through its contributions to attainment and maintenance of the NAAQS that act as a public health benchmark for many of the more densely populated areas of the country. Since its inception through FY 2014, $30 billion in CMAQ funds have supported more than 30,000 projects that reduced emissions of particulate matter, carbon monoxide, nitrogen oxides, and/or volatile organic compounds. CMAQ funded projects, such as public transit, bicycle and pedestrian facilities that promote alternative transportation options and active living can lead to congestion reduction, air quality improvements and positive health benefits. Many CMAQ projects also can provide additional public health benefits. For example, in addition to congestion relief, projects

that focus on improved traffic flow and system efficiency can lower vehicle crash and injury risk while also reducing traveler stress levels.

Executive Summary
National Highway Freight Program

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget requests $1.09 billion for the National Highway Freight Program (NHFP), established in section 1116 of the Fixing America's Surface Transportation (FAST) Act, to provide funding for States to invest in infrastructure and operational improvements that reduce congestion, improve safety and productivity, and strengthen the contribution of the National Highway Freight Network to the economic competitiveness of the United States. Key components of the NHFP include: establishment of a new National Highway Freight Network (NHFN), replacing the National Freight Network established under the Moving Ahead for Progress in the 21st Century Act (MAP-21), a new requirement for States to develop State freight plans and encouragement of States to create freight advisory committees. Generally, NHFP funds must contribute to the efficient movement of freight on the National Highway Freight Network and be identified in a freight investment plan included in the State's freight plan. In addition, a State may use up to 10 percent of its total NHFP apportionment each year for certain freight intermodal or freight rail projects. Our FY 2017 request is a slight decrease over the FY 2016 enacted level of $1.14 billion.

What Is The Program And Why Is It Necessary?
The NHFP provides funds to the States on a formula basis. Its purpose is to improve efficient movement of freight on the NHFN. The program strategically directs resources and policies to present solutions and strategies to address the infrastructure, institutional, and financial bottlenecks that hinder the safe and efficient movement of goods.

Investment in our nation's transportation freight infrastructure is needed right now if we expect to maintain a global competitive edge. The U.S. economy is expected to double in size over the next 30 years. By 2045, the nation's population is projected to increase to 389 million people, compared to 321 million in 2015. Americans will increasingly live in congested urban and suburban areas, with fewer than 10 percent living in rural areas by 2040 (compared to 16 percent in 2010 and 23 percent in 1980). To support our projected population and economic growth, freight movements across all modes are expected to grow by roughly 42 percent by 2040.

Why Do We Need To Fund The Program At The Requested Level?
In FY 2017, the NHFP needs to be funded at $1.09 billion in order to address expected growth in freight traffic and the need for more and better-directed investment on the freight infrastructure, consistent with the analyses presented in the biennial Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance report to Congress (2013 C&P report).

What Benefits Will Be Provided To The American Public Through This Request?
A national highway freight program with multi-year authorization offers States and their private-sector partners a path forward to make real improvements in freight infrastructure and operations and will yield a high return on federal investment for the economy and for public benefits in safety, mobility, health and the environment. Investments in freight infrastructure have a profoundly positive effect on the national economy, create jobs, and support economic growth and competitiveness.

Detailed Justification
National Highway Freight Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – National Highway Freight Program ($1.09 billion)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
National Highway Freight Program			
National Highway Freight Program	1,140,250	1,090,674	- 49,576
Total	**1,140,250**	**1,090,674**	**- 49,576**

What Is This Program And Why Is It Necessary?

The NHFP, which is newly established by the Fixing America's Surface Transportation (FAST) Act, is a formula based program that provides funding to States to invest in infrastructure and operational improvements that reduce congestion, improve safety and productivity, and strengthen the contribution of the NHFN to the economic competitiveness of the United States. The NHFP amount for each State is calculated by multiplying the total set-aside amount for the program for all States by the ratio of total base apportionment for that State to the total base apportionments for all States. A portion of the amount for each State is then provided to the Metropolitan Planning Program.

This budget requests that the NHFP be funded at $1.09 billion to improve efficient movement of freight on the NHFN.

Key features of the program include:
- Establishment of the NHFN;
- Requirement for State to develop comprehensive State Freight Plans; and
- Encouragement by US DOT for each State to create a multi-modal freight advisory committee with public and private sector representatives.

National Highway Freight Network:
The FAST Act requires the FHWA Administrator to establish a NHFN to strategically direct Federal resources and policies toward improved performance of the Network. FAST Act Section 1103 amends 23 U.S.C. 101(a)(15) to include a definition of the NHFN established under 23 U.S.C. 167. The NHFN includes the following subsystem of roadways:

A. **Primary Highway Freight System (PHFS)** – This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data. The initial designation of the PHFS is the

41,518 centerline mile network identified as a comprehensive network during the development of the highway-only Primary Freight Network (PFN) under 23 U.S.C. 167(d). The comprehensive network includes 37,436 centerline miles of Interstate and 4,082 centerline miles of non-Interstate roads. Note: this network differs from the PFN that was ultimately designated to satisfy the MAP-21 requirement in October 2015. The FHWA Administrator is required to re-designate the PHFS every 5 years. Each re-designation is limited to a maximum 3 percent increase in the total mileage.

B. **Interstate Routes not on the PHFS** – These highways consist of the remaining portion of interstate roads not designated as part of the PHFS. These routes provide important continuity and access to freight transportation facilities. Nationwide, these portions amount to 9,511 centerline miles of Interstate.

C. **Critical Rural Freight Corridors (CRFC)** – These are rural principal arterials which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities. States are responsible for designating public roads in their State as CRFCs. A State may designate a public road within the borders of the State as a CRFC if the public road is not in an urbanized area, and;

(1) is a rural principal arterial roadway and has a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks (Federal Highway Administration vehicle class 8 to 13);

(2) provides access to energy exploration, development, installation, or production areas;

(3) connects the PHFS, a roadway described in subparagraph (1) or (2), or the Interstate System to facilities that handle more than—

i. 50,000 20-foot equivalent units per year; or

ii. 500,000 tons per year of bulk commodities;

(4) provides access to--

i. a grain elevator;

ii. an agricultural facility;

iii. a mining facility;

iv. a forestry facility; or

v. an intermodal facility;

(5) connects to an international port of entry;

(6) provides access to significant air, rail, water, or other freight facilities in the State; or

(7) is determined by the State to be vital to improving the efficient movement of freight of importance to the economy of the State.

The designation of the CRFC is limited to a maximum of 150 miles of highway or 20 percent of the PHFS mileage in the State, whichever is greater.

D. **Critical Urban Freight Corridors (CUFC)** – These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities. In an urbanized area with a population of 500,000 or more, the metropolitan planning organization (MPO), in consultation with the State, is responsible for designating the CUFC. In an urbanized area with a population of less than 500,000, the State, in consultation with the MPO, is responsible for designating the CUFC. Regardless of population, designation of a public road as a CUFC must be in an urbanized area; and

(1) connects an intermodal facility to;

i. the PHFS;

ii. the Interstate System; or

iii.an intermodal freight facility;

(2) is located within a corridor of a route on the PHFS and provides an alternative highway option important to goods movement;

(3) serves a major freight generator, logistic center, or manufacturing and warehouse industrial land; or

(4) is important to the movement of freight within the region, as determined by the metropolitan planning organization or the State.

The designation is limited to a maximum of 75 miles of highway or 10 percent of the PHFS mileage in the State, whichever is greater.

States with PHFS mileage greater than or equal to 2 percent, calculated based on the proportion of total designated PHFS mileage in the State to the total mileage of the PHFS in all States, are considered "high mileage States" and may obligate funds for projects on the PHFS, the CRFC and the CUFC. States with PHFS mileage of less than 2 percent are considered "low mileage States" and may obligate funds for projects on all portions of the NHFN (the PHFS, the CRFC, the CUFC, and the rest of the Interstate System in their State).

As of October 1, 2015, the NHFN consists of the PHFS and other Interstate portions not on the PHFS, for a total of 51,029 centerline miles. The NHFN is expected to increase with the designation of CRFCs and CUFCs. States and MPOs are allowed to designate these Corridors on a rolling basis, and must certify to the FHWA Administrator that the designated corridors meet the requirements of the applicable provision (CRFCs and CUFCs). Further guidance will be developed on the process for identification, designation, and certification of the CRFCs and CUFCs.

State Freight Plan and State Freight Advisory Committee:
Freight planning is an important component of statewide and metropolitan transportation planning processes. MAP-21 directed the Department to encourage States to develop a freight plan under 23 U.S.C. 167. State freight planning is covered under the FAST Act in a different provision of law: Section 8001 of the FAST Act, Subsection 70201 of Subtitle IX of title 49 requires e*ach* State that receives NHFP funding to develop a comprehensive freight plan that provides for the immediate and long-range planning activities and investments in the State. The plan may be developed separate from or incorporated into the statewide strategic long-range transportation plan required by 23 U.S.C. 135. Among the factors that must be included in the State freight plan is a description of how the funds under section 167 of title 23 would be invested and matched. In addition, an investment plan component must include a list of priority projects with the stipulation that the investment plan must show how funding for completion of the project or an identified phase of a project in the investment plan can reasonably be anticipated to be available for the project within the time period identified in the freight investment plan. Interim State freight plan guidance was developed under MAP-21 section 1118.

Section 8001 of the FAST Act also encourages each State to establish a freight advisory committee consisting of a representative cross-section of public and private sector freight stakeholders, including representatives of ports, shippers, carriers, freight-related associations, the freight industry workforce, the transportation department of the State, and local governments. Under Section 8001, States are required to consult their State freight advisory committee, if applicable, in the development of a State freight plan. Under the NHFP, the Administrator shall provide an opportunity for State freight advisory committees to submit additional miles for consideration during the re-designation of the PHFS. State advisory committee guidance was developed under MAP-21 Section 1117, which was repealed and replaced under the FAST Act. This guidance will be updated to reflect FAST Act changes.

Eligible Projects: Eligible projects shall contribute to the efficient movement of freight on the NHFN, and be identified in a freight investment plan included in a State freight plan (FY 2018 and beyond). NHFP funds may be obligated for one or more of the following:

- Development of phase activities including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other pre-construction activities.
- Construction, reconstruction, rehabilitation, acquisition of real property (including land relating to the project and improvements to land), construction contingencies, acquisition of equipment, and operational improvements directly relating to improving system performance.
- Intelligent transportation systems and other technology to improve the flow of freight, including intelligent freight transportation systems.
- Efforts to reduce the environmental impacts of freight movement.
- Environmental and community mitigation for freight movement.
- Railway-highway grade separation.
- Geometric improvements to interchanges and ramps.

- Truck-only lanes.
- Climbing and runaway truck lanes.
- Adding or widening of shoulders.
- Truck parking facilities eligible for funding under section 1401 of MAP–21.
- Real-time traffic, truck parking, roadway condition, and multimodal transportation information systems.
- Electronic screening and credentialing systems for vehicles, including weigh-in-motion truck inspection technologies.
- Traffic signal optimization, including synchronized and adaptive signals.
- Work zone management and information systems.
- Highway ramp metering.
- Electronic cargo and border security technologies that improve truck freight movement.
- Intelligent transportation systems that would increase truck freight efficiencies inside the boundaries of intermodal facilities.
- Additional road capacity to address highway freight bottlenecks.
- Physical separation of passenger vehicles from commercial motor freight.
- Enhancement of the resiliency of critical highway infrastructure, including highway infrastructure that supports national energy security, to improve the flow of freight.
- A highway or bridge project to improve the flow of freight on the NHFN

In addition, any surface transportation project to improve the flow of freight into and out of a freight intermodal or freight rail facility is an eligible project. There is a cap on the use of NHFP funding for this type of project: For each fiscal year, a State may obligate not more than 10 percent of the total State apportionment under NHFP for freight intermodal or freight rail projects. This limitation applies, but is not limited to, such projects as those within the boundaries of public or private freight rail or water facilities (including ports), and that provide surface transportation infrastructure necessary to facilitate direct intermodal interchange, transfer, and access into or out of the facility.

In addition to the eligible projects identified above, a State may use apportioned funds for eligible costs, including carrying out diesel retrofit or alternative fuel projects under section 149 for class 8 vehicles; conducting analyses and data collection related to the national highway freight program; and costs associated with developing and updating performance targets and reporting to the FHWA Administrator to comply with the freight performance targets established pursuant to 23 USC 150.

Funding:
NHFP funds may be obligated for projects that contribute to the efficient movement of freight on the NHFN, and are consistent with the planning requirements of sections 134 and 135 of title 23. *B*eginning 2 years after the date of enactment of the FAST Act, a State may not obligate funds

apportioned to the State unless the State has developed a freight plan in accordance to Sec. 70202 of title 49, except that the multimodal component of the plan may be incomplete before an obligation may be made under this section. Projects must be identified in the STIP/TIP and consistent with the Long-Range Statewide Transportation Plan and the Metropolitan Transportation Plan(s).

A proportionate share of each State's NHFP funds is set aside for the State's Metropolitan Planning program.

Federal share:
Federal share is in accordance with 23 U.S.C. 120, which is generally an 80 percent federal share. Note that the FAST Act repealed section 1116 of MAP-21, which had offered an increased Federal share for certain projects that demonstrably improved freight movement. [FAST Act §1116(c)]

Why Do We Need To Fund The Program At The Requested Level?

Congress set the level of funding in the FAST Act to address needs in the system. The establishment of the NHFP with multi-year authorization offering public sector agencies and their private sector partners a path forward to make real improvements in freight infrastructure and operations is unprecedented and yields a high return on federal investment for the economy and for public benefits in safety, mobility, health and the environment. There are significant unmet needs for freight investment. The NHFP will help in achieving national export goals, as well as national performance goals in many sectors (reduced emissions and energy use, reduced vehicle miles traveled, improved efficiency, improved safety, etc.). The U.S. population growth, coupled with consumer demand for goods, will continue to drive freight growth. The program will have a significant effect on the ability of the U.S. freight industry to meet the growth in demand in a responsible, effective and sustainable way.

Freight projects are often multimodal, multi-jurisdictional, complex, or involve partnership with the private sector, making them difficult to administer under current federal and State funding programs. Public- and private-sector freight proponents identify these issues along with a lack of predictable federal funds as challenges to implementing freight solutions despite widespread need and a significant backlog of projects.

What Benefits Will Be Provided To The American Public Through This Request?

Investments in freight improve the economy - Investments in freight infrastructure have had a profoundly positive effect on the national economy. Research has documented a highly positive correlation between federal investment in freight and economic growth. Further, these analyses confirm that an efficient, reliable transportation system enables the economic competitiveness that is vital to maintaining economic health and supporting employment for our Nation, States, and localities. For example, disruptions to the speed and reliability of freight transportation add directly and indirectly to businesses costs, export costs, the cost of consumer goods and the ability of industry to support jobs.

Freight projects create jobs and support growth and sustainability - Investment in freight projects creates jobs, supports economic growth and competitiveness, and can improve safety and the environment. However, freight projects are often complex, involving numerous modes, public and private owners and operators, and diverse funding sources, and do not neatly fit into the design of current funding programs. Public- and private- sector freight proponents identify these characteristics along with a lack of sufficient funds in existing federal programs for freight projects as challenges to implementing freight solutions. As such, these projects struggle to progress.

Freight projects yield a high return on investment - A multimodal freight program with multi-year authorization offers public-sector agencies and their private-sector partners a path forward to make real improvements in freight infrastructure and operations. This program will leverage the federal investment in freight projects for the economy and for public benefits in safety, mobility, health and the environment.

Executive Summary
Metropolitan Transportation Planning

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget requests $335.94 million for metropolitan transportation planning (PL) funding. Metropolitan Planning Organizations (MPOs) use these funds for multimodal transportation planning and programming in metropolitan areas. Our request is a slight increase over the FY 2016 enacted level of $329.27 billion.

What Is This Program And Why Is It Necessary?
Under the FAST Act, census designated urbanized areas over 50,000 in population are required to designate an MPO to conduct a continuing, cooperative, and comprehensive transportation planning process as a condition to receiving federal funds for transportation projects.

Metropolitan areas are comprised of multiple governmental agencies and jurisdictions, each of which have an interest in and have needs for transportation investment. Through a coordinated, regional approach to planning, an MPO engages the local jurisdictions as well as the State DOT and transit operators in a regional process that identifies the needs and investment priorities for the region. The results are a performance-based long range (20-year) transportation plan and a shorter term (4-year) program of transportation projects for implementation through which the MPOs are required to establish system performance goals and outcomes as part of the metropolitan transportation planning process, and direct their investments toward meeting those system performance outcomes.

Why Do We Need To Fund The Program At The Requested Level?
Our $335.94 million request will ensure that MPOs have adequate resources to conduct the metropolitan planning process.

What Benefits Will Be Provided To The American Public Through This Request?
This request will ensure that MPOs direct investments appropriately toward improving transportation system outcomes in a transparent and accountable manner while engaging the public, elected officials, and other stakeholders in the process. MPOs will then use federal transportation funds more efficiently and effectively, and focus on the national goal areas identified in MAP-21 and continued in the FAST Act.

Detailed Justification
Metropolitan Transportation Planning

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Metropolitan Transportation Planning ($355.94 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Metropolitan Transportation Planning			
Metropolitan Transportation Planning	329,271	335,938	6,667
Total	**329,271**	**335,938**	**6,667**

What Is This Program And Why Is It Necessary?

The FAST Act requires census designated urbanized areas over 50,000 in population to designate an MPO to conduct a continuing, cooperative, and comprehensive transportation planning process as a condition of receiving Federal funds for transportation projects. MPOs use metropolitan planning (PL) funds for multimodal transportation planning and programming in metropolitan areas. Metropolitan planning activities include the collection and analysis of data on demographics, trends, and system performance; travel demand and system performance forecasting; identification and prioritization of transportation system improvement needs; and coordination of the planning process and decision making with the public, elected officials, and stakeholder groups.

Metropolitan areas are comprised of multiple governmental agencies and jurisdictions, each of which have an interest in and have needs for transportation investment. Through a coordinated, regional approach to planning, an MPO engages the local jurisdictions as well as the State DOT and transit operators in a regional process that identifies the needs and investment priorities for the region. The results are a long range (20-year) transportation plan and a shorter term (4-year) program of transportation projects for implementation. MAP-21 added a performance based approach to the metropolitan and statewide transportation planning processes, which is continued in the FAST Act; MPOs must establish system performance goals and outcomes as part of the metropolitan transportation planning process, and direct their investments toward meeting those system performance outcomes.

Under the FAST Act, multiple MPOs serving a single region are encouraged to better coordinate transportation planning across their boundaries through development of a common plan and Transportation Improvement Program (TIP) as a means of enhancing metropolitan planning; and they are provided incentives for the consolidation of MPOs. In support of the transition to a performance-driven, outcome-based planning process, the FAST Act would require MPOs to have a performance-based project selection process for their TIPs. The FAST Act has new requirements for resiliency, and stormwater runoff mitigation, which MPOs will have to

incorporate into their planning process. Public participation would be enhanced through additional opportunities for the public to participate and comment, such as when an MPO chooses to conduct scenario planning as part of its plan development and also the addition of public port authorities to the list of interested parties provided an opportunity to comment on the metropolitan plan.

Why Do We Need To Fund The Program At The Requested Level?

Our $335.94 million FY 2017 budget request will ensure that the PL program has adequate resources to conduct the metropolitan planning processes and direct investments appropriately toward improving transportation system outcomes while engaging the public, elected officials, and other stakeholders. There were 384 MPOs prior to the 2010 Census, and 36 new urbanized areas were identified as a result of the 2010 Census. Some of those were within existing MPOs, or joined an existing MPO, and 25 decided to form new stand-alone MPOs. As a result, the total number of MPOs expanded from 384 to the current total of 409.

These funds allow for each MPO to carry out a coordinated transportation planning process and develop long range transportation plans and transportation improvement programs that make effective use of limited transportation funding. These fiscally-constrained, prioritized plans and programs account for transportation system performance needs, future population and employment, future land use, economic development, public involvement, multimodal considerations and connectivity (including bicycle, pedestrian, highway, and transit), freight movement, environmental mitigation, transportation systems operation, safety, and congestion mitigation. The slight increase in program funds will provide MPOs with financial resources to aid in the implementation of FAST Act metropolitan planning provisions such as performance based planning and programming, and adding transit representation to MPOs serving transportation management areas.

What Benefits Will Be Provided To The American Public Through This Request?

This request will ensure that MPOs direct investments appropriately toward improving transportation system outcomes in a transparent and accountable manner while engaging the public, elected officials, and other stakeholders in the process. MPOs will then use federal transportation funds more efficiently and effectively, and focus on the national goal areas of a continuing, cooperative, and comphrehensive planning process identified in MAP-21 and continued in the FAST Act. MPOs' use of performance measures and targets in the decision making process will ensure transparency, and their reporting of progress toward achieving performance targets will lead to improved accountability.

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Executive Summary
Nationally Significant Freight and Highway Projects

What Is The Request And What Funds Are Currently Spent On The Program?
As authorized in the FAST Act, our budget requests $850 million in FY 2017 for a freight and highway grant program that will reduce congestion, improve goods movement and advance export and economic development opportunities in the United States (U.S.). The FY 2016 enacted funding for this program is $800 million.

What Is The Program And Why Is It Necessary?
The Nationally Significant Freight and Highway Projects program allows States, metropolitan planning organizations, local governments and other eligible entities to apply for funding to construct infrastructure projects that are difficult to complete solely using existing federal, State, local, and private funds. In addition to freight projects, the program can also be used to fund highway and bridge projects on the National Highway System (NHS) and railway-highway grade crossing or grade separation projects. Projects supported by this program will reduce the impact of congestion, generate national and regional economic benefits, improve safety and facilitate the efficient movement of freight. The program emphasizes the importance of addressing transportation impediments, which significantly slow interstate commerce.

Our FY 2017 budget request of $850 million for this program is necessary to advance some of the most critical freight projects that improve movement on the National Highway Freight Network (NHFN), improve the safe, secure, and efficient movement of people and goods throughout the U.S, improve connectivity between modes of freight transport, and improve the national economy. The program is also necessary because the types of freight and highway projects eligible under this program are often large, multimodal, multi-jurisdictional, complex, or involve partnership with the private sector, making them difficult to develop and implement using other federal and State funding programs. As a consequence, critical projects are not advancing sufficiently to keep pace with our nation's people and goods movement needs.

Why Do We Need To Fund The Program At The Requested Level?
Expansion of the U.S. population, coupled with increasing consumer demand for goods and growth in domestic production will continue to drive high levels of traffic and freight growth. To support this demand and to sustain and grow the U.S. economy, improvements are necessary to provide a reliable and efficient transportation network. Congestion in the network negatively impacts the U.S. economy as it severely impedes the ability of U.S. industries to efficiently manage their supply chains and remain competitive in the global marketplace. The program will benefit both the producers and transporters of goods in order to meet the growth in demand in a responsible, effective and sustainable way.

What Benefits Will Be Provided To The American Public Through This Request?
This program offers public-sector agencies and their private-sector partners a path forward to make real improvements in highway and freight infrastructure and operations that will yield a high rate of return on federal investment for the economy and for public benefits in safety, mobility, health and the environment. Investments in highway and freight infrastructure have a profoundly positive effect on the national economy, create jobs, and support economic growth and increase the global economic competitiveness of the U.S.

Detailed Justification
Nationally Significant Freight and Highway Projects

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Nationally Significant Freight and Highway Projects ($850.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Nationally Significant Freight and Highway Projects			
Nationally Significant Freight and Highway Projects	800,000	850,000	50,000
Total	**800,000**	**850,000**	**50,000**

What Is This Program And Why Is It Necessary?

The Nationally Significant Freight and Highway Projects program is a discretionary grant program that provides financial assistance to States, metropolitan planning organizations, tribal governments, special purpose districts and port authorities with a transportation function and local governments to complete projects that align with the program goals to:

- Improve safety, efficiency, and reliability of the movement of people and freight;
- Generate national or regional economic benefits and an increase in global economic competitiveness of the U.S;
- Reduce highway congestion and bottlenecks;
- Improve connectivity between modes of freight transportation;
- Enhance the resiliency of critical highway infrastructure and help protect the environment;
- Improve roadways vital to national energy security; and,
- Address the impact of population growth on the movement of people and freight.

The program is necessary to fund freight and highway infrastructure projects that are critical for the efficient movement of people and freight. The program targets investments at highway freight projects carried out on the NHFN and highway and bridge projects carried out on the NHS, including projects on the Interstate that improve mobility through added capacity. In addition, subject to various conditions, funding is available to cover the costs of freight intermodal or freight rail projects, or freight projects within the boundaries of water facilities (including ports), intermodal facilities, and freight rail facilities, provided such projects generate public benefits and make a significant improvement to freight movements on the NHFN. The program is also necessary to fund railway-highway grade crossing and grade crossing separation

projects that improve safety and improve the efficiency and reliability of freight rail service while reducing traffic and passenger rail delays.

The economy depends on efficient, reliable transportation to link businesses with suppliers and markets throughout the nation and the world. American farms and mines can market their goods to customers across and beyond the continent, using inexpensive transportation to compete against farming and mining industries in other countries. Domestic manufacturers increasingly use remote sources of raw materials and other inputs to produce goods for local and distant customers, all of which require efficient and reliable transportation to maintain a competitive advantage in a global marketplace. Wholesalers and retailers depend on fast and reliable transportation to obtain inexpensive or specialized goods through extensive supply chains. In the expanding world of e-commerce, households increasingly rely on freight transportation to deliver purchases directly to their door. Service providers, public utilities, construction companies, and government agencies also depend on freight transportation to get needed equipment and supplies from sources around the world.

Disruptions to the speed and reliability of transportation add directly and indirectly to the cost of doing business, the cost of exports, and the cost of consumer goods. Businesses must compensate for anticipated and unexpected additional travel time and reduced reliability from congestion, circuitous routing, or delays at inspection stations and intermodal transfer facilities by making redundant investments in equipment and facilities, paying higher labor expenses, and utilizing more costly forms of expedited transportation.

Highway and freight projects to eliminate bottlenecks, expand capacity, and improve efficiency can offer public benefits in terms of job creation, improved safety and environmental impacts; and contributions to the economic growth of a region or the nation. The relationship between federal investment for goods movement and the impact on the economy has been the subject of numerous federally supported studies, State studies, and academic projects. Studies and prior project results have demonstrated that public capital has a positive effect on freight and private economic productivity and output.

As an example, the Alameda Corridor East project, a program of grade separation projects in the San Gabriel Valley of California where train traffic to and from the Ports of Los Angeles and Long Beach is projected to increase 160 percent by 2020, has been leveraging public funding to build safety improvements or grade separations at 39 rail/road crossings. The benefits include reducing a projected 300 percent increase in auto delays at rail crossings and reducing train horn noise. As a result, commercial development has increased and quality of life for local residents is improving. The program of projects is yielding efficiencies in the distribution of what is projected to be $314 billion in trade by 2020, and will protect 634,000 existing jobs and 192,000 new jobs in the region. The economic growth enabled by this work has a positive effect at the local, State and national level.

The implementation of highway and freight projects that are nationally or regionally significant is often challenging and complex due to a variety of reasons such as:

- Multiple modes (e,g. trucks, trains, airplanes, barges and ships);
- Multiple stakeholders (State and local governments; the private sector);

- Funding sources and structures with different timelines, sizes, and constraints;
- Limited eligibilities in existing programs (especially for multimodal projects);
- A lack of funding to support multi-State, corridor-based planning organizations and activities; and
- Administrative hurdles in managing multi-jurisdictional, multimodal projects;

While public- and private-sector freight proponents have identified these characteristics as challenges to implementing freight solutions, the most significant impediment to advancing projects in the public interest is a lack of sufficient funds in existing federal and State programs to address new projects that span multiple modes or jurisdictions or projects that primarily produce national or regional benefits. As such, these projects may never progress to planning or delivery. This program addresses this impediment by providing a funding mechanism to advance nationally and regionally significant freight and highway projects that improve safety and hold the greatest promise to eliminate bottlenecks and improve both passenger and freight movements.

Administration

This discretionary grant program, as part of the National Surface Transportation and Innovative Finance Bureau, is administered through an annual competitive application process culminating in selection by the Secretary of projects aligning best with the program goals to:

- Improve safety, efficiency, and reliability of the movement of freight and people;
- Generate national or regional economic benefits and an increase in global economic competitiveness of the U.S;
- Reduce highway congestion and bottlenecks;
- Improve connectivity between modes of freight transportation, enhance the resiliency of critical highway infrastructure and help protect the environment;
- Improve roadways vital to national energy security; and
- Address the impact of population growth on the movement of people and freight.

In addition, program administration requirements include consideration of the cost effectiveness of projects and the effect projects have on mobility in the State and region in which projects are carried out. Other program administration requirements and considerations include:

- Whether the project contributes to the accomplishment of one or more of the national goals established under 23 U.S.C 150;
- Whether the project can be reasonably be expected to begin construction within 18 months after the date of obligation of funds;

- Utilization of nontraditional financing, innovative design and construction techniques, or innovative technologies;
- Utilization of non-Federal contributions; and
- Contributions to geographic diversity among grant recipients, including the need for a balance between the needs of rural and urban communities.

Eligible applicants are States or a group of States, metropolitan planning organizations that serve an urbanized area (as defined by the Bureau of the Census) with a population of more than 200,000 individuals, units of local government or a group of local governments, political subdivisions of a State or local government, special purpose districts or public authorities with a transportation function, including a port authorities, Federal land management agencies that apply jointly with a State or group of States and tribal governments, or a consortium of tribal governments.

Eligibilities

The following describes project eligibilities for the program:

- A highway freight project carried out on the NHFN established under 23 U.S.C 167;
- A highway or bridge project carried out on the NHS, including;
    - a project to add capacity to the Interstate System to improve mobility
    - a project in a national scenic area
- A freight project that is a freight intermodal or freight rail project; or within the boundaries of a public or private freight rail, water (including ports), or intermodal facility and that is a surface transportation infrastructure project necessary to facilitate direct intermodal inter- change, transfer, or access into or out of the facility; and,
- A railway-highway grade crossing or grade separation project.

Grants funding can be used for the following eligible project costs:

- Project development phase activities, including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering;
- Design work and other preconstruction activities; and
- Construction, reconstruction, rehabilitation, acquisition of real property (including land related to the project and improvements to the land), environmental mitigation, construction contingencies, acquisition of equipment, and operational improvements directly related to improving system performance.

Why Do We Need To Fund The Program At The Requested Level?

Congress set the level of funding for this program in the FAST Act to address needs in the system. This program will advance nationally significant freight and highway projects and offers public-sector agencies and their private-sector partners a path forward to make real improvements in transportation infrastructure and operations that will yield a high rate of return

on federal investment for the economy and for public benefits in safety, mobility, health and the environment. Investments in transportation infrastructure have a profoundly positive effect on the national economy, create jobs, and support economic growth and increase the global economic competitiveness of the U.S.

There is a significant unmet need in the nation for freight investment, and numerous public- and private -sector stakeholders have identified funding for nationally and regionally significant projects as critical for maintaining a world-class transportation system that facilitates the efficient movement of goods and people. This program addresses the unmet need and will help in achieving national freight policy goals established under Subtitle IX of U.S.C. 49, the national export goals, as well as national performance goals in many sectors (reduced emissions and energy use, reduced vehicle miles traveled, improved efficiency, improved safety, etc.). The U.S. population growth, coupled with consumer demand for goods, will continue to drive freight growth. Today, that demand is 57 tons of freight, per person, per year. The program will have a significant effect on the ability of the U.S. freight industry to meet the growth in demand in a responsible, effective and sustainable way.

Nationally and regionally significant freight and highway projects are often multimodal, multi-jurisdictional, complex, or involve partnership with the private sector, making them difficult to efficiently implement under other federal and State funding programs. Public- and private-sector freight proponents identify these issues along with a lack of predictable federal funds as challenges to implementing freight solutions despite widespread need and a significant backlog of projects. In work undertaken by FHWA, the agency identified over 200 bottlenecks that result in significant hours of delay and lost productivity. The delay from these bottlenecks total upwards of 243 million hours annually, with direct costs to the trucking industry from these bottlenecks of almost $8 billion per year. States have long requested federal assistance to advance their most significant projects, many of which have benefits beyond the improvement of freight flow.

This program is designed to address the following:

- ***Competition*** – Freight improvements to grow our economy often must wait behind a backlog of system preservation and other projects. Existing formula and grant programs are not sized to handle the backlog of multimodal or transformational freight infrastructure projects.
- ***Comprehensiveness*** –A high impact discretionary program to address one-time highway and freight projects with national or regional significance.
- ***Multi-jurisdictional*** – The program includes eligibility provisions that could advance corridor projects and initiatives with multi-party participation that are vital to meeting supply chain needs across political subdivisions.
- ***Private-Sector Investment*** – The private sector will be attracted by a robust freight discretionary program with multimodal eligibilities and will partner with public entities to realize priorities set out in State freight plans.

This program will:

- Allow freight projects, that are often complex, involving numerous modes, public and private owners and operators, and diverse funding sources, which do not neatly fit into the design of current funding programs to be more easily funded.
- Address the lack of sufficient funds in existing federal programs for critical transportation investments.
- Generate a high rate of return on federal dollars due to a highly positive correlation between federal (and non-federal) investment in freight and economic growth.

What Benefits Will Be Provided To The American Public Through This Request?

Investments in transportation and freight projects improve the economy - Investments in transportation and freight infrastructure have had a profoundly positive effect on the national economy. Research has documented a highly positive correlation between federal investment in freight and economic growth. Further, these analyses confirm that an efficient, reliable transportation system enables the economic competitiveness that is vital to maintaining economic health and supporting employment for the Nation, States, and localities. For example, disruptions to the speed and reliability of freight transportation add directly and indirectly to businesses costs, export costs, the cost of consumer goods and the ability of industry to support jobs.

Freight and highway projects create jobs and support growth and sustainability - Investment in freight and highway projects creates jobs, supports economic growth and competitiveness, and can improve safety and the environment. However, these projects are often complex, involving numerous modes, public and private owners and operators, and diverse funding sources, and do not neatly fit into the design of current funding programs. Public- and private- sector freight proponents identify these characteristics along with a lack of sufficient funds in existing federal programs for freight projects as challenges to implementing freight solutions. As such, these projects struggle to progress.

Freight and highway projects yield a high rate of return – A discretionary program for nationally and regionally significant highway and freight projects with multi-year authorization offers public-sector agencies and their private-sector partners a path forward to make real improvements in freight infrastructure and operations. This program will yield a high rate of return on federal investment for the economy and for public benefits in safety, mobility, health and the environment.

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Executive Summary
Federal Lands & Tribal Transportation Programs

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget requests $1.08 billion for the Federal Lands and Tribal Transportation Programs (FLTTP) to provide funding for transportation construction and engineering projects on Federal and Tribal lands. These projects will provide multimodal access to basic community services for 567 Federally-recognized sovereign Tribal governments, improve multimodal access to recreational areas on public lands/national treasures, and expand economic development and transportation accessibility in and around Federal and Tribal lands. Our FY 2017 request is a modest increase over the FY 2016 enacted level of $1.05 billion.

What Is This Program And Why Is It Necessary?
The FLTTP is comprised of four programs:

- **Federal Lands Transportation Program** – $345.0 million for projects that improve public access on high-priority roads, trails, and transit systems within the Federal estate (national forests, national parks, national wildlife refuges, national recreation areas, and other Federal public lands) on infrastructure owned by the Federal government.
- **Federal Lands Access Program** – $255.0 million for projects that improve access to the Federal estate on infrastructure owned by States, counties, and local governments.
- **Tribal Transportation Program** – $475.0 million for projects that improve access to and within Tribal lands.

These programs support safe, seamless, and multimodal access to Federal and Tribal lands which in turn provides opportunities for jobs and economic generation for the nearby communities. In the absence of these programs, it is highly likely, based on historical experiences, that the roads and bridges providing vital access to our Federal treasures and critical Indian community services (such as medical and education) would fall into severe disrepair, jeopardizing the public's and Tribal members' ability to access these areas and services.

Why Do We Need To Fund The Program At The Requested Level?
The requested $1.08 billion will provide a level of investment required to achieve results for these programs of national interest. The investment supports over 50,000 miles of paved and unpaved roads and 6,600 bridges used by over 900 million visitors annually, in addition to approximately 160,000 miles of roads and bridges used in large part by residents of 567 federally recognized, sovereign Tribes.

What Benefits Will Be Provided To The American Public Through This Request?
The FLTTP has demonstrated that Federal investment improved the condition of roads and bridges on Federal and Tribal lands. During 2005-2014, over 10,000 lane miles of Federal and Tribal roads were improved and over 700 bridges were constructed or improved. Through these improvements, safety, access to and within, and quality of life in and around Federal and Tribal lands are significantly improved.

Detailed Justification
Federal Lands Transportation Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Federal Lands Transportation Program ($345.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Lands and Tribal Transportation Programs			
Federal Lands Transportation Program	335,000	345,000	10,000
Federal Lands Access Program	250,000	255,000	5,000
Tribal Transportation Program	465,000	475,000	10,000
Total	**1,050,000**	**1,075,000**	**25,000**

Program Activity	FY 2016 Enacted	FY 2017 Request	Change
Federal Lands Transportation Program:			
Transportation facilities (roads, bridges, trails, and transit systems) owned by the National Park Service (NPS)	$268,000	$276,000	$8,000
Transportation facilities owned by the U.S. Fish & Wildlife Service (USFWS)	$30,000	$30,000	$0
Transportation facilities owned by the U.S. Forest Service (USFS)	$15,000	$16,000	$1,000
Transportation facilities owned by the Bureau of Land Management (BLM), Bureau of Reclamation (BoR), U.S. Army Corps of Engineers (USACE), and independent federal agencies with natural resource and land management responsibilities	$22,000	$23,000	$$1,000
Total	**$335,000**	**$345,000**	**$ 10,000**

What Is This Program And Why Is It Necessary?

The Federal Lands Transportation Program (FLTP) continues the purpose of the Federal Lands Highway Program (FLHP), which was in effect from 1983 to 2012, to promote a coordinated approach to highway construction on roads owned by Federal Land Management Agencies (FLMAs). The FLTP focuses on a comprehensive system of nationally-significant Federal transportation infrastructure (roads, bridges, trails, and transit systems) using a performance management program approach.

The anticipated FY 2017 accomplishments will include the design and construction of Federal transportation infrastructure consistent with the FLMAs strategic plans and DOT strategic goals. Based on recent data at comparable funding levels, we estimate improving approximately 20 structurally deficient and/or functionally obsolete bridges to a safe/good condition and improving about 600 lane miles of roads within our national parks, forests, refuges, recreation sites, and Federal public lands.

The purpose of the FLTP is to provide access within our national parks, forests, wildlife refuges, recreation areas, Bureau of Land Management lands, and other Federal public lands. The FLTP focuses on the subset of the Federal transportation infrastructure that is nationally significant: those roads, bridges, trails, or transit systems which provide access to high-use recreation areas or provide critical access for economic generation to support the local economy. In this manner, critical funding resources are targeted to those transportation facilities that provide access to the most popular recreational destination points within the Federal estate and thereby generate the greatest return on investment to land owners, communities adjacent to Federal lands, and the American people who are looking for seamless transportation to these popular recreational locations. The FLTP focuses on those transportation facilities that are in the national interest to maintain rather than broadly trying to include every road owned by the Federal Government or every road that provides access to Federal lands. The FLMAs are required to maintain a national transportation facility inventory and report annually on the state of good repair of the transportation infrastructure in the national Federal lands transportation facility inventory.

The FLTP funds transportation planning, research, preventive maintenance, engineering, administrative expenses, rehabilitation, and construction of roads and bridges that provide access to, within, or adjacent to Federal lands. Funding allocations within the $345 million request cited above will allow all participating agencies to proactively support long range, statewide, and metropolitan transportation planning requirements, more efficiently enhance their data collection, and promote the leveraging of FLTP funds with other non-traditional sources of revenue thereby directing more funds toward transportation construction projects. The identification of baseline allocations considers each agency's defined transportation networks, deferred maintenance backlog of transportation needs, transportation performance plans, and prior program allocations.

Each agency submits a single investment plan which describes how they intend to use their funds. Each proposed investment plan will be required to demonstrate how it supports the Secretary of Transportation's goals (state of good repair of transportation facilities, reduction of bridge deficiencies, and safety improvement), most highly visited Federal recreational areas and economic generators, and the goals of the participating agency. This approach incentivizes the

administration of a performance-based program. In this manner, agencies can continue to engage in long-term transportation planning, multi-year project programming, and leverage management systems and other asset management tools to support better decision making.

The FLTP reserves a percentage of the funding for long-range transportation planning, bridge inspections, management systems implementation, research/technology deployment, and road and bridge inventory/condition data collection. This set-aside will support bridge inspection activities for public-use bridges included in FLTP partner's defined transportation networks, public use bridges outside those network(s), and bridge inspection activities for other Federal agencies not included in the FLTP. The set-aside will focus on comprehensive multi-agency planning efforts and positions the program more effectively to support performance management.

The Federal Government owns approximately 30 percent of the land in the United States (see Exhibit 1 that follows). This land is primarily rural in nature, though there are many Federal roads and bridges in urban settings, such as the Golden Gate National Recreation Area in San Francisco, CA and the Federal Mall and Memorial Parks in Washington, DC. This program supports safe, seamless, and multimodal access to and through our national parks, forests, recreation areas, wildlife refuges, and other Federal public lands. The FLTP is focused on a comprehensive and coordinated approach to maintaining, rehabilitating, and improving the nationally-significant portions of the public transportation infrastructure owned by FLMAs, which are used on a daily basis by the American public.

The FLTP helps to create ladders of opportunity for all Americans, particularly in rural America, by expanding transportation accessibility and increasing economic development on and around Federal lands. As cities and suburban areas continue to grow, Federal lands that were at one time 70+ miles away from the nearest urban area are now within a 15 minute commute. Many communities outside national parks, refuges, and forests are close enough to urban areas to facilitate the use of transit, vanpools, and/or bicycles to access the Federal estate. Greater use of alternative transportation options within and outside of Federal lands helps to reduce car emissions, ease congestion at the gate, and preserve the environment of our national treasures for future generations.

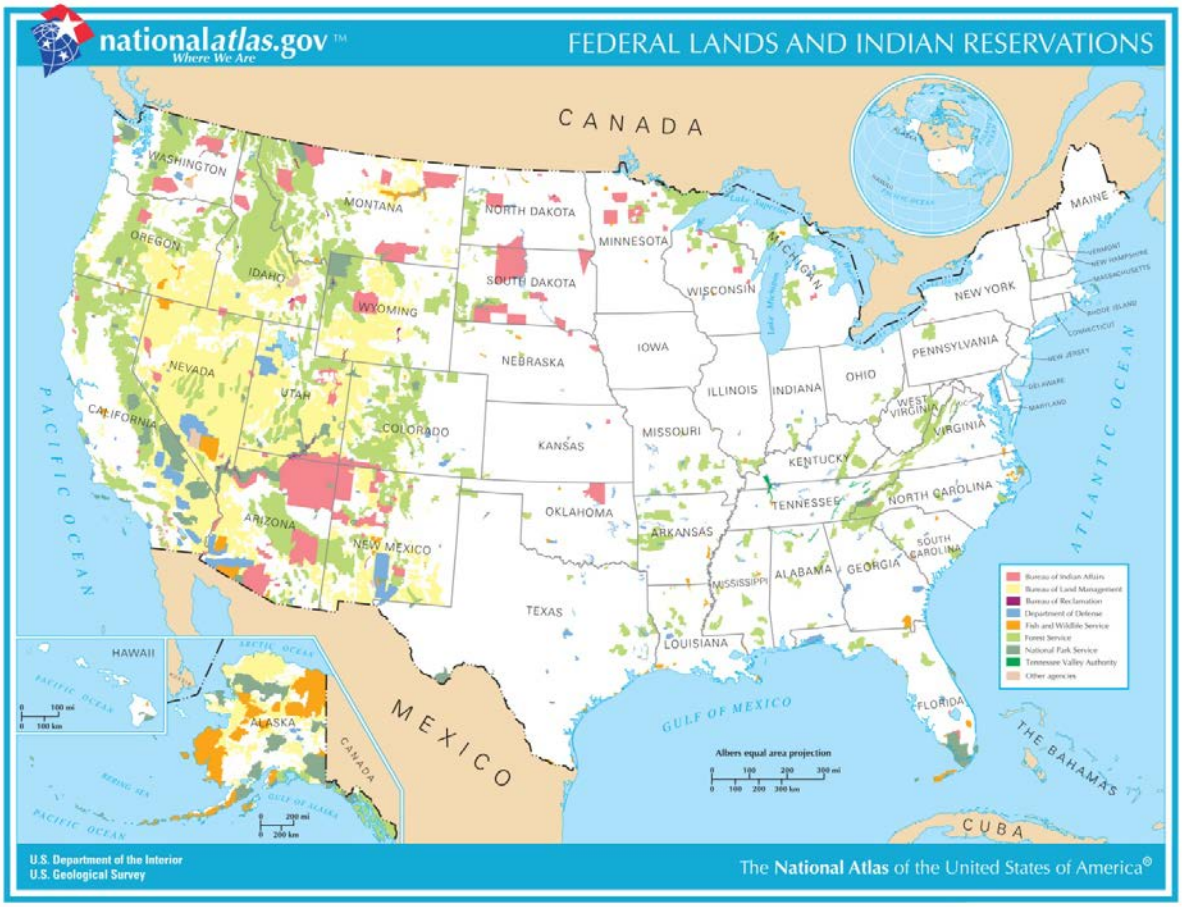

Exhibit 1

Recent national trends indicate that national forests and parks that were once 60-90 minutes away from urban areas are now 15-20 minutes away as suburbs continue to expand further from the urban cores. Approximately 90 percent of the US population is located within 50 miles of a US Army Corps of Engineers recreation site. The need for recreation for the growing US population is increasing, especially in light of the Administration's push to tackle childhood obesity. Outdoor recreation is playing a bigger role in our nation's health and quality of life. Recreational spending is a significant portion of the hundreds of billions in travel and tourism dollars that are contributed to the US economy every year. It is one of the fastest growing sectors of our economy—and more than 20 percent of Americans' recreational activities take place on Federal lands.

The FLTP provides attractive opportunities for big and small businesses alike. It provides access to those Federal lands for a wide variety of recreational activities: hunting, fishing, hiking, camping, RVing, skiing, snowshoeing, swimming, snorkeling, diving, running, biking, bird watching, sightseeing, horseback riding, driving for pleasure, snowmobiling, boating, waterskiing, and countless other outdoor activities. These activities create thousands of jobs for local communities surrounding Federal lands and as well as supporting jobs for major equipment and supply manufacturers. Additionally, Federal lands contribute significantly to our economy through energy generation, livestock grazing, and resource extraction, including both renewable (timber) and non-renewable (oil, gas, and other mineral) resources. The FLTP is the primary

funding mechanism to keep all of the roads, trails, and other Federal transportation systems that provide this access in a state of good repair.

Why Do We Need To Fund The Program At The Requested Level?

The requested $345.0 million is $10.0 million above the FY 2016 enacted level. This amount supports a comprehensive, coordinated, and performance-oriented approach to Federal transportation infrastructure management. We have determined that the national priority should focus the limited Federal funding on the roads, bridges, trails, and other transportation infrastructure that provide critical access to highly visited Federal recreation areas and economic generators.

The anticipated FY 2017 accomplishments will include the design and construction of Federal transportation infrastructure consistent with the FLMAs strategic plans and DOT strategic goals. Based on recent data at comparable funding levels, we estimate improving approximately 20 structurally deficient and/or functionally obsolete bridges to a safe/good condition and improving about 600 lane miles of roads within our national parks, forests, refuges, recreation sites, and Federal public lands.

What Benefits Will Be Provided To The American Public Through This Request?

The FLTP outcomes include completed construction and engineering projects that will improve multimodal access, support increasing visitation to recreational areas on public lands, expand economic development, and create new jobs in and around Federal lands, resulting in more options to improve the quality of life for all Americans, while increasing safety, preserving the environment and reducing congestion at our national treasures.

Overall, the condition of roads and bridges in the FLTP remained about the same over the life of SAFETEA-LU (2005-2012), though some agencies demonstrated significant improvements. The average condition of paved roads owned by the National Park Service increased from a pavement condition rating of 75 in 2005 to 82 in 2012 (on a 1-100 scale), a 9 percent increase. During the same timeframe, the average condition of roads owned by the US Fish & Wildlife Service increased from a roadway condition rating of 3.25 to 3.65 (on a 1-5 scale), an 11 percent increase. Coupled with the increasing volume of visitors to our Federal public lands (e.g., 2 percent increase on National Park Service lands and more than a 35 percent increase on US Fish & Wildlife Service lands over that timeframe), this indicates the program preserved critical assets in our national treasures effectively. In FY 2014, about 1,300 lane miles of road and 56 bridges were constructed or improved. Many of these road and bridge improvements included multimodal options on the same road or bridge thereby providing visitors with transportation options, e.g., car, biking, or walking. In summary, the program's transportation investments allow visitors from the United States and other countries to experience America's treasures in a safe and seamless manner.

Detailed Justification
Federal Lands Access Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Federal Lands Access Program ($255.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Lands and Tribal Transportation Programs			
Federal Lands Transportation Program	335,000	345,000	10,000
Federal Lands Access Program	250,000	255,000	5,000
Tribal Transportation Program	465,000	475,000	10,000
Total	**1,050,000**	**1,075,000**	**25,000**

What Is This Program And Why Is It Necessary?

The Federal Lands Access Program (Access Program) focuses on a comprehensive system of nationally significant State, county, Tribal, and local transportation infrastructure (roads, bridges, trails, and transit systems) which provide access to the entire Federal estate.

The anticipated FY 2017 accomplishments include the design and construction of transportation infrastructure consistent with the FLMAs strategic plans and strategic DOT goals. Based on recent data at comparable funding levels, we estimate improving about 12 structurally deficient and/or functionally obsolete bridges to a safe/good condition and improving approximately 400 lane miles of roads within or providing access to our national parks, forests, refuges, recreation sites, military facilities, and other Federal lands.

The purpose of the Access Program is to provide access to and through the Federal estate. The Access Program focuses on the subset of the roads, bridges, trails, or transit systems which provide access to high-use Federal recreation areas that increase interconnectivity between rural communities adjacent to Federal lands, or which provide critical access for resource extraction, energy generation, renewable resource usage, or animal grazing to support the local economy.

The structure of the $255.0 million Access Program is a formula distribution by State. Since all States have Federal lands of some type, each State benefits from some portion of this funding. The formula criteria includes visitation to Federal lands, Federal public road miles, number of Federal bridges, and the amount of Federal public lands within each state. Further, 80 percent of the funds are directed towards the 12 states with at least 1.5 percent of total Federal lands: Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. Programming decisions are made locally by a Program Decisions Committee comprised of representatives of the State DOTs, FHWA, and from county or local governments. These decisions are made in coordination with FLMAs. Funds are used to target transportation infrastructure (roads, bridges, trails, or transit systems) that are owned by States,

counties, Tribes, or local governments which provide critical access to Federal lands with high-use Federal recreation areas or high-use Federal economic generators.

The Access Program reserves a percentage of the funding for long range transportation planning, bridge inspections, management systems, and road and bridge inventory/condition data collection by FLMAs. This set-aside also supplements costs associated with bridge inspection activities on federally-owned bridges which are not on the national Federal transportation facility inventory. The set-aside focuses on comprehensive multi-agency planning efforts and positions the program more effectively to support performance management.

The Access Program funds transportation planning, research, preventive maintenance, engineering, rehabilitation, and construction of roads and bridges owned by States, counties, or local governments that provide access to, within, or are adjacent to Federal lands. The projects link highly used Federal transportation infrastructure inside the boundaries of Federal lands with the Federal-aid system outside the boundaries. In this manner, critical funding resources will be targeted to those roads and bridges that provide access to the most highly used recreational destination points and economic generators within the Federal estate and thereby produce the greatest return on investment to land owners, communities adjacent to Federal lands, and the American people who are looking for seamless transportation to these popular recreational locations. Put more plainly, the Access Program focuses on roads and bridges that are in the national interest to maintain rather than broadly trying to include every road that provides access to Federal lands.

The Federal Government owns approximately 30 percent of the land in the United States (see Exhibit 1 that follows). This land is primarily rural in nature, though there are many Federal roads and bridges in urban settings, such as the Golden Gate National Recreation Area in San Francisco, CA and the Federal Mall and Memorial Parks in Washington, DC. This program, in conjunction with the Federal Lands Transportation Program, supports safe, seamless, and multimodal access to and through our national parks, forests, wildlife refuges, Bureau of Land Management lands, US Army Corps of Engineers recreation areas, military installations, and other Federal lands.

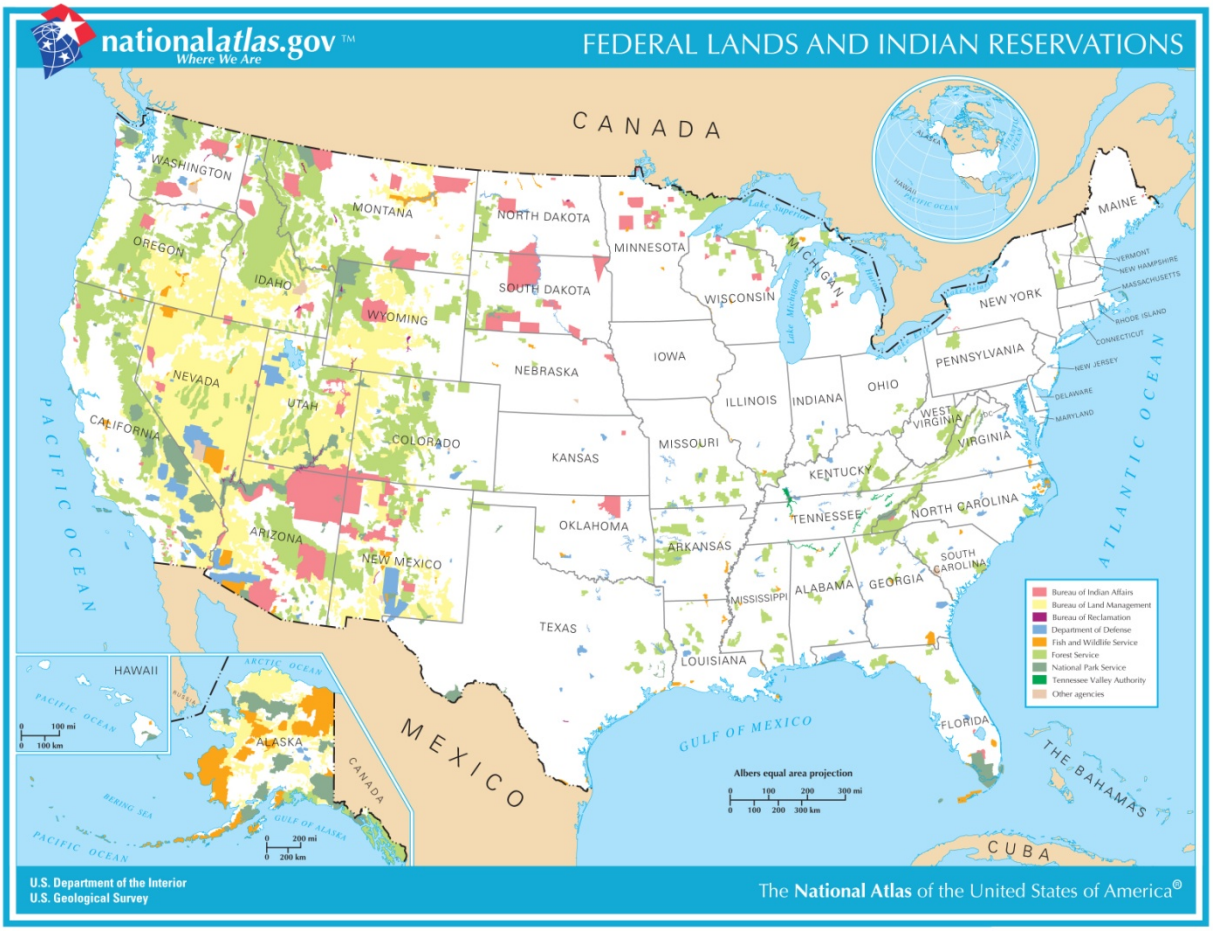

Exhibit 1

The Access Program is focused on a comprehensive and coordinated approach to maintaining, rehabilitating, and improving the nationally-significant portions of the public transportation infrastructure owned by States, counties, Tribes, or local governments, which provide key access to the Federal estate and are used on a daily basis by the American public.

Why Do We Need To Fund The Program At The Requested Level?

The requested $255.0 million is $5 million above the FY 2016 enacted level. This amount supports a comprehensive, coordinated, and performance-oriented approach to transportation infrastructure management on roads and bridges providing access to the Federal estate.

The anticipated FY 2017 accomplishments will include the design and construction of transportation infrastructure consistent with the FLMAs strategic plans and strategic DOT goals. Based on recent data at comparable funding levels, we estimate improving about 12 structurally deficient and/or functionally obsolete bridges to a safe/good condition and improving approximately 400 lane miles of roads within or providing access to our national parks, forests, refuges, recreation sites, military facilities, and other Federal lands.

The national priority is to focus the limited Federal funding on roads or bridges that provide critical access to highly-visited Federal recreation areas, and Federal economic generators. The Access Program focuses on publicly accessible, high-priority roads, bridges, trails, and transit systems owned by the States, counties, and local governments which provide access to the entire Federal estate.

What Benefits Will Be Provided To The American Public Through This Request?

The Access Program outcomes include completed construction and engineering projects that will improve multimodal access, support increasing visitation to recreational areas on public lands, expand economic development, and create new jobs in and around Federal lands, resulting in more options to improve the quality of life for all Americans, while preserving the environment and reducing congestion at our national treasures.

Generally, the condition of roads and bridges in the pre-MAP-21 era remained about the same over the life of SAFETEA-LU (2005-2012). Considering the increasing volume of visitors to our Federal public lands (e.g., 2 percent increase on National Park Service lands and more than a 35 percent increase on US Fish & Wildlife Service lands over that timeframe), this indicates the program preserved critical assets in our national treasures effectively. During FY 2014, 56 structurally deficient and/or functionally obsolete bridges were repaired or replaced, and over 1300 lane miles of roads were improved or reconstructed. Many of these road and bridge improvements included multimodal options on the same road or bridge thereby providing visitors with transportation options (e.g., motoring, biking, walking). We anticipate similar accomplishments through a broader set of State and county facilities that access all public lands under this program. In summary, the program's transportation investments allow visitors from the United States and numerous countries to experience America's treasures in a safe and seamless manner.

Additionally, the Access Program helps to create ladders of opportunity for all Americans, particularly in rural America, by expanding transportation accessibility and increasing economic development on and around Federal lands. Many communities outside national parks, refuges, forests, recreational areas, and military bases are close enough to urban areas to facilitate the use of transit, vanpools and/or bicycles. Greater use of alternative transportation options inside and outside Federal lands helps reduce car emissions, eases congestion at the gate and preserves the environment inside our national treasures for future generations. This program also provides residents located in communities outside public lands with opportunities to keep their homes and secure jobs or enhance their educational choices provided by nearby cities by using a range of transportation options, *e.g.*, vanpools, buses, and bike paths.

Detailed Justification
Tribal Transportation Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Tribal Transportation Program ($475.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Lands and Tribal Transportation Programs			
Federal Lands Transportation Program	335,000	345,000	10,000
Federal Lands Access Program	250,000	255,000	5,000
Tribal Transportation Program	465,000	475,000	10,000
Total	**1,050,000**	**1,075,000**	**25,000**

What Is This Program And Why Is It Necessary?

The Tribal Transportation Program (TTP) promotes a coordinated approach to highway construction in Indian country on roads owned by the Bureau of Indian Affairs (BIA), sovereign Tribal governments, and other roads owned by States, counties, or localities which provide access to or are located within Indian communities.

The anticipated FY 2017 accomplishments will include the design and construction of Tribal transportation infrastructure consistent with strategic long-range transportation plans and goals of the Tribes and DOT. Based on recent data at comparable funding levels, we estimate improving about 25 structurally deficient and/or functionally obsolete bridges of over 950 eligible bridges to a safe/good condition and improving about 800 miles of the approximately 160,000 miles of eligible roads accessing Tribal lands.

The structure and allocation of the $475.0 million to the 567 federally recognized Tribes is based on a statutory formula that was established in MAP-21 and carried forward in the FAST Act. This statutory funding formula replaced the one developed through Negotiated Rulemaking during TEA-21 and published in 2004. The statutory funding formula has various factors and takedowns but ultimately determines a "percentage" for each federally recognized Tribe that is then applied to the year's available program funding in order to calculate their TTP funding share for that year. Since FY16 was the last year of the 4 year transition into the new statutory formula, the FY17 tribal share "percentages" will closely reflect those percentages used to distribute funding in FY16.

The program would fund transportation planning, research, maintenance, engineering, rehabilitation, and construction of roads and bridges that provide access to, are within, or are adjacent to Tribal lands. The BIA and Tribes are required to maintain a national road and bridge inventory, and report annually on the state of good repair of the TTP system.

The TTP advances transportation accessibility in Tribal communities. This program provides better access to housing, emergency services, schools, stores, jobs, and medical services. Access to these basic services improves the quality of life on Tribal lands.

Under the FAST Act, the TTP will increase the set-aside for national bridge rehabilitation and replacement priority activities to three percent from the two percent level in MAP-21. This increase is commensurate with pre-MAP-21 bridge funding levels which were found to be effective in addressing bridge deficiencies for all Tribes. The set-aside will be administered using the existing regulatory-defined grant program which prioritizes funds on the bridges with the lowest sufficiency rating. Applications are submitted by Tribes each year.

The TTP reserves up to a five percent set aside for administration of the program. Funding from this set-aside helps to provide funding for the seven Tribal Technical Assistance Program Centers which provide technical assistance and training to Tribes, oversight and maintenance of the TTP Inventory, funding for the TTP Program Coordinating Committee, and funding for the BIA, BIA-DOT, and FHWA staff responsible for carrying out the Stewardship and Oversight and inherent Federal functions/responsibilities of the program. These functions include fund distribution, technical assistance, environmental documentation review and approval, project construction inspection, and the travel by the Federal employees to carry out these activities.

Safety is the Department's number one priority, and the TTP addresses this priority by focusing up to two percent of the program towards national safety priority activities. This set-aside targets funding for safety projects using a national grant process similar to the TTP bridge process, i.e., applications are submitted by Tribes each year. In some States, the fatality and crash rates on Tribal lands are three to four times higher when compared to the balance of the same State(s). Therefore, we suggest this situation warrants national attention and dedicated resources to address it.

Why Do We Need To Fund The Program At The Requested Level?

The requested $475.0 million is $10.0 million above the FY 2016 enacted level. The request supports a more comprehensive, coordinated, and goal-oriented approach to Tribal transportation infrastructure management.

What Benefits Will Be Provided To The American Public Through This Request?

The TTP provides funding to improve the access to basic community services for all of the 567 federally-recognized sovereign Tribal governments. The Administration's focus and support for enhanced quality of life through transportation modal options coupled with creating ladders of opportunity in the mostly rural environments of Indian reservations will translate to better and safer access to housing, emergency services, schools, stores, places of employment, and medical services. On some rural reservations, a "complete street" means an all-weather road instead of a native-surface road. The TTP will promote access to Tribal lands for commerce and economic growth within Tribal communities. More than eight billion vehicle miles are traveled annually on the TTP system, even though it is among the most rudimentary of any transportation network in the United States with more than 60 percent of the system unpaved.

Generally, the condition of TTP roads and bridges remained about the same over the prior highway authorization (2005-2015). Considering the increasing traffic on Indian lands, there is a good news story to be told. During 2014, about 470 lane miles of Tribal Transportation Roads were improved and 19 bridges were constructed or improved.

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Executive Summary
Research, Technology & Education (RT&E) Program

What Is The Request And What Funds Are Currently Spent On the Program?
The FY 2017 funding request for the RT&E Program is $417.5 million. The FY 2016 enacted level is $414.5 million.

What Is The Program And Why Is It Necessary?
The RT&E Program is comprised of the following subprograms:

- Highway Research & Development Program (HRD): $125.0 million for research activities associated with safety, environmental streamlining, operations, policy, infrastructure preservation, and infrastructure design for improved connectivity within communities.
- Technology & Innovation Deployment Program (TIDP): $67.5 million to turn research products into proven technologies, and to promote rapid adoption of proven, market-ready technologies and innovations to States, local jurisdictions, and industry. TIDP advances, and will continue to advance, the Every Day Counts (EDC) initiative that identifies market-ready technologies with high pay-offs and accelerates their deployment and acceptance throughout the Nation.
- Training & Education Program (T&E): $24.0 million to train the current and future transportation workforce, transferring knowledge quickly for effective deployment.
- Intelligent Transportation Systems Program (ITS): $100.0 million for research and deployment of applications and tools that facilitate a connected, integrated, and automated transportation system that is information-intensive to better serve the interests of users and be responsive to the needs of travelers and system operators.
- State Planning and Research program (SP&R – Research portion – Non-add): The States must set aside a portion of their formula program funds to conduct research and deploy technologies and innovations of local, regional, and national interest.

The Office of the Assistant Secretary for Research and Technology administers these RT&E programs: University Transportation Centers ($75.0 million), and Bureau of Transportation Statistics ($26.0 million). *Justifications for these programs are in the budget for the Office of the Secretary of Transportation, Office of the Assistant Secretary for Research and Technology.*

Why Do We Need To Fund The Program At The Requested Level?
Research and development, technology deployment, and training functions are the highway program's primary means for developing and advancing technology solutions to support and improve the transportation system. The requested level of funding will allow FHWA to develop and deliver technology and procedural advancements that improve infrastructure longevity and integrity, improve system resilience, increase throughput, improve safety, reduce costs, and improve connectivity within communities, both in the short-term and long-term.

What Benefits Will Be Provided To The American Public Through This Request?
FHWA's commitment to researching and implementing ground-breaking innovations and technologies is changing the way roads, bridges, and other facilities are planned, designed, built, and maintained across the country. This commitment delivers a safer and more reliable transportation system that is cost-effective, environmentally sustainable, and reconnects neighborhoods and communities, thus improving overall quality of life.

Detailed Justification
Research, Technology & Education (RT&E) Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Research, Technology, and Education Program ($417.5 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Research, Technology & Education Program			
Highway Research and Development Program	125,000 [1/]	125,000 [1/]	-----
Technology and Innovation Deployment Program	67,000 [1/]	67,500 [1/]	500
Training and Education	24,000	24,000	-----
Intelligent Transportation Systems Program	100,000 [1/]	100,000 [1/]	-----
University Transportation Centers [2/]	72,500	75,000	2,500
Bureau of Transportation Statistics [2/]	26,000	26,000	-----
State Planning & Research (SP&R research portion) [Non-Add]	[195,224]	[199,892]	[4,043]
Total	**414,500**	**417,500**	**3,000**

1/ Per the Fast Act, the Advanced Transportation & Congestion Management Technologies Deployment Program (ATCMTD) will be included in the Technology and Innovation Deployment Program and will be funded by set-asides from the Highway Research and Development Program, Technology and Innovation Deployment Program, and Intelligent Transportation Systems Program. The FY 2016 and FY 2017 funding levels shown for these 3 programs are pre-ATCMTD set-aside.
2/ Administered by the Office of the Assistant Secretary for Research and Technology.

What Is This Program And Why Is It Necessary?

This request enables the Department to conduct, sponsor, sustain, and guide highway research and technology activities that addresses current and emerging highway challenges and provides information for policy decisions. This request will provide a comprehensive and coordinated research, technology, and education program that will advance DOT organizational goals and FAST Act priorities of accelerating innovation delivery and technology implementation.

The RT&E Program is comprised of the following sub-programs:

- Highway Research & Development Program (HRD): $125.0 million for research activities associated with safety, infrastructure preservation, environmental mitigation, operations, policy, and infrastructure design that enhances the connection and reconnection of communities.
- Technology & Innovation Deployment Program (TIDP): $67.5 million to enable FHWA and its partners to more aggressively fill the critical need to turn research products into proven technologies or demonstrate practices. TIDP advances, and will continue to advance, the Every Day Counts (EDC) initiative that identifies market-ready technologies with high pay-offs and accelerates deployment and acceptance throughout the Nation.
- Training & Education Program (T&E): $24.0 million to train the current and future transportation workforce, transferring knowledge quickly for effective deployment.

- Intelligent Transportation Systems Program (ITS): $100.0 million for research and deployment of applications and tools that facilitate a connected, integrated, and automated transportation system that is information-intensive to better serve the interests of users and be responsive to the needs of travelers and system operators.
- State Planning & Research Program (SP&R – Research portion – Non-add): The States must set aside a portion of their formula program funds to conduct research and deploy technologies and innovations of local, regional, and national interest. .
- Office of the Assistant Secretary for Research and Technology-administered RT&E programs: University Transportation Centers and Bureau of Transportation Statistics. ***Detailed justifications for these programs can be found in budget submission for the Office of the Secretary of Transportation (OST) - Office of the Assistant Secretary for Research and Technology.***

Why Do We Need To Fund The Program At The Requested Level?

Without sufficient funding for the RT&E program, the nation's highway program would lose its primary means for creating and advancing innovative solutions to support national policies, improve highways, and accelerate construction.

The programs under FHWA's RT&E portfolio cover all phases in the innovation life cycle: HRD covers exploratory advanced research, applied research and development, and initial testing. TIDP supports the implementation, delivery and deployment phase, conducting refined testing and evaluations, market research, and communicating the value of accelerating innovations in the highway community. The ITS program develops and deploys applications for an informed, connected, and automated transportation system. The T&E program provides assistance to transportation agencies and users of these market-ready technologies, training and educating the workforce on how to efficiently implement and deploy the innovations. Additionally, the States use the SP&R to conduct research of local, regional, and national interest.

The main components of the RT&E program are as follows:

Highway Research and Development Program (HRD)
HRD highlights FHWA's leadership in developing a comprehensive, nationally-coordinated highway research and development program, engaging and cooperating with other highway research programs such as University Transportation Centers, the pooled fund National Cooperative Highway Research Program, and State-based research and technology initiatives. Research areas include:

- **Infrastructure -** Infrastructure-related research focuses on three major areas: pavements, bridges and structures, and asset management. Research areas include:
    - *The Long-Term Pavement Performance (LTPP)* program collects pavement-performance data and conducts studies that help practitioners improve pavement design, construction, maintenance, and preservation practices.
    - *Bridge construction technologies*: FHWA's research efforts in bridge construction technologies and advanced concretes led to the development of the Ultra-High Performance Concrete (UHPC) connections, an innovation that is today transforming the way bridges are constructed.

- **Safety -** Activities emphasize data-driven analysis of roadway-related safety considerations and specific improvement in four crash areas: roadway departure, intersection design, pedestrians and cyclists, and speeding. The program conducts rigorous evaluations to determine what safety improvements can be expected with the introduction of countermeasure designs or operations. All design or operational changes are assessed from a human factor perspective to eliminate or minimize unexpected consequences of change. FHWA works in cooperation with NHTSA and FMCSA to develop tools and technologies to reduce crashes and improve transportation safety.
- **Planning and Environment –** Initiatives include:
    - *Improving community connectivity*: In FY 2017, the FHWA will focus research resources on identifying strengths, weaknesses and gaps in infrastructure design guidance for road, bridge, tunnel, and bike and pedestrian overpass on the National Highway System. This effort will develop recommendations that will lead to providing guidance and encouragement of future transportation infrastructure improvements that enhance the connection and reconnection of surrounding neighborhoods, communities, and urban centers, and improve overall quality of life.
    - *Carrying out short and long-term sustainability initiatives* to improve project delivery and enhance communities that are impacted by transportation projects;
    - *Developing strategies to minimize negative impacts* of and maximize benefits from transportation investment on the natural and human environment;
- **Operations -** FHWA conducts research on the application of cutting-edge technologies to move people and goods better, quicker, more reliably, and safer. The primary focus is on mitigating the impacts of recurring congestion and dealing more effectively with non-recurring events that cause congestion, such as traffic incidents, work zones, adverse weather conditions, and planned special events. Operations research works in concert with connected vehicle and other Intelligent Transportation System initiatives, and pursues a broad range of activities designed to enhance freight productivity and economic competitiveness of the United States.
- **Policy –** Initiatives include:
    - *Analyzing emerging issues in the transportation community*, such as alternative highway revenues, understanding trends and patterns of how the system is used, and economic impacts of highway investment.
    - *Developing the Infrastructure Investment Needs Report* through data analysis to assess the current and future conditions of our Nation's highways and bridges.
    - *Forming strategic alliances with international partners* to gain better knowledge of technology and best practices put in place in other countries that can improve the U.S. surface transportation system, and leverage resources to enable the U.S. to benefit from investments made by foreign counterparts.
    - Through an agreement with the Transportation Research Board, conduct the ***Future Interstate Study***, as required in the FAST Act.
- **Next Generation Research & Technology –** Activities include:
    - *Advancing the Exploratory Advanced Research (EAR) Program,* conducting longer-term, higher-risk research with the potential for dramatic breakthroughs.
    - *Operating the FHWA's Turner-Fairbank Highway Research Center (TFHRC),* a Federally-owned and operated research facility in McLean, Virginia that provides

State and local governments, FHWA, and the world highway community with targeted applied research and development related to new highway technologies.

- **Surface Transportation System Funding Alternatives Demonstration Program**: The FAST Act requires FHWA to provide grants to States to demonstrate alternative funding sources for the Highway Trust Fund.

Technology & Innovation Deployment Program (TIDP)

After innovations and technologies have gone through an initial testing and evaluation process and are ready to be put through a more refined, conclusive testing, or to be deployed, these technologies are advanced through the TIDP. This is where final evaluations, pilots, demonstrations, marketing, communications, and promotional activities are conducted to accelerate its adoption by Federal Lands Highways and State DOTs and other government entities or beneficiaries.

Examples of TIDP sub-programs include:

- **Every Day Counts Initiative (EDC):** The FAST Act recognizes the success of EDC, making it a required program. EDC identifies market-ready technologies with high pay-offs and accelerates their deployment and acceptance throughout the Nation.
- **Accelerated Innovation Deployment Demonstration Program:** FHWA provides incentive funding for eligible entities to accelerate the implementation and adoption of innovation in highway transportation. Funds are available to cover the cost of implementation of an innovation on a project.
- **State Transportation Innovation Council (STIC) Incentive Program**: FHWA offers technical assistance and resources to support the standardizing of innovative practices in a State transportation agency or other public sector STIC stakeholders.
- **Accelerated deployment of pavement technologies**: The FAST Act extends the designation of funding to promote, deploy, demonstrate, and document the application of innovative pavement technologies, practices, performance, and benefits.
- **Advanced Transportation and Congestion Management program**: Funded out of the HRD, TIDP, and ITS programs, the FAST Act requires FHWA to award grants to States and other entities to deploy technologies with the potential to relieve congestion and improve the quality of life.

Training and Education Program (T&E)

T&E is responsible for training the current and future transportation workforce, transferring knowledge quickly and effectively to and among transportation professionals, and providing education solutions throughout the full innovation lifecycle. T&E provides a wide variety of services and products, including:

- *The National Highway Institute* provides training courses to present the latest technologies and best practices in highway construction.
- *The Local and Tribal Technical Assistance Programs (LTAP/TTAP)* support technology transfer centers in all 50 States, Puerto Rico, and regional centers serving Native American Tribal governments.
- *Training and Workforce Development Programs*:

- The Dwight D. Eisenhower Transportation Fellowship Program provides opportunities for students and faculty to research transportation topics.
- The Garrett A. Morgan Technology and Transportation Education Programs enhance science, technology, engineering, and mathematics at elementary and secondary school level.
- The Transportation Education Development Program develops new curricula and education programs to train individuals at all levels of the transportation workforce.
- The Surface Transportation Centers for Excellence will promote and support strategic programs and activities in the areas of environment, surface transportation safety, rural safety, and project finance.

Intelligent Transportation Systems Program (ITS)

For FY 2017, the Intelligent Transportation Systems Program (ITS) is authorized by the FAST Act to execute the scope of research and deployment outlined in the ITS Strategic Research Plan 2015 to 2019 in six USDOT focus areas-- Connected Vehicles, Automated Vehicles, Enterprise Data, Interoperability, Emerging Technologies, and Accelerating Deployment. These six program categories provide the USDOT the best tactical and strategic opportunities to exhibit federal leadership to transform transportation using ITS technologies. The FY 2017 budget proposes the following strategies for these program categories:

- *Connected Vehicles (CV)* – the plan focuses on completing the transition from research to a national deployment of this transformational program. Building on over a decade and nearly $600 million in ITS investments, the program will continue to support the NHTSA Vehicle to Vehicle (V2V) rule, the FHWA Vehicle to Infrastructure (V2I) guidance, the deployment of a scalable operational Security Certificate Management System (SCMS) to accommodate tens of millions of vehicles and expand the deployment of both vehicles and infrastructure beyond the pilot in southeast Michigan through the continued support of the connected vehicle pilots in New York City, NY, Tampa, FL and Wyoming. In addition, the ITS program at DOT will conduct research to respond to challenges to the use of Dedicated Short Range Communications (DSRC) spectrum for this collision avoidance technology. The primary focus is to spur widespread adoption and deployment of the system nationwide. The secondary goal is to promote technology transfer of over 60 CV applications that promote safety, enhance traveler and freight efficiency, address impacts of weather on road transportation, reduce fuel consumption and reduce greenhouse gas and other pollutants.

- *Automated Vehicles* –this program enables the USDOT to engage in the fast pace of technology development in the emergent automated vehicles industry. Introduction of this technology poses both an opportunity and a risk to safety, efficiency and sustainability of the transportation system. U.S. leadership in this industry is not a forgone conclusion and the USDOT is lagging behind while a number of government and private entities already focus on topics related to automated road-vehicle systems and related technologies. At our current budget levels, our participation will be more observation and planning preparation than the extensive research needed to safely expedite these technologies into operation in the U.S.

- *Enterprise Data* – this program will continue existing efforts in operation data capture from stationary sensors, mobile devices, and connected vehicles, and the expansion into research activities involving the development of mechanisms for housing, sharing, analyzing, transporting, and applying the data for improved safety and mobility across all modes of travel. . These efforts are the focus of DOT's Internet of Things and Smart Cities initiatives.

- *Interoperability* – this funds key enabling technical research on ITS Architecture and Standards, cyber security, human factors required for regulatory decision making, test beds to ensure a sound industrial base and national and international interoperability and economies of scale. The goal of this research is to ensure effective connectivity from the device level to the transportation system level.

- *Emerging Technologies* – this area scans the technology horizon for emerging technologies and trends. It addresses our statutory requirements for the Small Business Innovation Research program as well as conducts focused technology inquiries on emerging capabilities with a focus on future generations of transportation systems.

- *Accelerating Deployment* – this area seeks to spur adoption of technology and aid stakeholders and localities deploy maturing ITS systems. Funds are directed at technical assistance, training, outreach, program evaluation and stakeholder engagement to advance ITS work from research to initial adoption to wider scale deployment in coordination with other stakeholders at the federal, state, regional and local level.

ITS outreach efforts extend to the entire USDOT, leveraging modal research and applying innovative solutions to our nation's transportation challenges. The budget request is necessary to work across USDOT modes to implement results for the ITS Program to advance safe, efficient transportation systems. The funding supports related research that expands this technology to achieve benefits for mobility and the environment. The funding will also allow the program to accelerate deployment of ITS technologies through demonstration programs, grants, incentives, and other strategies. These efforts will enable the definition of the required performance areas and objectives and threshold performance criteria to allow the government, automotive industry, equipment manufacturers, and the standards development organizations to define the necessary preconditions needed to commercialize and deploy affordable connected vehicle fleets in the U.S. with safety performance superior to today's human operated vehicles.

State Planning & Research Program (SP&R – Research portion – Non-add)
The SP&R program is a set aside of five of the formula programs: National Highway Performance Program, Surface Transportation Block Grant Program, Congestion Mitigation Air Quality Program, Highway Safety Improvement Program, and National Freight Program that the States must use for planning and research purposes.

States must allocate a minimum of 25 percent of their SP&R apportionment for research, development, and technology activities. SP&R is intended to solve problems identified by the States, and typically involve research on new areas of knowledge; adapting findings to practical applications by developing new technologies; and the transfer of these technologies, including the process of dissemination, demonstration, training, and adoption of innovations by users.

States are encouraged to pool their funds in cooperative research efforts as a means of addressing national and regional issues and as a means of leveraging funds. This includes contributing to cooperative programs such as the National Cooperative Highway Research Program (NCHRP), the Transportation Research Board (TRB), and transportation pooled fund studies.

What Benefits Will Be Provided To The American Public Through This Request?

FHWA's continued commitment to highway research and the implementation of ground-breaking technology is changing the way roads, bridges, and other facilities are planned, designed, built, and maintained across the country. This commitment ultimately delivers a safer, more reliable transportation system that is both effective and environmentally sustainable.

Below are examples of ways the RT&E programs support the Administration's priorities.

Creating Ladders of Opportunity

Reconnecting Communities: For FY 2017, FHWA will utilize research resources to identify strengths, weaknesses and gaps in infrastructure design guidance for road, bridge, tunnel, and bike and pedestrian overpass on the National Highway System.

- The goal of the design research would be to develop recommendations to fill the gaps and strengthen the weaknesses to improve safety, mobility, accessibility, and connectivity for all users and avoid disconnecting neighborhoods and communities.
- This effort will develop recommendations that will lead to providing guidance and encouragement of future transportation infrastructure improvements that enhance the connection and reconnection of surrounding neighborhoods, communities, and urban centers, and improve overall quality of life.
- Also as part of this effort, FHWA will publicly recognize entities that successfully have incorporated these design elements and utilized outreach procedures that focus on reconnecting communities.

The National Network for the Transportation Workforce (NNTW) consists of five Regional Surface Transportation Workforce Centers to serve as a resource to support, grow and maintain a skilled and career-ready transportation workforce in their respective regions. The NNTW will help produce:

- *Better Data*: on transportation job needs and priorities within each region;
- *One-Stop Portals*: to transportation training and education programs;
- *Better Alignment*: of education and training to workforce skills gaps;
- *Direct Connections*: among industry, education, economic development and workforce communities;
- *Better Workers*: A sustainable pool of skilled and diverse workers.

Accessible Transportation Technologies Research Initiative (ATTRI): In 2013, FHWA built on the connected vehicle program and initiated ATTRI, a multi-modal USDOT effort designed to enhance mobility choices and quality for travelers with disabilities, including those with mobility, vision, hearing and intellectual impairments, veterans with disabilities, as well as our aging population. The Federal Transit Administration (FTA) is now co-chairing the initiative. The goal is to provide these groups with the capability to reliably, safely and independently plan and execute their travel, which in turn allows for more opportunities to work and connect. The

National Institute of Disability and Rehabilitation Research and other Federal agencies are participating. The EAR program supported the effort through research projects to examine new technology solutions for wayfinding and navigation guidance using technologies such as GPS and ITS infrastructure, smartphone sensors, and stereo cameras.

Each year, over 100,000 local and Tribal transportation officials receive training in infrastructure management, safety, and workforce development through Local and Tribal Technical Assistance Program (LTAP/TTAP) centers. The Centers are located in all 50 States and Puerto Rico, with 7 additional regional centers serving Native American Tribal governments. In some rural areas, LTAP centers provide the only professional development and technical training the agency staff receives. LTAP/TTAP Centers are FHWA's primary connection for technology deployment to local agencies, and they also provide on-site technical assistance to aid local agencies to implement low-cost safety improvements and conduct roadway safety audits.

Consistently Improving USDOT's Safety Mission

EDC-Endorsed: Diverging Diamond Interchanges (DDI): The DDI design shifts crossroad traffic to the left side of the roadway between ramp intersections to eliminate the left-turn phase of traffic signals, improving traffic flow and safety. Reconstruction of an existing interchange to a DDI configuration can often make use of existing infrastructure, resulting in substantial savings over other alternatives. For example, the Colorado DOT and the City of Grand Junction constructed a diverging diamond interchange at the I-70 and US 6/50 interchange, doubling the capacity for left-turns and saving 70 percent ($11 million) of the costs of other design alternatives. Since its U.S. development by FHWA, over 50 DDIs have been constructed or are under construction in the US.

Innovative Technologies for Pedestrian Safety: Through the Small Business Innovation Research (SBIR) program, a small business developed a new stereovision-based approach for detecting pedestrians at intersections. Based on a concept borrowed from military tracking, the company used a new light-emitting diode (LED) stereo camera and advanced pedestrian-detection algorithms to distinguish pedestrians and vehicles on the roadways. FHWA and the FTA are collaborating on a follow-up project to research whether the information from the project can be used in connected-vehicle research to greatly reduce pedestrian fatalities. Another SBIR project developed a smartphone application called SmartCross that alerts pedestrians before crossing the street. Sending signals between the pedestrian's phone and the traffic signal box, the application becomes a warning sign to notify when it's safe for the pedestrian to step into the crosswalk.

EDC-Endorsed: Road Diets: Advanced through FHWA's R&T programs, a Road Diet is a low-cost strategy that reallocates the roadway cross-section to safely accommodate all users, increase mobility and access, reduce crashes, provide space for alternative modes, and improve a community's quality of life. A Road Diet in Orlando, Florida (photos below) converted an existing four-lane undivided roadway segment into a three-lane segment consisting of two through lanes, a center two-way left turn lane, and bike lanes. The result was a 34 percent reduction in the total number of crashes, a 30 percent increase in bike volumes, and a 23 percent increase in pedestrian volumes.

Low Cost Safety Countermeasures: FHWA and 38 partner States evaluated the benefits of deploying over 40 low-cost highway safety countermeasures, such as offset improvements for left-turn lanes, increased retro-reflectivity at stop signs, and lane and shoulder width combinations on rural, two-lane, undivided roads.

Increasing Public-Private Partnerships and Supporting a Build America Transportation Investment Center

Center for Excellence in Project Finance: The AASHTO Project Finance Institute (APFI) will provide education and outreach to decision makers and transportation project leaders at state DOTs and local partner agencies. The APFI provides expertise in all forms of innovative transportation finance, including public-private partnerships, bonding, state infrastructure banks and federal credit assistance.

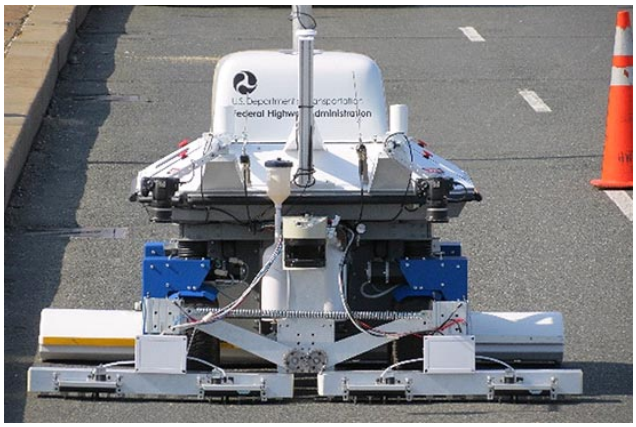
Leading Towards Innovation in Transportation

EDC-Endorsed: Slide-in Bridge Construction (SIBC): SIBC accelerates bridge construction whereby a new bridge is built next to an existing bridge out of the way of traffic. Once ready, the roadway is closed for a short period of time, the old bridge is quickly removed, and the new bridge is slid into place. Under SIBC, the bridge can be replaced in a matter of hours or days, instead of drivers dealing with lane closures and/or detours for months. The New York State DOT replaced two bridges on I-84 during a 20-hour time period over a weekend using the SIBC method; resulting in estimated savings of $900,000 in construction costs and $1.37 million in user delay costs. Together, the savings represented 22 percent of the $10.2 million construction cost of the project. (*Photo: New York State's Dingle Bridge Rd. replacement using slide-in bridge construction*)

Using Data Analysis to Improve Performance Management

SHRP2 Naturalistic Driving Study (NDS) and Roadway Information Database (RID): Through a cooperative agreement with the Transportation Research Board (TRB), FHWA facilitated collection of an unprecedented amount of actual driver behavior data (including video) and associated road conditions. FHWA continues to fund TRB's oversight and public availability of NDS data. The combined data will help researchers and practitioners identify the behaviors and

road designs that cause and/or can avert collisions. The National Highway Traffic Safety Administration (NHTSA) is using the data for driver research. FHWA and AASHTO are also actively seeking proposals from the research community to use these databases on projects to advance highway safety goals. FHWA recently established a Safety Training and Analysis Center (STAC) at FHWA's TFHRC to expand access to these data bases and apply to road safety questions.



Bridge Inspection Technologies: In collaboration with Rutgers University, FHWA researchers designed and constructed the RABIT™ concrete bridge deck condition assessment tool. This robot utilizes a suite of non-destructive evaluation (NDE) technologies to simultaneously and quickly collect high-quality bridge deck data and provide near-real time information and visualization of conditions. FHWA is also developing a device to evaluate existing bridge foundations for the effects of bridge scour, which is the major cause of bridge failure in the U.S. Both of these FHWA innovations will help identify concrete bridge deck and structure deficiencies before they become life threatening.

Data Collection and Analysis: The FHWA research program supports data collection and analysis to assist and improve policy and decision making. For example, the National Household Travel Survey collects data on daily trips, including purpose of the trip, means of transportation used, and other useful data used to quantify travel behavior and analyze changes in travel characteristics over time, among other purposes. FHWA also supports the Highway Performance Monitoring System (HPMS), a national-level highway information system that includes data on the extent, condition, performance, use, and operating characteristics of the nation's highways. The purpose of HPMS is to support a data driven decision process within FHWA, the USDOT, and Congress.

Leading towards automation in transportation

The ITS Joint Program Office leads the Department's Connected Vehicle work which is laying the foundation for the nationwide deployment of automated vehicles. ITS provides the best opportunity to leverage infrastructure investments to cost-effectively increase safety, mobility, and efficiency of the transportation network. Additionally, the public will gain a leading-edge solution to support private and secure, trusted, and authenticable transportation communications.

In FY 2017, the ITS program will continue to support efforts on the Connected Vehicle Pilots to significantly accelerate the deployment of research through the deployment of connected, integrated, automated transportation systems on three major pilots. These research pilots will enable the definition of the required performance areas and objectives and threshold performance criteria to allow the government, automotive industry, equipment manufacturers and standards development organizations to define the necessary preconditions needed to commercialize and

deploy affordable connected and integrated transportation systems in the U.S. with safety, mobility, and efficiency performance superior to the norm.

ITS, connected vehicles, and automated vehicles are the next logical step in developing a robust transportation infrastructure to demonstrate what is possible when communities use technology to connect transportation assets into an interactive network. The ITS Program will continue to support efforts on the Smart City Challenge.

See the Office of the Secretary of Transportation (OST) -- Office of the Assistant Secretary for Research and Technology budget submission for details about the University Transportation Centers program and the Bureau of Transportation Statistics.

Executive Summary
Federal Allocation Programs

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget request for the Federal Allocation Programs includes: $80.0 million for the Construction of Ferry Boats and Ferry Terminal Facilities Program which is $13.0 million above the FY 2015 funding level and equal to the FY 2016 enacted level; $10.0 million for the Disadvantaged Business Enterprise (DBE) Program which is equal to the FY 2015 and FY 2016 funding levels; $100.0 million for the Emergency Relief (ER) program which is equal to the FY 2015 and FY 2016 funding levels; $4.0 million for the Highway Use Tax Evasion Projects Program which is $2.0 million above the temporarily reduced FY 2015 funding level and equal to the FY 2016 enacted level; $10.0 million for the On-The-Job Training (OJT) Program which is equal to the FY 2015 and FY 2016 funding levels; and $200.0 million for the Territorial and Puerto Rico Highway Program which is $10 million above the FY 2015 funding level and equal to the FY 2016 enacted level.

What Is The Program And Why Is It Necessary?
This program category contains six separate programs that will provide disparate functions to assist federal highways. This includes assistance: to construct ferry boat and ferry terminals to enhance the federal-aid network; for States to assist certified DBE firms in becoming competitive when seeking to obtain highway and bridge construction contracts; to States and localities for the repair of damage to Federal-aid highways from natural events and catastrophic failures due to an external cause; to support highway use tax evasion enforcement efforts; for States to enhance the development of our nation's highway construction industry workforce; and for Puerto Rico and U.S. territories to build vital transportation infrastructure important for their mobility needs and to serve national defense and global trade needs.

Why Do We Need To Fund The Program At The Requested Level?
These diverse programs serve key functions that provide long-standing, positive impacts on the U.S. highway infrastructure.

What Benefits Will Be Provided To The American Public Through This Request?
The long-standing programs in the overall Federal Allocation Programs perform the following vital functions: construct ferry boat and ferry terminals to improve the mobility of the transportation network; assist certified DBE firms in becoming competitive when seeking to obtain highway and bridge construction contracts; help States, territories, and localities repair damage to Federal-aid highways from natural events and catastrophic failures due to an external cause; support highway use tax evasion enforcement efforts; enhance development of our nation's highway construction industry workforce, particularly for historically underrepresented groups; and build vital transportation infrastructure in Puerto Rico and the U.S. territories that is important for their mobility needs and to serve national defense and global trade needs.

Detailed Justification
Construction of Ferry Boats and Ferry Terminal Facilities

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Construction of Ferry Boats and Ferry Terminal Facilities ($80.0 million)

($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Allocation Programs			
Construction of Ferry Boats and Ferry Terminal Facilities	80,000	80,000	-----
Disadvantaged Business Enterprise [1/]	10,000	10,000	-----
Emergency Relief (exempt from obligation limitation) [2/]	100,000	100,000	-----
Highway Use Tax Evasion Projects [1/]	4,000	4,000	-----
On-the-Job Training [1/]	10,000	10,000	-----
Territorial and Puerto Rico Highway Program	200,000	200,000	-----
Total	**404,000**	**404,000**	-----

1/ Programs funded as set-asides from Administrative Expenses.
2/ In FY 2016 $6.8 million was sequestered from Emergency Relief (sequestration not reflected in table).

What Is The Program And Why Is It Necessary?

This is an allocated program that will provide funding to construct ferry boats, and ferry terminal facilities. Funds are proportionally distributed to eligible ferry operations, based on the number of ferry passengers, the number of vehicles carried, and the total route miles serviced.

Ferry services are important links in the network of Federal-aid highways. Often times these carry significant numbers of passengers and vehicles. In 2009, the national ridership was in excess of 100 million passengers. In many case they are the only reasonable form of transportation, particularly on coastal islands which have year round residents.

Why Do We Need To Fund The Program At The Requested Level?

Our FY 2017 budget request of $80.0 million is in line with the FAST Act. This compares to $67 million annually authorizations under MAP_21. This level of funding is required to maintain and improve important transportation connections on the Federal-aid highway system, as well as provide access to remote areas where other modes of transportation may not be available for passengers and vehicles.

What Benefits Will Be Provided To The American Public Through This Request?

The Construction of Ferry Boats and Ferry Terminal Facilities program addresses mobility and access in urban and rural areas by providing valuable assistance to help States and other entities replace or acquire new ferry boats; replace propulsion systems with newer cleaner and more

energy efficient power plants; update navigational control systems; construct new terminals; improve access for the disabled; and replace and construct new docking facilities. Through these activities, the program provides vital connections on the network of Federal-aid highways, increasing mobility and safety particularly for citizens for which ferry services are the only reasonable transportation option. To date, this program has made available funding for 119 ferry operations in 35 states and one US territory.

Detailed Justification
Disadvantaged Business Enterprise

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Disadvantaged Business Enterprise ($10.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Allocation Programs			
Construction of Ferry Boats and Ferry Terminal Facilities	80,000	80,000	-----
Disadvantaged Business Enterprise [1/]	10,000	10,000	-----
Emergency Relief (exempt from obligation limitation) [2/]	100,000	100,000	-----
Highway Use Tax Evasion Projects [1/]	4,000	4,000	-----
On-the-Job Training [1/]	10,000	10,000	-----
Territorial and Puerto Rico Highway Program	200,000	200,000	-----
Total	**404,000**	**404,000**	-----

1/ Programs funded as set-asides from Administrative Expenses.
2/ In FY 2016 $6.8 million was sequestered from Emergency Relief (sequestration not reflected in table).

What Is This Program And Why Is It Necessary?

The DBE/SS program was established by regulation (23 CFR 230, Subpart B) under statutory authority at 23 USC 140(c) to develop, conduct, and administer training and provide technical assistance programs to increase the efficiency of small businesses owned and controlled by socially and economically disadvantaged individuals to compete, on an equal basis, for federally-assisted highway contracts.

The program supports State DOT DBE programs required for recipients of federal highway, transit and aviation funds (40 CFR Part 26). The DBE/SS funds made available each fiscal year are allocated by the FHWA Office of Civil Rights to State DOTs for a 100% federal share, with no State matching required. The primary purpose of the DBE/SS program is to ensure training, capacity building assistance, and services (e.g., training in business development; mentoring, bonding and financial assistance; marketing; and accounting) to firms certified in the DBE program. This training and support is intended to increase their activity within the program, and to facilitate the firms' development into viable, self-sufficient organizations capable of competing for, and performing on, federally assisted highway projects. Beginning FY 2015, FHWA requires State DOTs accepting DBE/SS funds to create and administer Business Development Programs (BDPs). State DOTs should select certified DBE candidates for BDPs, focusing on underperforming DBEs with the desire and potential for growth. The BDP must assess these DBEs in all areas of performance and business acumen and create a Business Development Plan tailored to their individual needs.

The program is necessary to assist a sector of our small business community for which there is clear evidence of current discrimination and/or the lingering effects of past discrimination that has created barriers to fair competition on highway contracts.

Why Do We Need To Fund This Program At The Requested Level?

Our $10.0 million FY 2017 budget request is in line with the FAST Act, and is equal to the FY 2016 funding level. Our request level is required to empower States to enhance these vital DBE/SS programs. In addition to the increase in funding, FHWA now requires State DOTs to use their DBE/SS allocation to create Business Development Programs to ensure that DBEs are afforded the opportunity to be evaluated and provided a structured process to receive firm-specific training and guidance to be competitive within the heavy highway marketplace.

What Benefits Will Be Provided To The American Public Through this Request?

The DBE/SS program is an essential tool for a successful DBE program. The DBE/SS program benefits the American Public by assisting small and disadvantaged firms in becoming competitive which creates ladders of opportunity for the firm's workforce. These programs help create a level playing field in which these firms have a fair opportunity to participate in federally-assisted contracts without competing against discriminatory barriers related to race, color, gender, or national origin that are so prevalent in the transportation industry.

Detailed Justification
Emergency Relief (ER) Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Emergency Relief Program ($100.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Allocation Programs			
Construction of Ferry Boats and Ferry Terminal Facilities	80,000	80,000	-----
Disadvantaged Business Enterprise [1/]	10,000	10,000	-----
Emergency Relief (exempt from obligation limitation) [2/]	100,000	100,000	-----
Highway Use Tax Evasion Projects [1/]	4,000	4,000	-----
On-the-Job Training [1/]	10,000	10,000	-----
Territorial and Puerto Rico Highway Program	200,000	200,000	-----
Total	**404,000**	**404,000**	-----

1/ Programs funded as set-asides from Administrative Expenses.
2/ In FY 2016 $6.8 million was sequestered from Emergency Relief (sequestration not reflected in table).

What Is The Program And Why Is It Necessary?

Congress authorized in Title 23, United States Code, Section 125, a special program from the Highway Trust Fund for the repair or reconstruction of Federal-aid highways and roads on Federal lands which have suffered serious damage as a result of (1) natural disasters or (2) catastrophic failures from an external cause. This program, commonly referred to as the Emergency Relief or ER program, supplements the commitment of resources by States, their political subdivisions, or other Federal agencies to help pay for unusually heavy expenses resulting from extraordinary conditions.

Examples of natural disasters include floods, hurricanes, earthquakes, tornadoes, tidal waves, severe storms, and landslides. A catastrophic failure is defined as the sudden and complete failure of a major element or segment of the highway system that causes a disastrous impact on transportation services. Additionally, the cause of the catastrophic failure must be determined to be external to the facility. A bridge suddenly collapsing after being struck by a barge is an example of a catastrophic failure from an external cause. Failures due to an inherent flaw in the facility itself do not qualify for ER assistance.

Emergency repairs accomplished in the first 180 days after the occurrence of the disaster to restore essential traffic, minimize the extent of damage, or protect the remaining facilities may be reimbursed at a 100 percent Federal share. ER funds for permanent repairs and for emergency repair work accomplished more than 180 days after an event are at the pro rata Federal-aid share that would normally apply to the facility being repaired. This 180 day period can be extended in

consideration of any delay in the State's ability to access damaged facilities to evaluate damage and the cost of repair.

Following the 2005 Gulf Coast Hurricanes, more than $2.8 billion in ER funds were provided to assist States in the repair and recovery of Federal-aid highways damaged by the hurricanes. These funds were instrumental in assisting the Gulf Coast region with needed recovery efforts following the devastating impact from Hurricanes Katrina, Rita, and Wilma. More recently, over $500 million was provided to Mid-Atlantic and Northeast states in response to Superstorm Sandy. Nearly $60 million of this funding was provided within days after the storm to allow States to address their most critical emergency needs. The immediate availability of ER funds was essential in providing these funds.

When a natural disaster or catastrophe strikes, the ER program is available to provide assistance to get damaged highways open to essential traffic. Longer term permanent repairs to restore damaged highways are also funded through the ER program. When economically justified, betterments to damaged highways, aimed at improving the resiliency of those facilities, would be eligible for funding through the ER program. Additionally, the law makes eligible the cost of a comparable facility that is designed to current geometric and construction standards required for the types and volume of traffic the facility will carry over its design life.

Why Do We Need To Fund The Program At The Requested Level?

The ER program has been funded through a recurring annual authorization of $100.0 million since 1972. When ER program needs exceed available funding, Congress has provided supplemental appropriations to cover the ER backlog.

Over the past 12 years, the costs of nationwide ER events, not including large scale disasters (e.g., Hurricane Katrina, Hurricane Sandy) have averaged about $350 million annually. Within the same time frame, including large scale disasters, the average costs increased to about $750 million annually. Over the past 20 years, $12.2 billion has been provided through supplemental appropriations to the ER program, in addition to the annual $100 million authorization. In FY 2013, Congress appropriated $2.0 billion for Superstorm Sandy and other disasters. That appropriation is not part of the Federal-aid Highways account and is funded by the General Fund.

In 2015, ER funds were provided for 33 separate disasters. The average annual need for ER funds has been in the range of $300-400 million; however, in recent years, large-scale events such as Hurricane Irene and Superstorm Sandy have pushed annual needs above $1 billion. These needs have been funded from the annual ER appropriation as well as supplemental funds, provided by Congress. As of January 27, 2016, the estimate of the cost to repair previous ER damage exceeds $717 million.

What Benefits Will Be Provided To The American Public Through This Request?

ER program funds are critical to maintaining mobility and safety for the American public following a disaster. Natural disasters and catastrophes that destroy highways and bridges are unpredictable events and can occur anywhere in the country. The ER program provides funding

to States for the repair and reconstruction of Federal-aid highways and roads on Federal lands following a disaster.

Detailed Justification
Highway Use Tax Evasion Projects

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Highway Use Tax Evasion Projects ($4.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Allocation Programs			
Construction of Ferry Boats and Ferry Terminal Facilities	80,000	80,000	-----
Disadvantaged Business Enterprise [1/]	10,000	10,000	-----
Emergency Relief (exempt from obligation limitation) [2/]	100,000	100,000	-----
Highway Use Tax Evasion Projects [1/]	4,000	4,000	-----
On-the-Job Training [1/]	10,000	10,000	-----
Territorial and Puerto Rico Highway Program	200,000	200,000	-----
Total	**404,000**	**404,000**	**-----**

1/ Programs funded as set-asides from Administrative Expenses.
2/ In FY 2016 $6.8 million was sequestered from Emergency Relief (sequestration not reflected in table).

What Is This Program And Why Is It Necessary?

The Highway Use Tax Evasion Projects program provides funding to the Internal Revenue Service (IRS) and the States to carry out intergovernmental enforcement efforts along with training and research to reduce evasion of payment of motor fuel and other highway use taxes; which are the principal sources for Federal and State highway funding. Consistent with the FAST Act, FHWA requests $4.0 million to fund the vital Highway Use Tax Evasion Projects program in FY 2017. Of this amount, $2 million will be reserved to make grants for intergovernmental enforcement efforts, including research and training. The $2 million set-aside is awarded to State agencies through a competitive application process from which FHWA and the IRS make selections based on the most innovative, intergovernmental proposals. The remaining $2 million will be allocated to the IRS for their enforcement efforts.

While the statute allows for the IRS to determine the use of their allocations, they must be used in some fashion related to the identification and elimination of highway use tax evasion. While the initiatives change from year to year, they include office examinations, refinery and terminal examinations, and on-road enforcement in areas such as dyed diesel fuel use. Diesel fuel that has a red dye introduced has no Federal and State fuel excise taxes imposed and is intended for use only in non-highway situations. The enforcement is to identify and penalize those who use dyed diesel fuel on the highway.

Since no system exists that can definitively track all motor fuels in the distribution system in the U.S., it is impossible to determine if all fuel is reported on the Federal and State level. Thus, it is difficult to accurately measure the level of highway fuel tax evasion. However, the Joint

Operations Center for National Fuel Tax Compliance (JOC), a joint FHWA/IRS/State initiative, is making great advances in tracking the fuel. Problem areas for evasion include imports, production and distribution of fuels outside of the normal distribution system (including alternative fuels), and correct State identification of sales. The best validation of the need for continued efforts in this area is the assessments made by the IRS and the State agencies in the area of evasion. As with many areas of taxation, new technologies and new fuels are no exception, there are always people willing to find ways of collecting taxes from customers, while never remitting the taxes to the proper agency.

Our FY 2017 request will continue to fund IRS initiatives, including the expansion of the JOC, and at the State level for new, innovative, and intergovernmental enforcement efforts.

Why Do We Need To Fund The Program At The Requested Level?

Our $4.0 million request for FY 2017 is in line with the FAST Act and will be used by the IRS, other Federal agencies, and the States to carry out significant intergovernmental enforcement efforts to increase collections, along with training and research, to reduce evasion of payment of motor fuel and other highway use taxes.

Through the efforts of this program the IRS has launched a number of initiatives including mislabeled imported fuel examinations ($26.9 million in assessments in 2012), examinations of mislabeled products at refineries and terminals ($9.1 million in assessments in FY 2013), and examinations of questionable credit claims ($37.4 million in assessments, $15.3 million in disallowed credits in 2013). These are just some of the efforts supported in part by the annual allocation to the IRS. From FY 2010 through FY 2012 $30 million in funding was provided to the IRS, which resulted in $491 million in assessments through various activities including internal audits, refinery and terminal inspections, and retail truck inspections. The IRS initiatives are not solely funded from Highway Use Tax Evasion funds, but they provide a significant portion of the funding.

The following table shows examples of initiatives at the State level, comparing amounts provided by this program and the results.

Year	Agency	Expenditures	Results	Description
2014	Arizona DOT	$41,112	$570,740	Dyed diesel enforcement, data validation, Port of Entry assessments.
2014	Kentucky State Police	$3,992	$79,388	Vehicle screenings at weigh stations.
2014	Missouri Criminal Investigation Bureau	$11,403	$21,440	Dyed fuel investigations. Reports that collections are up over 1300% since program started with grant funding.
2014	North Dakota Department of Revenue	$8,314	$29,500	Dyed diesel fuel on-highway enforcement and IFTA enforcement.

As the data indicates there are significant findings at the IRS and State levels, however, highway use tax evasion persists with new methods of evasion regularly employed. The continued funding of this program would not only provide funding for the successful efforts already in place, but also for enhanced practices resulting from training and vital equipment, such as enhanced motor fuel tracking computer software that is critical for sharing of information between the IRS and States.

Highway Use Tax Evasion Projects program funding can also be used for training in the assessment of highway tax evasion. Many States have opted for this training which provides great value by preparing practitioners to complete the valuable assessments noted in the above table.

What Benefits Will Be Provided To The American Public Through This Request?

The collection of highway use taxes has always been an important part of the Federal-Aid program. It is critical that we collect all of the highway use taxes that are applicable at the Federal and State levels. This program will collect transportation revenues at the Federal and State level, and will identify trends and patterns that can be shared with other tax collection agencies to ensure the proper payment of highway use taxes. As the FAST Act seeks to provide critical growth in surface transportation, this program supports that goal in collecting all taxes that support the funded programs.

Throughout its history, the Highway Use Tax Evasion program has been able to identify not only isolated incidents, but also patterns of tax evasion that can be identified through the enhanced analysis of data, in some cases using non-traditional data. The JOC uses nearly 100 unique data sources to identify anomalies, which often result in assessments. These assessments represent valuable tax dollars that then can be properly used to increase the safety and mobility of our nation’s roads and bridges.

Detailed Justification
On-the-Job Training

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – On-the-Job Training ($10.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Allocation Programs			
Construction of Ferry Boats and Ferry Terminal Facilities	80,000	80,000	-----
Disadvantaged Business Enterprise [1/]	10,000	10,000	-----
Emergency Relief (exempt from obligation limitation) [2/]	100,000	100,000	-----
Highway Use Tax Evasion Projects [1/]	4,000	4,000	-----
On-the-Job Training [1/]	10,000	10,000	-----
Territorial and Puerto Rico Highway Program	200,000	200,000	-----
Total	**404,000**	**404,000**	-----

1/ Programs funded as set-asides from Administrative Expenses.
2/ In FY 2016 $6.8 million was sequestered from Emergency Relief (sequestration not reflected in table).

What Is This Program And Why Is It Necessary?

The OJT/SS program was established by regulation (23 CFR 230, Subpart A) under statutory authority at 23 USC 140(b) to support State DOT On-the-Job Training program requirements. The funds made available each fiscal year are allocated by the FHWA Office of Civil Rights to the State DOTs for a 100% federal share, with no State matching required. As recipients of federal transportation funds, the FHWA requires each State DOT to have an On- the-Job Training (OJT) program. This program requires prime contractors participating on federally-assisted contracts to establish apprenticeship and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions. The OJT/SS program provides funds for State DOTs to implement skills training programs to prepare individuals, focusing on historically underrepresented groups, to participate in the highway construction workforce as trainees and apprentices on federally-assisted construction contracts as part of the States' OJT Programs.

The OJT/SS Program is necessary to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts. The National Summer Transportation Institute (NSTI) Program and the Summer Transportation Internship Program for Diverse Groups (STIPDG) Program are also supported with OJT/SS funds. These programs are necessary to further strengthen FHWA efforts to develop the highway construction workforce of the future by introducing individuals to this industry at the more formative stages of their lives.

Why Do We Need To Fund This Program At The Requested Level?

Our $10.0 million FY 2017 budget request is in line with the FAST Act, and is equal to the FY 2016 funding level. FHWA now strongly encourages States accepting OJT/SS funds to partner with other state and local entities, such as other agencies, colleges and universities, workforce development boards, unions, etc., with existing training, recruiting and job placement capabilities. Such partnerships will focus skills training in areas of the industry in which State and localities have identified current and future gaps. Partnering will also improve the quality of the services provided to participants as well as have a greater likelihood of success in actual long term job placement. Further, in order for States to receive funding in subsequent years, they must demonstrate program outcomes through accomplishment reports that directly address objective measurements such as the number of program participants trained, the type of career job development training provided, the number of participants employed as a result of the training received, and the dollar cost per program participant. This funding request level is required to continue to assist States with administering these programs that are vital in training our future workforce.

What Benefits Will Be Provided To The American Public Through this Request?

The American Public benefits because this program ensures continuity of our nation's current and future highway construction industry workforce by providing the development and diversity of skilled labor. A skilled workforce is vital to constructing and maintaining a safe and efficient transportation system. Furthermore, this program creates ladders of opportunity by helping create well-paying jobs for groups that have been historically underrepresented in the transportation industry.

Detailed Justification
Territorial and Puerto Rico Highway Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Territorial and Puerto Rico Highway Program ($200.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Federal Allocation Programs			
Construction of Ferry Boats and Ferry Terminal Facilities	80,000	80,000	-----
Disadvantaged Business Enterprise [1/]	10,000	10,000	-----
Emergency Relief (exempt from obligation limitation) [2/]	100,000	100,000	-----
Highway Use Tax Evasion Projects [1/]	4,000	4,000	-----
On-the-Job Training [1/]	10,000	10,000	-----
Territorial and Puerto Rico Highway Program	200,000	200,000	-----
Total	**404,000**	**404,000**	**-----**

1/ Programs funded as set-asides from Administrative Expenses.
2/ In FY 2016 $6.8 million was sequestered from Emergency Relief (sequestration not reflected in table).

What Is The Program And Why Is It Necessary?

This program provides funding to Puerto Rico and the four territories of American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the United States Virgin Islands. From our FY 2107 budget request of $200.0, $ 158.0 million would be provided to Puerto Rico by authorization and the remaining $42.0 million is divided among the four territories via an administrative formula.

Fifty percent of the funds provided to Puerto Rico must be spent on projects eligible under the National Highway Performance Program (NHPP), twenty five percent must be spent on projects eligible under the Highway Safety Improvement Program (HSIP), and the remaining twenty five percent can be spent for any purpose under Chapter 1 of 23 U.S.C. The location and eligibility requirements are similar to those that apply to the States. Additional information may be found on the narratives for these programs.

Funds provided to the four territories may be used for projects eligible under the Surface Transportation Block Grant Program (STBG); preventive maintenance; ferry boats, terminals, and approach roadways; engineering, economic and planning studies; regulation and equitable taxation of highways; and research and development. Territorial Funds are generally subject to the location requirements of the STBG, except that rural minor collector routes are eligible. The four programs are administered under individual agreements between the Secretary and the chief executive officer of each of the territories.

Territorial and Puerto Rico Highway Program funding is critical to providing transportation infrastructure to Puerto Rico and the four territories. Puerto Rico and the four territories have military facilities or serve a strategic role important to national defense. They also contribute to the national economy through tourism, agriculture and access to foreign trade.

Why Do We Need To Fund The Program At The Requested Level?

Our FY 2017 budget request is required to provide critical transportation infrastructure to Puerto Rico and the four territories. This will allow for access to military facilities key to national defense, as well as maintain and improve infrastructure vital to the region's tourism, agriculture, and foreign trade.

What Benefits Will Be Provided To The American Public Through This Request?

The Territorial and Puerto Rico Highway Program has provided for the construction of critical infrastructure in Puerto Rico and the U.S. territories. It helps them to develop economically and contribute to the national economy. It also provides critical infrastructure that serves key facilities or which in themselves serve a strategic role for national defense.

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Executive Summary
Transportation Infrastructure Finance and Innovation Act (TIFIA) Program

What Is The Request And What Funds Are Currently Spent On The Program?
USDOT is requesting $275 million for the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program in FY 2017, which is consistent with the level authorized under the FAST Act. The TIFIA program provides critical financing support to infrastructure projects across the country, and is a central tool for leveraging both public and private investment. USDOT's ongoing work to implement a new National Surface Transportation and Innovative Finance Bureau, authorized under the FAST Act and building on the Administration's efforts over the past two years to stand up the Build America Transportation Investment Center, will continue to expand access to and demand for, this already successful program.

The FY 2015 funding level under MAP-21 was $1.0 billion and the FY 2016 enacted level under the FAST Act is $275.0 million. Pursuant to FAST Act, DOT is authorized in the amount of $1.435 billion for the full implementation period. This includes $275 million in Federal Fiscal Year (FY) 2016 funds; $275 million in FY 2017 funds; $285 million in FY 2018 funds; $300 million in FY 2019 funds; and $300 million in FY 2020 funds. Additional funds may also be available from funding authority carried over from previous fiscal years. Any funding authority not obligated in the fiscal year for which it is authorized remains available for obligation in subsequent years. The TIFIA funding authority is subject to an annual obligation limitation that may be established in appropriations law.

In addition to direct funding for the TIFIA program, the FAST Act permits the use of certain Federal-aid funds to cover the subsidy and administrative costs associated with TIFIA credit assistance. Under the FAST Act, Surface Transportation Block Grant Program[1] funds (Section 133), National Highway Performance Program funds (Section 119), and Nationally Significant Freight and Highway Projects Program grant funds (Section 117) may be used by eligible recipients to cover the subsidy and administrative costs of TIFIA credit assistance. Similarly, TIGER program funds may also be used to pay for such costs. The FY 2017 Budget expands program flexibility to pay for TIFIA subsidy costs out of USDOT programs. Specifically, in addition to the programs referenced above, TIFIA subsidy and administrative costs would be eligible expenses for multi-modal grant programs included as part of the *21st Century Clean Transportation Plan*, including: the Climate-Smart Performance Formula Funds program; the 21st Century Regions Grant Program; the Clean Communities Grant Program; the Resilient Transportation Grant Program; and the Future Freight System Program.

What Is The Program and Why Is It Necessary?
The TIFIA Program provides Federal credit assistance to surface transportation projects of national or regional significance. The TIFIA Program leverages Federal dollars in a time of scarce budgetary resources, facilitating private participation in transportation projects and encouraging innovative financing mechanisms that help accelerate project delivery. By offering flexible repayment terms and attracting private capital, the TIFIA Program stimulates

[1] As so renamed under the FAST Act; formerly the Surface Transportation Program.

infrastructure investment that would be significantly or permanently delayed without TIFIA financing.

Why Do We Need To Fund The Program At The Requested Level?
The TIFIA Program FY 2017 funding level of $275.0 million is essential in meeting the continued demand for TIFIA credit support. Despite the FAST Act significantly reducing funding for the TIFIA Program, the demand and need for the program is as strong as ever. Additionally, the requested funding will support work to meet new requirements pursuant to the FAST Act, which include, among other changes, increased funding flexibility for local governments, which aligns with the Departmental priority to make funding more accessible to local governments, transit oriented development, and rural infrastructure projects. Additionally, it will support administrative resources to meet the TIFIA Program's staffing needs.

What Benefits Will Be Provided To The American Public Through This Request?
The TIFIA Program will make possible the delivery of significant transportation projects throughout the United States. It will also facilitate projects that would otherwise be delayed or deferred due to lack of funding. By stimulating investment in the country's transportation infrastructure, the TIFIA program will improve the economy – it will help create jobs and opportunities, improve mobility and enhance transportation options via new eligibilities under the FAST Act for transit-oriented development, help American businesses improve productivity and competitiveness, and improve access to opportunities in local as well as rural communities.

Detailed Justification
Transportation Infrastructure Finance and Innovation (TIFIA) Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – TIFIA Program ($275.0 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
TIFIA Program (loan program subsidies)			
TIFIA Program (loan program subsidies)	275,000	275,000	-----
Total	**275,000**	**275,000**	-----

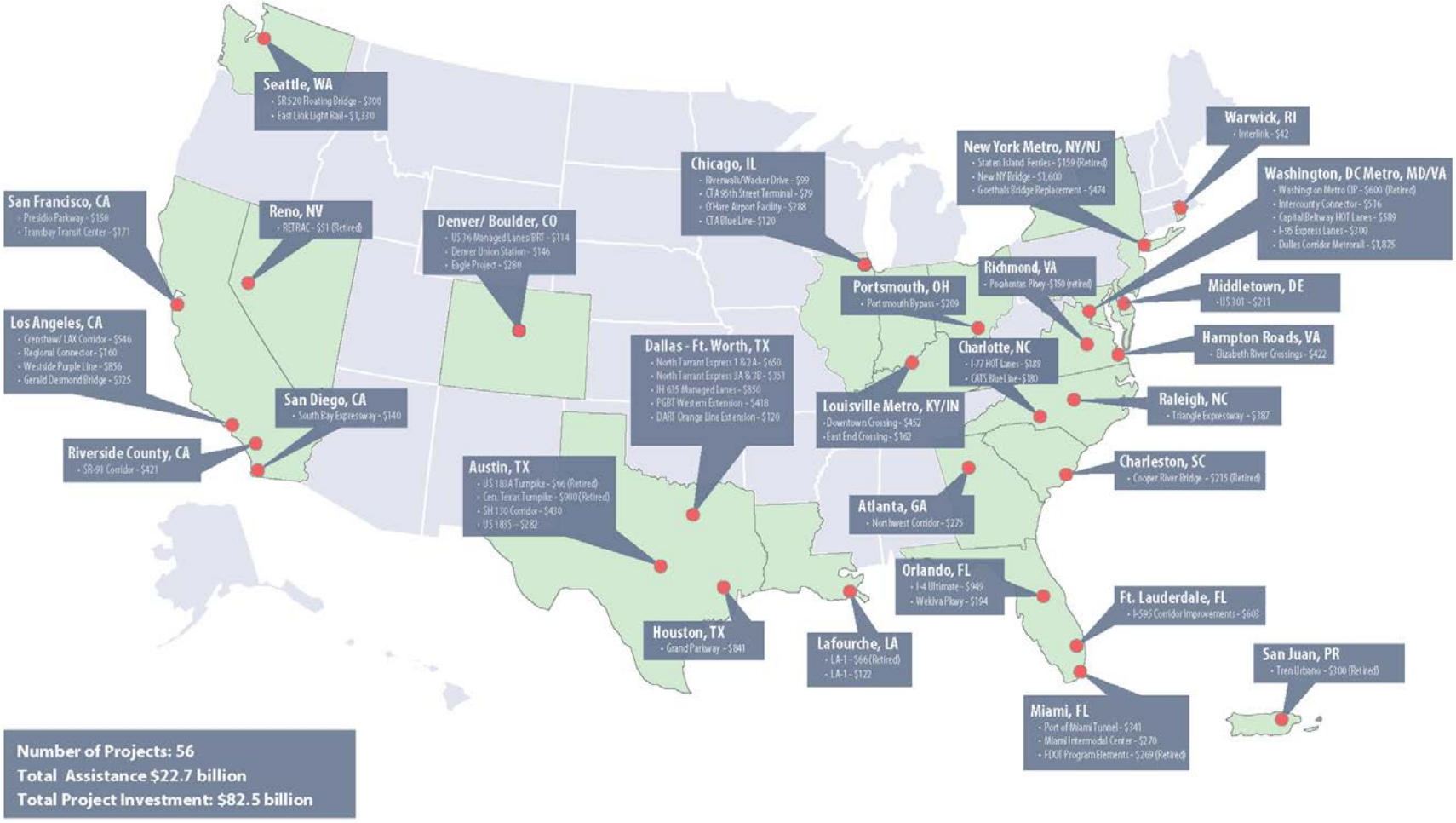
What Is This Program And Why Is It Necessary?

Congress created the TIFIA Program as part of its 1998 enactment of the Transportation Equity Act for the 21st Century (TEA-21, P.L. 105-78), as amended by the TEA-21 Restoration Act (Title IX, P.L. 105-206), further amended in 2005 by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, P.L 109-59), amended and restated in 2012 by the Moving Ahead for Progress in the 21st Century Act (MAP-21, P.L 112-141), and most recently, as amended in 2015 by the Fixing America's Surface Transportation Act (FAST, P.L. 114-94).

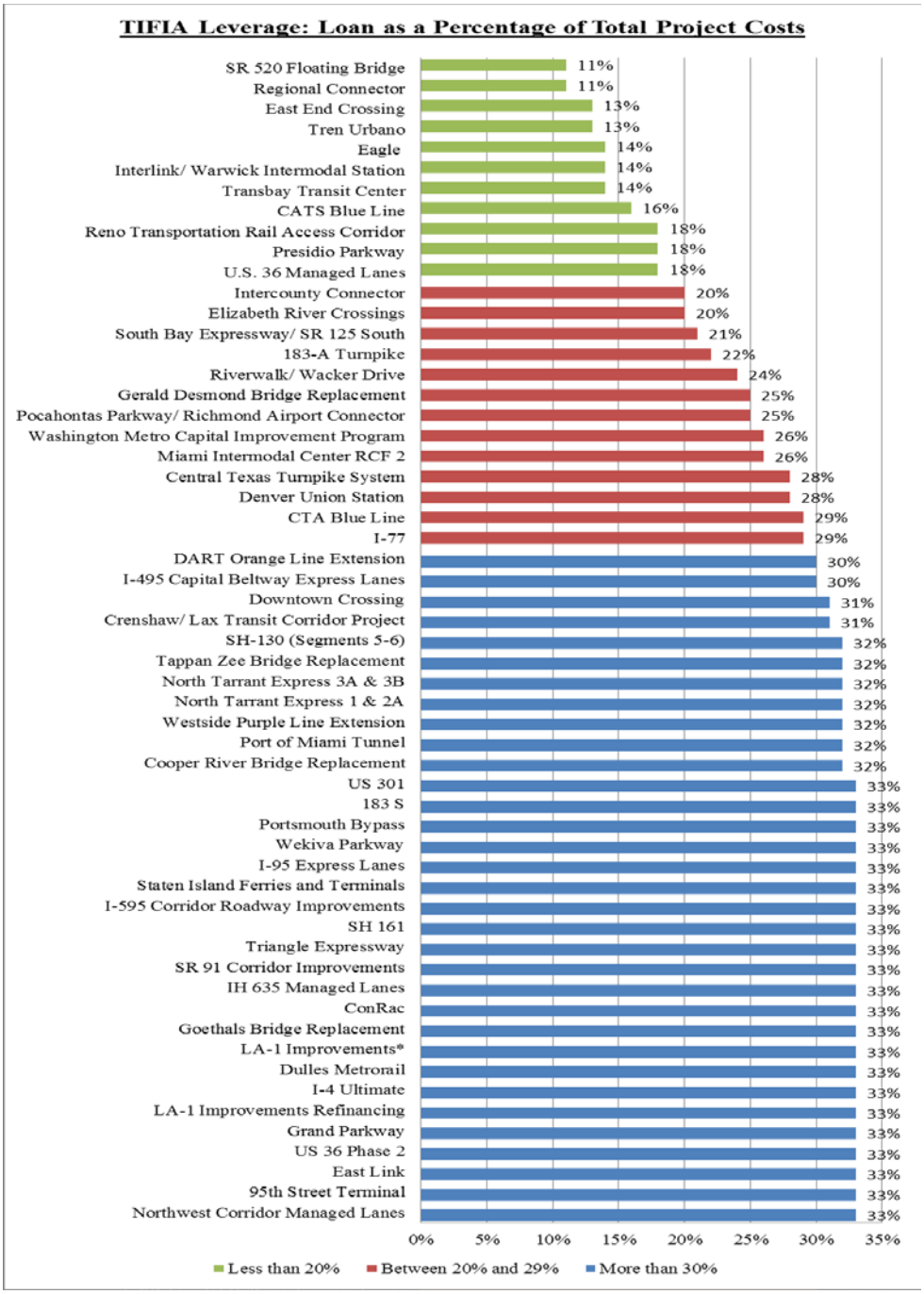
The TIFIA Program is a Federal financing program that provides credit assistance to sponsors of surface transportation projects. The Program offers three types of credit assistance: direct loans, loan guarantees, and lines of credit. The Office of the Secretary oversees the TIFIA program, including the evaluation of individual projects, and provides overall policy direction and program decisions for the TIFIA Program.

The Program has played a significant role in delivering infrastructure projects. Since its launch, the TIFIA Program has financed 56 diverse projects across the United States, including 5 intermodal projects, 37 highway projects, and 14 transit projects. Currently, the TIFIA Program's portfolio represents over $82 billion in infrastructure investment spread across the country. Under MAP-21, the TIFIA Program has dramatically increased its investment and expanded its portfolio into new states and municipalities. For instance, the TIFIA Program now has projects in the States of Georgia, Kentucky, Ohio, Indiana, New Jersey, Delaware, and Illinois. The TIFIA Program's portfolio spans all regions in the country, covering a total of 20 states, as well as the District of Columbia and Puerto Rico.

Locations of TIFIA Investment ($ in millions)



The TIFIA Program is designed to fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital to projects. The TIFIA Program maximizes limited Federal resources to deliver large infrastructure investments. Historically, each dollar of TIFIA funding authority has allowed DOT to provide approximately $10 in credit assistance. In recent years, DOT has been able to leverage TIFIA funds to support closer to $14 in credit assistance. Given statutory changes in the TIFIA credit program under the FAST Act, and the need to calculate credit subsidies on a project-by-project basis, actual lending capacity could vary. Historically, TIFIA has supported total infrastructure investment of 3 to 4 times the amount of total credit assistance it has made available.



The TIFIA Program is necessary because of its role in stimulating transportation infrastructure investments that would be temporarily or permanently delayed without TIFIA financing. The Program leverages Federal resources to accelerate project delivery and facilitate private participation in transportation infrastructure projects.

Why Do We Need To Fund The Program At The Requested Level?

Under MAP-21, TIFIA lending capacity was increased significantly, and the TIFIA JPO has closed a record number of loans since that time. Since the beginning of FY 2013, the Department has closed 28 projects and extended over $13 billion in credit support to stimulate nearly $45 billion in infrastructure investment.

FY 2014 Activity: In FY 2014 alone, the Department extended over $7 billion in credit assistance for 13 loans that will help finance over $25 billion in transportation infrastructure investment across the United States. The Tappan Zee Bridge Replacement Project is one example.

The Tappan Zee Bridge Replacement Project: The project is approximately 20 miles north of New York City. The Department approved a $1.6 billion loan to help fund the $4.96 billion project in December of 2013. The TIFIA Loan is secured by a system wide pledge of revenues from the Thruway Authority. The TIFIA loan will reduce the project's interest cost and thereby relieve pressure on the debt capacity of the System as a whole. The difference in interest cost between the TIFIA Loan and the alternate short term debt the Thruway Authority incurred for this project is approximately $10 million in savings per year for over 35 years. The project is expected to address structural deficiencies, safety concerns, and allow for future economic growth in the region. The Thruway Authority is passing this savings on to the traveling public. With overall lower debt service as a result of the TIFIA Loan, the Thruway Authority will be able to keep future bridge tolls lower than without the TIFIA Loan.

FY 2015 Activity: In addition to the projects closed in FY 2014, the Department closed 7 projects totaling nearly $9 billion in infrastructure investment in FY 2015. One example is the East Link project in the State of Washington.

The East Link project: In January 2015, the Department closed a $1.33 billion loan for this transit project. The project will construct a 14.5 mile light rail line across the I-90 floating bridge between Seattle and Redmond, Washington. According to Sound Transit, the project sponsor, TIFIA credit assistance is estimated to <u>generate up to $300 million in additional financial capacity</u> while reducing the risk of scope reduction and service delays. The project is expected to create <u>49,000 new jobs, connect over 200,000 people to the major employment centers within the Puget Sound Region, reduce 10,000 vehicle hours and 230,000 vehicle miles traveled per day, reduce greenhouse gases by 22,000-29,000 metric tons</u>, and provide significant seismic and fire safety features on the light rail line and along I-90.

<u>FY 2016 and FY 2017 Activity:</u> The Department has already closed two projects totaling $1.5 billion in infrastructure investment in FY 2016, and is positioned to close additional projects before the end of the fiscal year. The Department has a robust and active pipeline of 21 projects from around the country in various stages of the review process. The Department has requested further information from and is actively reviewing these projects estimated to add $26 billion in infrastructure investment when constructed. Like the TIFIA portfolio itself, the pipeline of projects is a diverse mix of rural and urban, public private partnerships (P3) and public projects, and projects in States using TIFIA for the first time. An example of one of the projects in the pipeline is the I-93 Improvement Project in New Hampshire.

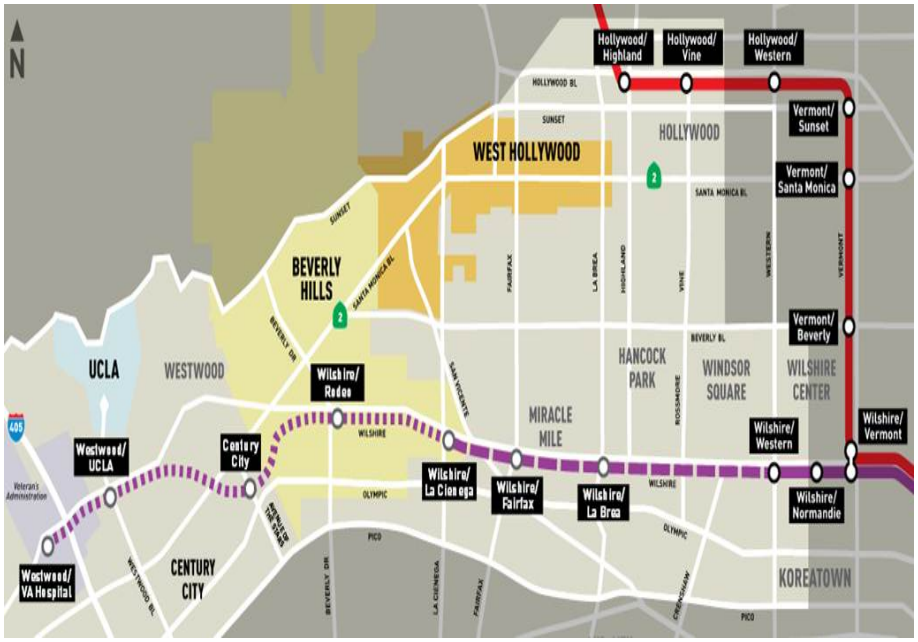
The I-93 Improvement Project: The New Hampshire Department of Transportation is requesting a TIFIA loan of $200 million to help fund the $784 million project that will reconstruct 19.8 miles of I-93 from Manchester to Salem, New Hampshire. NHDOT applied for TIFIA loan at the rural interest rate, which is a new provision under MAP-21 allowing an interest rate equal to one-half of the Treasury rate. Because of the rural rate, the State will <u>save nearly $250 million in resources that otherwise would go toward I-93 debt payments</u>. The State plans to use savings on maintenance projects for rural roads and

reconstruction of rural and deficient bridges, which will include timely maintenance of 40% of the state roads and 30% of structurally deficient bridges across the State.
The TIFIA Program's success in delivering projects and the active pipeline of projects support this budget request of $275 million for FY 2017. Through TIFIA, the Department has helped advance important infrastructure projects around the country during the MAP-21 authorization period, and this positive momentum will continue in FY 2017 under the FAST Act.

What Benefits Will Be Provided To The American Public Through This Request?

The TIFIA Program will accelerate delivery of significant transportation projects throughout the United States. By stimulating investment in the country's transportation infrastructure, the TIFIA program will improve the economy, create jobs, and improve access to opportunities.

Stimulating Significant Economic Benefits: TIFIA credit assistance provides improved access to capital markets, flexible repayment terms, and more favorable interest rates than can be found in private capital markets for similar instruments. In this way, the TIFIA Program can help accelerate delivery of qualified projects that otherwise might be delayed or deferred because of size, complexity, or uncertainty over the timing of revenues. Below is an example of a complex project that benefited greatly from TIFIA assistance and will in turn have a positive economic impact.



The Los Angeles County Metropolitan Transportation Authority's (LACMTA) Westside Subway: The TIFIA loan provides significant benefits to LACMTA and is a key financing tool for the Measure R Expenditure Plan. The interest rate for the loan is lower than rates for LACMTA's traditional debt. TIFIA secured loans can be issued at a subordinate lien level with lower debt service coverage ratios, allowing LACMTA to maximize its debt capacity. The flexible repayment terms of the TIFIA loan program are critical to LACMTA's transit capital program by allowing deferred payments until project completion and ascending debt service payment structures that leverage projected sales tax revenue growth. Overall, TIFIA loans for this and other LACMTA projects have helped accelerate infrastructure investment in the region. This investment has significant economic advantages, according to LACMTA estimates, the Westside Subway Project is expected to create 25,330 jobs and produce an economic impact of more than $2 billion over the next 30 years.

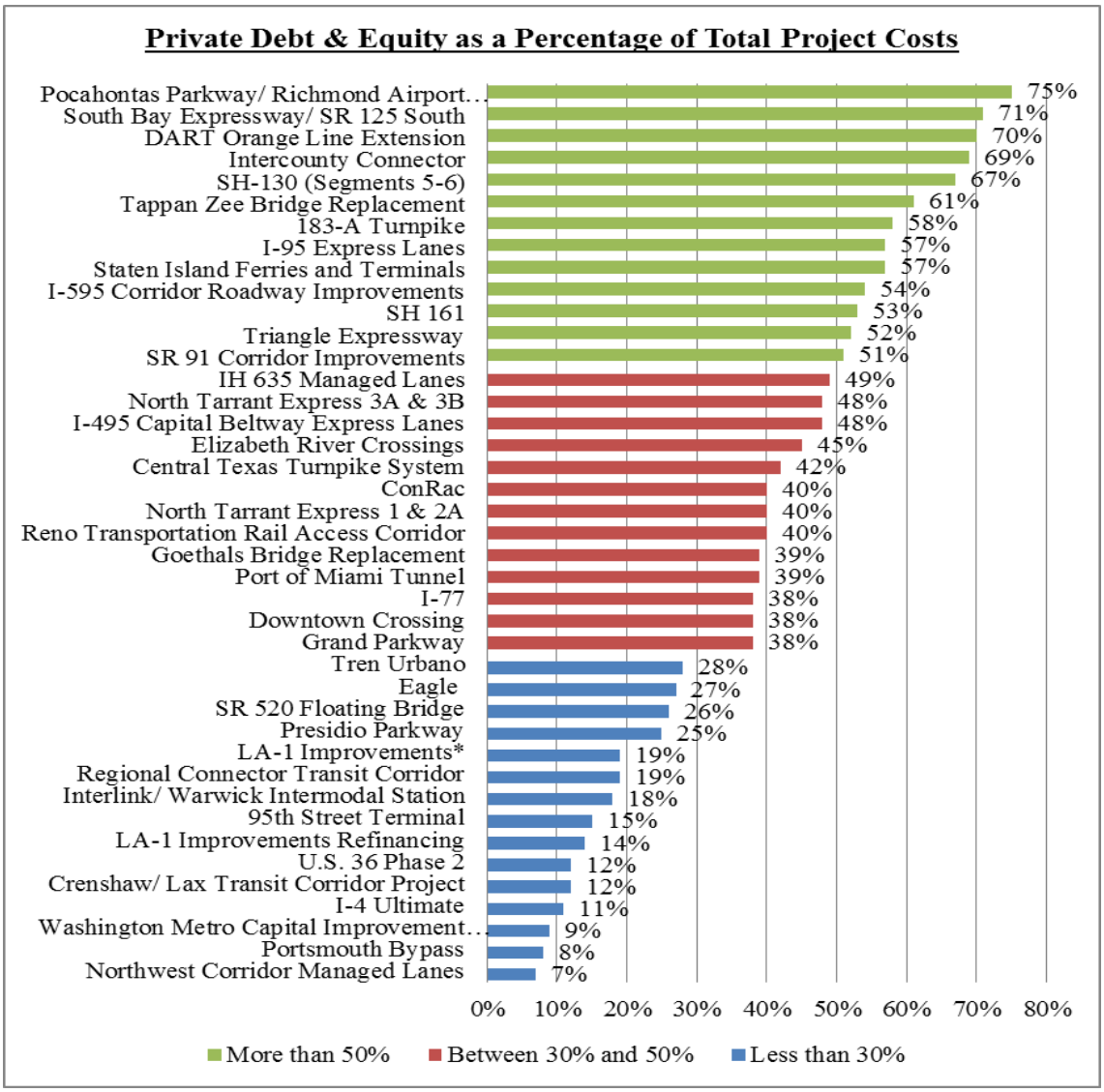
Encouraging New Revenue Streams: TIFIA was created because State and local governments often had difficulty financing projects with innovative revenue streams at reasonable rates due to the uncertainties associated with these non-traditional repayment sources. Tolls and other project-based revenues are difficult to predict, particularly for new facilities because it is hard to estimate how many transportation users will pay fees during the initial ramp-up years after construction. By supporting these projects, TIFIA facilitates an introduction of alternative revenue streams to surface transportation projects. One example is the Northwest Corridor Project in Georgia. As a new toll facility with revenue uncertainties, the TIFIA loan was critical to helping fund the project that would have likely been delayed or deferred.

The Northwest Corridor Project: The Department approved a $275 million loan for the State Road and Tollway Authority (SRTA) to fund the project. The project will add reversible managed lanes along I-75 and I-575 north of Atlanta, Georgia. The managed lanes will reduce congestion, provide additional transportation choices, improve mobility and connectivity between centers, and encourage transit transportation solutions in the region. The project will be constructed under a Design-Build-Finance (DBF) agreement between a private developer and SRTA. The TIFIA loan will leverage $59.9 million in developer financing and $498.8 million in public funds to support the project's total cost of $833.7 million.

In addition to stimulating new revenue streams, TIFIA credit assistance can help attract private debt and equity participation to transportation projects. TIFIA has been an integral part of public private partnerships in the United States, with almost a third of the TIFIA Program's portfolio funded as P3 projects. One such example is the I-4 Ultimate Project in Orlando, Florida, which was closed in September 2014.

The I-4 Ultimate Project: TIFIA is providing $950 million in credit assistance to fund the $2.9 billion project. The project will reconstruct 21 miles of the I-4 mainline and expand the facility to include two managed lanes in each direction. The project is expected to increase transportation options, reduce congestion, provide safety enhancements, and promote economic growth in the region. Through the use of TIFIA and utilizing the public private partnership delivery method, the Florida Department of Transportation estimates that they'll be able to save hundreds of millions of dollars and deliver the project 50% quicker than they would have under other delivery methods.

The I-4 Ultimate Project is just one of many examples of public private partnership projects. In total, there have been 19 projects financed with TIFIA that have advanced as public private partnerships, and the private equity committed to these projects exceeds $3 billion. On the debt



side, TIFIA has been combined with other debt sources including Private Activity Bonds (PABs), bank debt, and GARVEE Bonds, that total over $11 billion in financing for surface transportation. Currently, over a third of the entire portfolio has received a level of private participation in financing.

Enhancing Economic Competitiveness: By facilitating projects that would have been delayed or deferred, the TIFIA Program will help modernize our transportation system, thereby creating access to opportunities that will advance communities and help American businesses compete and grow in the global economy. Consistent with the FAST Act, the TIFIA Program will accelerate project delivery by stimulating new revenue streams for transportation projects and attracting private investment. Furthermore, TIFIA funding will leverage limited Federal funds, so that a relatively small Federal commitment will stimulate a large amount of State, local, and private investment.

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Executive Summary
Administrative Expenses

What Is The Request And What Funds Are Currently Spent On The Program?
FHWA requests $435.8 million for FHWA General Operating Expenses (GOE) and Appalachian Regional Commission (ARC) operating expenses. This is consistent with the administrative expenses funding level under the FAST Act. In addition to FHWA and ARC administrative expenses, other programs are funded within the administrative expenses section of the Act, including On-The-Job Training, Disadvantaged Business Enterprises, and Highway Use Tax Evasion Projects.

What Is This Program And Why Is It Necessary?
This program provides essential resources to carry out the agency's mission. FHWA requires adequate administrative funding to maintain its leadership and oversight role for the Federal-aid Highway Program's new era of complexity, accountability, and transparency under the FAST Act. GOE funds salaries and benefits for approximately 2,100 employees, as well as rent, communications, utilities, contractual services, travel, supplies, and equipment to support the delivery of the Federal-aid Highway Program. The funding level requested for administrative expenses will support a $51.5 billion overall Federal highway program and amounts to 0.8 percent of the overall budget request for FHWA programs.

Why Do We Need To Fund The Program At The Requested Level?
From FY 2013 to 2015, FHWA's GOE contract authority level decreased from $416 million to $404 million, while compulsory costs, such as pay and benefits, rent, utilities, and Working Capital Fund (WCF), increased. The combination of these factors forced FHWA to institute significant cost savings measures that negatively impacted agency operations, including an agency-wide hiring freeze which permanently reduced the workforce by more than100 employees, reduced information technology (IT) support, cut funding for field and headquarters operations, and curtailed many critical training programs. FHWA requests an administrative funding level consistent with the FAST Act that will enable the agency to effectively deliver the Federal-aid Highway Program.

What Benefits Will Be Provided To The American Public Through This Request?
The Federal-aid Highway Program requires an appropriately staffed workforce that is sufficiently supported and well-trained. FHWA's immediate response to the I-5 bridge collapse, our efforts to finalize the Record of Decision (ROD) for the Tappan Zee project in just over a year, and innovations like adaptive signal control and use of warm-mix asphalt, which have national safety and emissions benefits, are just a few examples of how the agency is providing benefits to the American public. Without a well sized and qualified staff capable of carrying out the Federal-aid highway program,, the program would not be able to make roadways safer, maintain and improve road conditions, rehabilitate and repair structurally deficient bridges, improve access to and roads within Federal and Tribal lands, conduct and deploy innovative transportation research, and undertake many other functions critical to maintaining a safe and efficient transportation network.

Detailed Justification
Limitation on Administrative Expenses

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Limitation on Administrative Expenses ($435.80 million)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
Federal-aid Highways			
Limitation on Administrative Expenses			
Limitation on Administrative Expenses [1/]	429,000	435,795	6,795
Total	**429,000**	**435,795**	**6,795**

1/ Includes FHWA General Operating Expenses (GOE) and transfers to the Appalachian Regional Commission (ARC) for administrative activities associated with the Appalachian development highway system. Other programs funded within administrative expenses (On-the-Job Training, Disadvantaged Business Enterprises, and Highway Use Tax Evasion Projects) are included in the Federal Allocation Programs justification.

What Is This Program And Why Is It Necessary?

The Limitation on Administrative Expenses funds salaries and benefits, travel, rent, communications, utilities, printing, contractual services, supplies and equipment. This account provides the resources necessary to maintain the Federal-aid oversight and administrative operations. Funding will support activities to meet FHWA goals and other Federal mandates.

Program Purpose

Administrative expenses fund the oversight and management of the Federal-aid Highway Program. This includes direct interaction in the field with State and local partners, as well as Federal agencies and Tribes. These administrative expenses provide critical on-the-ground technical assistance in areas such as bridge oversight and safety, accelerating project delivery through the Every Day Counts (EDC) program, expediting the environmental review and approval process, development and review of performance management metrics/standards and freight plans, and coordination with other Federal agencies. These funds also provide the means to approve project agreements, environmental actions, and State Transportation Improvement Plans (STIPs), and approve and process obligations and reimbursements, as well as ensure compliance with the Federal-aid Highway Program and proper use of Federal funds.

The majority of FHWA's employees are located in 52 Division offices – one in each State; Washington, DC; and Puerto Rico. The agency also has regional offices for the Federal Lands Highway Program and a Resource Center, which provides technical assistance, training, and innovative technology deployment assistance for the Division offices, State departments of transportation, metropolitan planning organizations, and local agencies. In total, FHWA has

approximately 1,400 field staff, comprising 65 percent of the GOE-funded workforce. Field staff work directly with State and local partners and other Federal agencies and Tribes to oversee the Federal-aid program and assist these partners in advancing projects more quickly through innovations such as E-NEPA and accelerated project delivery tools.

FHWA's Headquarters program staff provides national leadership and works directly with division offices, States, and other partners to advance the Federal-aid Highway Program. These offices are responsible for innovations to accelerate project delivery and reduce environmental review time, instituting performance management standards and processes, oversight of bridge inspection, coordination among other Federal agencies, and providing critical technical assistance to division offices, States, and other partners. The program offices lead implementation of the various components of the FAST Act, especially in the areas of performance management, environmental review, and project/program innovation.

FHWA's Headquarters support offices provide agency-wide support for the Federal-aid Highway Program. These offices provide all legal, IT, policy, human resources, training, finance, budget, and acquisitions support for the entire agency. These offices played a key role in the rulemaking process, provided critical technical assistance on reauthorization and other legislation, and established employee programs and training opportunities to maintain a knowledgeable workforce, among other essential responsibilities.

Funding Request

FHWA requests a $435.8 million Limitation on Administrative Expenses (LAE) consisting of $433.3 million for FHWA Federal-Aid General Operating Expenses (GOE) and $2.5 million for the Appalachian Regional Commission (ARC). In accordance with section 104 of title 23, United States Code, a portion of FHWA's administrative expenses funding is transferred to ARC for administrative activities associated with the Appalachian Development Highway System.

The following table summarizes the requested FY 2017 obligation limitation changes from FY 2016 enacted levels.

Summary of Requested FY 2017 Funding Changes from FY 2016 Enacted Level

GOE Activity	**Amount ($000)**
Adjustments to Base	
President's 2017 pay raise	3,593
Annualization of President's 2016 pay raise	981
Two Less Compensable Days	-2,313
GSA Rent	570
Working Capital Fund (WCF)	-2,182
Inflation	686
Subtotal, adjustments to base	**1,335**

Program Increases/Decreases	
DP2 maintenance (cost moved from the WCF)	1,888
Restoration of PDP program	1,270
UPACS modernization	1,000
Discipline seminar restoration	800
Mobile device deployment	750
Federal Lands data center consolidation	500
Adjustment to ARC	-748
Subtotal, program increases/decreases	5,460
Total	**$6,795**

Of the increased funding requested, $1.3 million is for adjustments to the base for pay raises ($4.6 million), rent ($0.6 million) and inflation ($0.7 million). These increased costs are offset by decreases to Working Capital Fund and two less compensable days.

The remaining increases are simply to allow FHWA to return to normal operations. During the GOE reductions in FY 2014 and 2015, FHWA had to cut back significantly on necessary IT systems and equipment support as well as reduce key initiatives such as the Professional Development Program (PDP)—a necessary pipeline for FHWA to attract and retain quality employees. The other programmatic increase, DP2 maintenance, is FHWA's share for the new Departmental procurement system.

Following is a description of the request:

DP2 Maintenance ($1.9 million)-- In 2017, FHWA will move to the Department Procurement platform (DP2), a comprehensive acquisition system that will allow FHWA to commit, track, manage, and report on its procurement actions. The system interfaces with Delphi, the Department's accounting system, and also with the Federal Procurement Data System, allowing for detailed obligation reporting on each award.

The Enterprise Service Center (ESC) will manage DP2 for DOT Operating Administrations and will provide the following services:

- *Application Services*—configuration management, technical testing, user administration, and maintenance of all system environments.
- *Hosting Services*—for hardware, storage, operating system administration, database administration, and disaster recovery.
- *Telecommunications*—for firewall/load balancing management and equipment.
- *IT Security*—for certification/accreditation, and security system officer services.
- *System Development*—for upgrades with Delphi integration, as well as other needed system enhancements.
- *Help Desk and Accounting Services*—includes customer support and issue resolution, password resets, and configuration management.

Restoration of Professional Development Program (PDP) ($1.27 million)— The Professional Development Program (PDP) is the agency's pipeline for entry-level professionals focused on program delivery positions in the Division Offices, and the design and construction of highway and bridge projects on Federal and Tribal lands performed in Federal Lands Highway Division Offices. The PDP also provides funding for training and development assignments for approximately 10 decentralized PDPs in Division and Federal Lands offices. PDP's are hired in the Agency's primary mission critical occupations, including engineering and structural engineering, finance, planning, environment, realty, and civil rights. They are hired at the GS-5, GS-7, and GS-9 levels and are developed to fulfill the hiring needs in these critical occupations throughout the Agency.

In FY 2015, the PDP was reduced from 48 to 30 positions—a nearly 40% reduction. This significant cut has had a negative impact on the agency, as the PDP is a necessary pipeline to fill mission critical positions. This program is vital to the Agency's long term succession planning.

UPACS Modernization ($1 million)-- The User Profile and Access Control System (UPACS) manages user authentication and associated access rights for access to all FHWA Information Systems. As such, the UPACS system maintenance is critical to FHWA's compliance with Federal and DOT cybersecurity mandates, and security for all FHWA information systems.

In 2012, the UPACS system was upgraded to comply with HSPD-12 Personal Identity Verification (PIV) requirements, however the code base for the system was not updated and is aging. A modernization effort is needed to upgrade the system and ensure it is maintained in a good state of repair. The modernization effort will review the code base and the system architecture to maximize system compliance with all security mandates and best practices, as well as optimizing system performance to meet the demands of FHWA's mission support systems.

Discipline Seminars ($0.8 million)-- As a cost savings measure during FY 2014 and 2015, FHWA nearly eliminated its discipline seminars. In FY 2017, FHWA is proposing to hold 5 discipline seminars. This is not an expansion of FHWA's discipline training program, but rather would return the agency to pre-FY 2014 levels. FHWA is also making use of technology to deliver some of the seminars virtually, which will reduce costs.

The primary focus of each seminars is to develop technical skills, strengthen mission critical proficiencies as well as provide networking opportunities for knowledge sharing within each respective discipline. Discipline champions, agency experts and other discipline members also have the opportunity to develop or refine leadership skills during the planning and implementation of the seminars thereby supporting discipline succession planning. The National Discipline Leadership and Development Seminars are an integral part of the Discipline Support System to promote FHWA's overall knowledge management and development of technical expertise and leadership development. These seminars not only provide a platform to build professional competencies and support learning, but to also make available the tools and resources necessary to facilitate knowledge transfer and encourage professional networking.

Mobile Device Deployment ($0.8 million)-- FHWA has been investing over the past few years in equipping our workforce with mobile devices in order to maximize productivity based on the types of work staff perform and how they perform that work. In FY 2017, FHWA expects to use this funding to refresh the mobile devices that have been previously deployed to ensure the devices are fully functional and compliant with the latest cybersecurity requirements.

FHWA will also deploy additional smartphone and tablet devices to enable FHWA to fully participate in State DOT e-Construction program, which will maximize the States' return on investment in delivering their construction projects. e-Construction, which is one of FHWA's signature Every Day Counts (EDC) initiatives, is a paperless construction administration delivery process that includes electronic submission of all construction documentation by all stakeholders, electronic document routing/approvals (e-signature), and digital management of all construction documentation in a secure environment allowing distribution to all project stakeholders through mobile devices. Since FHWA is a critical stakeholder in the e-Construction process, the agency's ability to quickly respond electronically is essential to the State DOT's successful implementation of these initiatives.

Data Center Consolidation ($0.5 million)-- In FY 2013, FHWA conducted an assessment of the Office of Federal Lands (HFL) IT programs and made a recommendation to consolidate their data centers at each field location (Eastern, Central, and Western) to save money and improve IT service delivery. Each division has historically maintained separate data centers due to network latency. FHWA had anticipated being able to close at least one of the 3 HFL data centers by FY 2017; however funds to start this initiative have not been available so it has remained on hold. Delaying the consolidation will result in increased cost, reduced efficiency, and worsening IT support for the HFL field offices. This initiative is also aligned with the Federal Data Center Consolidation Initiative (FDCCI), mandated in FITARA, to consolidate data centers where feasible.

Why Do We Need To Fund The Program At The Requested Level?

Funding at the requested, authorized amount will enable FHWA to operate at normal levels and effectively oversee the Federal-aid Highway Program. This allows FHWA to maintain post-hiring freeze staff levels (approximately 100 staff less than pre-hiring freeze levels), provide required IT support such as scheduled computer refreshes and required server maintenance, re-institute some previously cancelled training courses, and pay for deferred office moves. In some instances, FHWA will not be providing all support services at pre-FY 2014 levels; however, the requested funding level will allow FHWA to successfully administer the program.

It is also important to note the following factors that affect the administration of the Federal-aid program:

Continued program consolidation has not reduced staffing requirements.

The FAST Act effectively continued the consolidated program structure from MAP-21; however, nearly all eligibilities and activities from previous authorizations continue. FHWA has been and remains organized around core areas of expertise such as infrastructure, safety, operations,

environmental assessments, and project planning. Those core areas of expertise remain critical to delivering the consolidated program structure under the FAST Act and the budget request.

Federal-aid program continues to grow in scope and complexity.

The FAST Act continued and expanded many of the management and oversight responsibilities under MAP-21. Further, the FAST Act requires numerous rulemakings and studies that, although unfunded, will require additional resources.

While increased project management, accelerated project delivery, and shortening environmental reviews and approvals are all worthy initiatives, they require both human and financial resources to achieve. FHWA fully supports these initiatives, and will continue these efforts under the FAST Act and in our FY 2017 budget proposal— we simply want to ensure that we have sufficient resources to effectively carry out these tasks.

Also, the FAST Act established both a freight formula and freight discretionary program, along with programmatic requirements such as the designation of a freight network, oversight of State freight plans, and in the case of the discretionary program, a role in project review and selection. While FHWA strongly supports these measures, and believes that these programs will improve the movement of goods throughout the country, these new programs will increase the FHWA's administrative responsibilities.

Reduced request for Appalachian Regional Commission (ARC) administrative funding.

The administrative funding amount for ARC is included within FHWA's overall administrative request. ARC administrative funds provide for pay/benefits, travel, and related expenses for both ARC and FHWA employees that are working on the Appalachian Development Highway System (ADHS). As the ADHS is completed, FHWA staff currently supporting the ADHS program will return to support other FHWA programs. This will mean less spending in FY 2017 and future years on ARC administrative expenses. In order to provide flexibility for FHWA and ARC to align resources with estimated needs, and to ensure that administrative funds are most efficiently used, FHWA, in alignment with the FAST Act, proposes to fund ARC administrative expenses from its overall request.

What Benefits Will Be Provided To The American Program Through This Request?

FHWA and our administrative funding are integral to the effective delivery of the Federal-aid Highway Program. We:

- Ensure that $51.5 billion of annual Federal funding is delivered in accordance with Federal laws and regulations and protected from fraud, waste and abuse.
- Protect the safety of the traveling public through highway and bridge design and operations standards and guidance as well as by establishing requirements for and monitoring bridge inspection practice.
- Help communities recover from national disasters through administration of the emergency relief program and by providing internationally recognized technical expertise.

- Shorten project delivery through assistance to State and local governments in the planning, design and construction process, including meeting NEPA requirements and coordinating with other federal agencies to obtain the required permits.
- Design and manage the construction for projects on federal lands, including National Parks and forest highways. We provide public access to America's treasures.
- Conduct research, advance technologies and practices, deliver training and provide technical assistance to States, local and tribal governments. These new technologies save taxpayer time, money and lives

With qualified staff and necessary contracts to provide oversight, FHWA will be able to make roadways safer, maintain and improve road conditions, rehabilitate and repair structurally deficient bridges, improve access to and roads within Federal and Tribal lands, conduct and deploy innovative transportation research, and many other functions critical to maintaining an efficient and safe transportation network.

In recent years, FHWA has increased its focus on innovation through the EDC initiative, which Congress codified in the FAST Act, demonstrating the significance and effectiveness of the program. EDC has led to significant improvements in shortening project delivery and accelerating technology and innovation deployment. For example, FHWA has worked closely with its State partners to develop the Construction Manager General Contractor contracting method to shorten project delivery. As a result, new or revitalized roadways and bridges are opening to the public sooner.

EDC initiatives have also had a significant impact on safety and emissions. For example, adaptive signal control, which adjusts signal phases based on traffic patterns, were implemented in 90 locations as of 2012. These signals reduce fuel consumption and crashes. Also, EDC supported the development and use of warm-mix asphalt (WMA), which allows asphalt to be mixed at lower temperatures, reducing costs and fuel consumption. In 2012, WMA represented 30 percent of the asphalt market, resulting in a 5 percent reduction in overall air emissions -- the equivalent of taking 160,000 vehicles off the road.

FHWA works closely with its State, local, Federal and Tribal partners to shorten the environmental review process. For example, on the Tappan Zee bridge project, one of the largest bridge projects in the nation, FHWA worked with New York State to develop a concurrent environmental review process, resulting in a significantly expedited review and approval process. This type of collaboration reduces costs and enables projects to be completed sooner, which reduces commute times for the nearly 140,000 drivers who use the bridge each day.

These are just a few examples of FHWA employing innovation to assist its partners in completing transportation projects more safely, quickly, and efficiently, which results in fewer fatalities and accidents, reduced congestion and commute times, and accelerates better movement of goods and services throughout the nation.

By providing funding at the requested level, FHWA can continue to provide these valuable services, enhancing the transportation experience for all Americans.

FEDERAL HIGHWAY ADMINISTRATION

21st CENTURY CLEAN TRANSPORTATION PLAN INVESTMENTS IN FY 2017 REQUEST - TOTAL BUDGET AUTHORITY

Program	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
21st Century Clean Transportation Plan Investments	**7,500,000,000**	**14,500,000,000**	**15,500,000,000**	**18,500,000,000**	**17,000,000,000**
Climate-Smart Performance Formula Funds Program	2,000,000,000	3,000,000,000	3,000,000,000	3,500,000,000	2,000,000,000
21st Century Regions Grant Program	1,000,000,000	6,500,000,000	7,000,000,000	9,500,000,000	10,000,000,000
Clean Communities Grant Program	1,000,000,000	1,500,000,000	2,000,000,000	2,000,000,000	2,500,000,000
Resilient Transportation Grant Program	1,500,000,000	1,500,000,000	1,500,000,000	1,500,000,000	1,500,000,000
Future Freight System Program	2,000,000,000	2,000,000,000	2,000,000,000	2,000,000,000	1,000,000,000
TOTAL, FHWA	**7,500,000,000**	**14,500,000,000**	**15,500,000,000**	**18,500,000,000**	**17,000,000,000**
CA Subject to Obligation Limitation	**7,500,000,000**	**14,500,000,000**	**15,500,000,000**	**18,500,000,000**	**17,000,000,000**

Program	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total FY 2017-2026
21st Century Clean Transportation Plan Investments	**13,450,000,000**	**11,000,000,000**	**8,000,000,000**	**2,000,000,000**	**2,000,000,000**	**109,450,000,000**
Climate-Smart Performance Formula Funds Program	1,500,000,000	1,000,000,000	500,000,000	-----	-----	16,500,000,000
21st Century Regions Grant Program	9,000,000,000	8,500,000,000	6,500,000,000	1,500,000,000	1,500,000,000	61,000,000,000
Clean Communities Grant Program	1,950,000,000	1,500,000,000	1,000,000,000	500,000,000	500,000,000	14,450,000,000
Resilient Transportation Grant Program	-----	-----	-----	-----	-----	7,500,000,000
Future Freight System Program	1,000,000,000	-----	-----	-----	-----	10,000,000,000
TOTAL, FHWA	**13,450,000,000**	**11,000,000,000**	**8,000,000,000**	**2,000,000,000**	**2,000,000,000**	**109,450,000,000**
CA Subject to Obligation Limitation	**13,450,000,000**	**11,000,000,000**	**8,000,000,000**	**2,000,000,000**	**2,000,000,000**	**109,450,000,000**

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21st CENTURY CLEAN TRANSPORTATION PLAN INVESTMENTS

(LIQUIDATION OF CONTRACT AUTHORIZATION)

(LIMITATION ON OBLIGATIONS)

(TRANSPORTATION TRUST FUND)

Contingent upon enactment of multi-year 21st century clean transportation plan investments authorization legislation, for the payment of obligations incurred in this account in carrying out the Future Freight System Program, Climate-Smart Performance Formula Funds Program, 21st Century Regions Grant Program, Clean Communities Grant Program, Resilient Transportation Grant Program, Rapid-Growth Area Transit, Transit Formula Grants, Rail Service Improvement, Motor Carrier Safety Operations and Programs, Motor Carrier Safety Grants, and Autonomous Vehicle Development programs in such legislation, $17,935,000,000 to be derived from the Transportation Trust Fund in fiscal year 2017 and to remain available until expended: Provided, that funds available for the implementation or execution of such programs shall not exceed total obligations of $17,935,000,000 in fiscal year 2017.

Note: FHWA programs include Future Freight System Program, Climate-Smart Performance Formula Funds Program, 21st Century Regions Grant Program, Clean Communities Grant Program, and Resilient Transportation Grant Program, which are provided obligation limitation and liquidating cash of $7,500,000,000 out of the $17,935,000,000 total for FY 2017.

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Executive Summary
21st Century Clean Transportation Plan Investments

What Is The Request And What Funds Are Currently Spent On The Program?
Our FY 2017 budget request of $7.5 billion under the 21st Century Clean Transportation Plan Investments provides funding for a series of new, multi-modal programs that focus on shifting investment decisions towards a "21st Century Regions" approach that reflects America's changing and increasingly regional demographics.

What Is This Program And Why Is It Necessary?
The 21st Century Clean Transportation Plan Investments includes five multi-modal programs, to be administered by FHWA. The Climate-Smart Performance Formula Funds Program would incentivize States to invest in transportation projects that reduce transportation-related carbon dioxide (CO_2) emissions, with the funds designed to accelerate the essential transition to investments across transportation modes in a way that will help mitigate transportation's contribution to climate change and improve outcomes for end users. The 21st Century Regions Grant Program would promote regional transportation and land use plans that reduce per capita greenhouse gas emissions while improving the mobility of people and goods. The Clean Communities Grant Program would create a new competitive funding source for local governments through competitive grants that could be used to transform land use and transportation systems to encourage climate-smart development and achieve regional greenhouse gas (GHG) and vehicle miles traveled (VMT) reduction goals. The Resilient Transportation Grant Program, modeled on HUD's National Disaster Resilience Competition, encourages local and State governments to invest in specific projects that address the impacts of climate change on all types of transportation systems and surrounding communities. The Future Freight System Program will provide targeted, competitive grants to State and local agencies to fund innovative rail, highway, port and intermodal projects that can help transform our current freight system into a highly efficient, multi-modal system that will strengthen America's exports and trade, while at the same time reducing the freight system's environmental impact.

Why Do We Need To Fund The Program At The Requested Level?
The requested total of $7.5 billion for these programs in FY 2017, with total funding of $109.5 billion over the ten-year period of the 21st Century Clean Transportation Plan Investments, provides sufficient resources to encourage States and localities to make the investments that are demonstrated to reduce greenhouse gas emissions; spur smart growth in metropolitan areas; improve quality of life in communities where demand for transit and non-motorized travel is soaring; allow investments to make the transportation system more resilient to climate change and extreme weather effects; and develop an efficient, low emissions freight system that will be required in the 21st century.

What Benefits Will Be Provided To The American Public Through This Request?
Increasingly, Americans are choosing to live in metropolitan areas and mega-regions that often cross State lines, yet the majority of dollars continue to flow through States. This request would change that balance, while also addressing national needs such as reducing greenhouse gas emissions, improving quality of life in communities through smart development, preparing our transportation system for the effects of climate change, and further transforming our freight system to meet 21st century requirements.

Detailed Justification
Climate-Smart Performance Formula Funds Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Climate-Smart Performance Formula Funds Program ($2.0 billion)
($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
21st Century Clean Transportation Plan Investments			
Climate-Smart Performance Formula Funds Program	-----	2,000,000	2,000,000
21st Century Regions Grant program	-----	1,000,000	1,000,000
Clean Communities Grant Program	-----	1,000,000	1,000,000
Resilient Transportation Grant Program	-----	1,500,000	1,500,000
Future Freight System Program	-----	2,000,000	2,000,000
Total	**-----**	**7,500,000**	**7,500,000**

What Is This Program And Why Is It Necessary?

The Climate-Smart Performance Formula Funds program would incentivize States to invest in transportation projects that are demonstrated to reduce transportation-related CO_2 emissions. These new incentive funds would be awarded to States which demonstrate a 2 percent reduction in CO_2 emissions coming from mobile sources compared to baseline emissions. For example, States may qualify for this funding by making sustained reductions in VMT per capita, controlled for external factors including economic growth and gas prices. These funds are designed to accelerate the essential transition to investments of federal formula funds that help mitigate transportation's contribution to climate change and improve outcomes for end users.

Why Do We Need To Fund The Program At The Requested Level?

This program will provide $16.5 billion over a ten-year period, starting with $2 billion in FY 2017, to encourage States to make the specific types of investments that are demonstrated to reduce greenhouse gas emissions, such as rail infrastructure, infrastructure that supports compact transit-oriented development, and bicycle and pedestrian facilities. State DOTs will be the eligible recipients of this incentive funding, which will peak at a funding level of $3.5 billion in year four of this budget proposal. States may choose to partner with local agencies in order to encourage them to make investments that reduce emissions and encourage smart growth of our transportation system.

Climate-Smart Performance Formula Funds Program Funding Levels
($ in millions)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	TOTAL FY 17-26
Climate-Smart Performance Formula Funds Program	2,000	3,000	3,000	3,500	2,000	1,500	1,000	500	0	0	16,500

What Benefits Will Be Provided To The American Public Through This Request?

The Moving Ahead for Progress in the 21st Century Act established a wide range of national goals for the Federal-aid highway program, and the FAST Act reaffirmed these goals. However, some goals—such as improved coordination of land use planning and accelerating the reduction in the nation's greenhouse gas emissions—can be challenging to address through the traditional Federal-aid highway programs. States receive the vast majority of Federal-aid highway funding through formula apportionments, but economic and population indicators, as well as infrastructure needs, increasingly push beyond State lines. Furthermore, formula programs are overwhelmingly focused on modal siloes as opposed to addressing systemic needs for people and goods transportation.

There is an urgent need to increase funding for surface transportation. In addition, the distribution of this vital funding needs to reflect the changing needs of our country, such as the growth of large mega-regional economies and the emerging threats to our way of life, including climate change. Historically, the formulas that determined how much highway funding each State receives were based on lane miles and vehicle miles traveled, which gave States an incentive to build new roads, sometimes at the expense of a better, more integrated multimodal system. Furthermore, the siloed nature of those funds were not flexible enough to address what are often multimodal transportation needs of the State. The Climate-Smart Performance Formula Funds Program will help transition to a fundamental reform in the way investment decisions are made by States, by:

- promoting a multimodal mindset when solving transportation challenges;
- reinforcing efforts – already underway in States and localities across the nation - to provide travelers with a wider range of transportation options;
- responding to the new technological innovations that are disrupting old paradigms, enabling us to use existing assets in more creative, efficient ways;
- ensuring Federal-aid highway program funding is used to encourage meaningful efforts to reduce greenhouse gases and VMT per capita;
- increasing transparency and accountability in the Federal aid Highway program; and,
- advancing investments that, among their many benefits to end users, will reduce both emissions and travel times.

Detailed Justification
21st Century Regions Grant Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – 21st Century Regions Grant Program ($1.0 billion)

($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
21st Century Clean Transportation Plan Investments			
Climate-Smart Performance Formula Funds Program	-----	2,000,000	2,000,000
21st Century Regions Grant program	-----	1,000,000	1,000,000
Clean Communities Grant Program	-----	1,000,000	1,000,000
Resilient Transportation Grant Program	-----	1,500,000	1,500,000
Future Freight System Program	-----	2,000,000	2,000,000
Total	**-----**	**7,500,000**	**7,500,000**

What Is This Program And Why Is It Necessary?

The 21st Century Regions Grant Program would promote regional transportation and land use planning that reduces vehicle miles traveled (VMT) and associated GHG emissions, while improving the transportation of people and goods. This competitive grant program would reward visionary localities with funding for strategic investments to shape long-term regional development that is cleaner, more efficient, and more equitable. Grants would be awarded to metropolitan planning organizations (MPOs) or regional planning organizations (RPOs) to support integrated strategies to expand transportation alternatives and multimodal networks, enhance "last mile" connectivity, decrease congestion, increase pedestrian and bike infrastructure, provide data and tools to improve transit and travel efficiency, and coordinate transportation and land use planning. In order to be eligible for these funds, MPOs or RPOs would need to demonstrate they are coordinating planning and performance targets with any other MPOs that are designated within the same metropolitan statistical area, or consolidating with any other MPO that is already designated within the same metropolitan statistical area. MPOs or RPOs will also employ an equitable and performance-based approach to decision-making, taking a regional and comprehensive approach to planning, and align transportation plans with plans for land-use, housing, environmental protection, and economic development. This should include a plan for coordinating across jurisdictional permitting and approval responsibilities.

This grant program would reflect the changing geography and economy of the country and would support the growing importance of regional planning. America is becoming an increasingly metropolitan nation, with 75 percent of the nation's population projected to live in 'mega-regions' by 2050. As these metropolitan areas expand, the transportation program must align the tools and incentives to ensure that this urbanization occurs in an environmentally sustainable and climate-sensitive manner. Metropolitan areas require flexible resources to

address their unique and evolving surface transportation needs.

Why Do We Need To Fund The Program At The Requested Level?

Starting with an initial $1 billion investment, this program will quickly accelerate and provide $61 billion over a ten-year period to fund multimodal transportation investments in metropolitan areas that encourage smart growth of our transportation system. Metropolitan regions receive insufficient funding, despite having the majority of the population, producing the majority of national GDP, and being best positioned to make investment decisions to optimize existing assets and expand multimodal travel choices. This substantial new funding stream, with awards comparable in magnitude to what many States receive through the current Federal-aid highway program, will address the critical resource scarcity at the metropolitan level while also aligning local agency decisions with the national goals of sustainability, efficiency, connectivity, and equity. This will create a powerful incentive for better plans, empowering metropolitan areas to promote more performance-based, regional and equitable decision-making through the expenditure of those funds.

In the first year, this program would be funded at a level of $1.0 billion, with funding available to MPOs and RPOs on a competitive basis. This funding would peak at $10.0 billion in the fifth year. The program's average funding level would be $6.1 billion per year.

21st Century Regions Grant Program Funding Levels

($ in millions)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	TOTAL FY 17-26
21st Century Regions Grant Program	1,000	6,500	7,000	9,500	10,000	9,000	8,500	6,500	1,500	1,500	61,000

What Benefits Will Be Provided To The American Public Through This Request?

Expanding the opportunities for low-emissions travel in metropolitan areas represents a major opportunity for climate change mitigation. For instance, compact land development can reduce VMT–and in turn GHG emissions—by 20 to 40 percent compared to conventional development. Metropolitan areas are ideally positioned to plan and make investments that will enable the nation to respond to the impending climate change crisis. Our metropolitan areas already tend to have lower energy and GHG emissions per capita due to more efficient land use, and better energy efficiency of buildings and transit availability. Metropolitan planning organizations are also the decision-making bodies best positioned to ensure that funds are invested in solutions that will meet the changing needs of metropolitan areas and ensure that people and goods move within and between cities efficiently, safely, and sustainably. These funds will help to address structural gaps in the Federal-aid highway program, and enable investments that not only reduce emissions, but also improve reduce travel times and provide other benefits to end users.

Detailed Justification
Clean Communities Grant Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Clean Communities Grant Program ($1.0 billion)

($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
21st Century Clean Transportation Plan Investments			
Climate-Smart Performance Formula Funds Program	-----	2,000,000	2,000,000
21st Century Regions Grant program	-----	1,000,000	1,000,000
Clean Communities Grant Program	-----	1,000,000	1,000,000
Resilient Transportation Grant Program	-----	1,500,000	1,500,000
Future Freight System Program	-----	2,000,000	2,000,000
Total	**-----**	**7,500,000**	**7,500,000**

What is this Program and Why is it Necessary?

The Clean Communities Grant Program would create a new competitive grant program for local governments to encourage climate-smart development and achieve regional GHG and VMT reduction goals. Eligibility for funding would be contingent on communities implementing climate-supportive policies across transportation modes to support transit oriented development, complete streets, brownfield clean-up and in-fill activities, and bicycle, pedestrian, and transit infrastructure and services.

This grant program would be focused on promoting thriving main streets, expanding transit-oriented development, improving walking and bicycling networks, and incentivizing better land-use planning decisions for dense development in the urban core. Local agencies would have the flexibility to tailor strategies to their local context by choosing from a wide array of innovative planning and climate change mitigation activities. Proposals could include activities focused on redesigning or reconstructing existing infrastructure to better achieve context sensitive solutions, removing outdated freeways or replacing them with surface level, multifunctional shared streets that reintegrate the street grid. They could be focused on urban and suburban in-fill development and the clean-up and re-use of brownfields. They also could fund the expansion of bicycle and pedestrian networks. Proposals could include innovative solutions, such as market-based congestion pricing, complete streets policy implementation, or intelligent transportation systems technology. In addition, a small portion of the funding would be dedicated to a design competition that would be focused on reconnecting neighborhoods divided by interstates and other linear barriers.

Why Do We Need To Fund The Program At The Requested Level?

Funding for this program would begin at $1 billion per year, rising to a peak of $2.5 billion in FY 2021, and then decreasing through FY 2026, as these program goals permeate transportation planning and investment decision-making to a greater extent in the underlying base formula programs. As outlined in the table below, a total of $14.45 billion is proposed over ten years. A 15 percent rural set-aside would ensure that all types of communities could take advantage of this critical opportunity to plan for and build a cleaner, smarter future.

Clean Communities Grant Program Funding Levels

($ in millions)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	TOTAL FY 17-26
Clean Communities Grant Program	1,000	1,500	2,000	2,000	2,500	1,950	1,500	1,000	500	500	14,450

What Benefits Will Be Provided To The American Public Through This Request?

Targeting grants to communities where demand for transit and non-motorized travel is increasing would help aid reductions in GHG emissions, helping the nation to meet our critical emissions reductions goals and respond to the challenge of climate change. Studies suggest that compact development with low- or no-emission transportation options can reduce driving by up to 40 percent and carbon emissions per household by 15 to 30 percent.

Detailed Justification
Resilient Transportation Grant Program

What Is The Request And What Funds Are Currently Spent On The Program?

FY 2017 – Resilient Transportation Grant Program ($1.5 billion)

($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
21st Century Clean Transportation Plan Investments			
Climate-Smart Performance Formula Funds Program	-----	2,000,000	2,000,000
21st Century Regions Grant program	-----	1,000,000	1,000,000
Clean Communities Grant Program	-----	1,000,000	1,000,000
Resilient Transportation Grant Program	-----	1,500,000	1,500,000
Future Freight System Program	-----	2,000,000	2,000,000
Total	**-----**	**7,500,000**	**7,500,000**

What Is This Program And Why Is It Necessary?

The Resilient Transportation Grant Program, modeled on HUD's National Disaster Resilience Competition (NDRC) ($1.5 billion), encourages local and State governments to propose specific projects that address the impacts of climate change on all types of transportation systems and surrounding communities. Cutting-edge projects should incorporate resilience strategies, such as adaptive materials, risk-sensitive design, and next generation transportation and logistics technology. A portion of the funding would be spent on a series of regional "resilience academies" to help local and State leaders develop innovative, data-driven, and interdisciplinary proposals, as was done with the NDRC. Urban, rural and Tribal communities would be eligible – with a 20 percent set aside for rural and Tribal communities. A 20 percent rural set-aside would ensure that all communities have access to the opportunity to make critical resilience improvements.

Why Do We Need To Fund The Program At The Requested Level?

This five year program would be funded at $1.5 billion per year, with a total of $7.5 billion proposed over the life of the program.

Transportation infrastructure is vulnerable to climate change and extreme weather effects. Making a transportation system more resilient to these effects will require investments in specific transportation assets in a variety of settings and environments. While work on the resilient planning, design and construction of transportation infrastructure has gained ground at the State and national levels, this funding would help local communities implement resiliency improvements in their transportation systems. At $1.5 billion, communities around the nation will be able to compete for funds that provide meaningful benefits at the local level.

Resilient Transportation Grant Program Funding Levels

($ in millions)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	TOTAL FY 17-26
Resilient Transportation Grant Program	1,500	1,500	1,500	1,500	1,500	0	0	0	0	0	7,500

What Benefits Will Be Provided To The American Public Through This Request?

Targeting grants to improve transportation resiliency in communities vulnerable to climate change and extreme weather would greatly expand implementation of adaptation and resiliency measures at the local level and help ensure the communities maintain economic development and growth. By focusing on the impacts of climate change on transportation systems and encouraging innovation at the local level, we can better allocate resources in a way that improves resiliency and economic competitiveness, helps achieve national transportation resiliency goals, and fosters meaningful change.

Detailed Justification
Future Freight System Program

What Is The Request And What Funds Are Currently Spent on the Program?

FY 2017 – Future Freight System Program ($2.0 billion)

($000)

PROGRAM ACTIVITY	FY 2016 ENACTED	FY 2017 REQUEST	DIFFERENCE FROM FY 2016 ENACTED
21st Century Clean Transportation Plan Investments			
Climate-Smart Performance Formula Funds Program	-----	2,000,000	2,000,000
21st Century Regions Grant program	-----	1,000,000	1,000,000
Clean Communities Grant Program	-----	1,000,000	1,000,000
Resilient Transportation Grant Program	-----	1,500,000	1,500,000
Future Freight System Program	-----	2,000,000	2,000,000
Total	**-----**	**7,500,000**	**7,500,000**

What Is This Program And Why Is It Necessary?

The Future Freight System Program will provide targeted, competitive grants to State and local agencies by funding innovative rail, highway, port and intermodal projects that can help transform our current freight system into a highly efficient, multi-modal system that will strengthen America's exports and trade, while at the same time reducing the freight system's environmental impact.

The FAST Act took a number of critical steps to invest in our freight networks, including a formula freight program, discretionary grants for freight projects, and the establishment of a freight corridor designation process. The Future Freight System Program takes additional steps to develop an ultra-efficient, ultra-low emissions freight system that will be required in the 21st century. Program goals include:

- Shifting from high emissions (trucks) to lower emissions freight modes (pipeline, rail, and waterborne shipping);
- Developing efficient non-petroleum low emissions freight systems through electrification and alternative fuels infrastructure;
- Targeting key freight bottlenecks that tend to be neglected by existing patterns of institutional interests (port/rail connections, border crossing points, aviation landside connections, and pipelines connections).

To address these goals, the Future Freight System Program will offer targeted competitive grants, to State and local agencies aimed at, among other things:

- Developing alternative fuel stations and electric vehicle recharging stations along designated freight corridors;
- Converting local delivery or service fleets to electricity;

- Converting long-range freight delivery systems or fleets (maritime, rail, long-distance trucking) to alternative fuels;
- Converting large volumes of freight movements from high emissions to low emissions transportation modes;
- Supporting "shore power" deployment for commercial aviation and ships, enabling aircraft and ships to turn off auxiliary power units when loading and unloading.
- Accelerating border crossing improvements with significant congestion and significant freight movements;
- Addressing intermodal connectors;
- Reducing congestion at our nation's ports.

Why Do We Need To Fund The Program At The Requested Level?

This program would be funded at $2 billion in FY 2017, with a total of $10 billion proposed over the life of the program. Grant recipients would have two years to obligate funds. The funding for the program would ramp down in later years, with the expectation that private and traditional formula funds would increasingly support these priorities.

Future Freight System Program Funding Levels

($ in millions)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	TOTAL FY 17-26
Future Freight System Program	2,000	2,000	2,000	2,000	1,000	1,000	0	0	0	0	10,000

What Benefits Will Be Provided To The American Public Through This Request?

The long and often vulnerable supply chains of high-value, time-sensitive commodities are particularly susceptible to congestion. Congestion results in significant carbon emissions and enormous costs to shippers, carriers, and the economy. Before accounting for environmental impacts, *Beyond Traffic*, US DOT's 30 year framework for the future, estimates that truck congestion results in $27 billion in wasted time and fuel alone. By investing in multi-modal freight solutions, we can strengthen our Nation's primacy in freight efficiency and services, while at the same time reducing the carbon emissions generated from our transportation system.

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DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
HIGHWAY INFRASTRUCTURE INVESTMENT, RECOVERY ACT

BACKGROUND

Enacted on February 17, 2009, the American Recovery and Reinvestment Act of 2009 (Recovery Act) provided $27.5 billion from the General Fund to the Federal Highway Administration (FHWA), of which $26.6 billion was apportioned to States based on formulas described in the Recovery Act and $0.9 billion was allocated to programs identified in the Recovery Act, including the Indian Reservation Roads Program, Park Roads and Parkway Program, Forest Highway Program, Refuge Roads Program, Disadvantaged Business Enterprise Bonding Assistance, Territorial Highway Program, Puerto Rico Highway Program, and the Ferry Boat Discretionary Program. Administrative oversight funds were available through September 30, 2012 and all other funds were available through September 30, 2010.

The FHWA Recovery Act funds have been used to invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits to the Nation. The Recovery Act funds augmented existing investments authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005: A Legacy for Users (SAFETEA-LU), enabling States, regional, and local governments to accelerate to completion a number of highway infrastructure projects planned or underway. Since the Recovery Act was enacted in February 2009, more than 42,000 miles of pavement across the United States have been improved. As of September 30, 2015, States have expended 100% of Recovery Act obligations and closed 12,585 of 12,913 projects. As of September 30, 2015 Recovery Act funds are cancelled and are no longer available for expenditure.

BUDGETARY RESOURCES

No new budget authority is requested for FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
HIGHWAY INFRASTRUCTURE INVESTMENT, RECOVERY ACT

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-0504-01-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
	Budgetary Resources:			
	Budget authority			
	Appropriations, discretionary:	.....	.....	.....
11.60	Appropriation, discretionary (total)	.....	.....	.....
	Spending authority from offsetting collections, discretionary:	.....	.....	.....
17.50	Spending authority from offsetting collections, disc (total)	.....	.....	.....
Change in obligated balance				
	Unpaid obligations:			
30.00	Unpaid obligations, brought forward, Oct 1	147	1	1
30.01	Adjustment to unpaid obligations, brought forward, Oct 1		.....	.....
30.11	Obligations incurred, expired accounts	22	.....	.....
30.20	Outlays (gross)	-108	.....	.....
30.41	Recoveries of prior year unpaid obligations, expired	-60	.....	.....
30.50	Unpaid obligations, end of year	1	1	.....
	Uncollected payments:			
30.60	Uncollected payments, Federal sources, brought forward, Oct 1	-2	.....	.....
30.61	Adjustments to uncollected pymts, Fed sources, brought forward, Oct 1	2	.....	
30.90	Uncollected payments, Federal sources, end of year	.....	.....	.....
	Memorandum (non-add) entries:			
31.00	Obligated balance, start of year	147	1	1
32.00	Obligated balance, end of year	1	1	1
Budget authority and outlays, net				
	Discretionary:			
	Outlays, gross:			
40.11	Outlays from discretionary balances	108	.....	.....
	Offsets against gross budget authority and outlays:			
	Offsetting collections (collected) from:			
40.30	Federal sources	.....	.....	.....
	Additional offsets against gross budget authority only:			
40.52	Offsetting collections credited to expiring accounts	.....	.....	.....
40.70	Budget authority, net (discretionary)	.....	.....	.....
40.80	Outlays, net (discretionary)	108	.....	.....
41.90	Outlays, net (total)	108	.....	.....

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EMERGENCY RELIEF

BACKGROUND

The Emergency Relief program receives $100 million annually in mandatory funds in the Federal-aid Highways account. The Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005: A Legacy for Users (SAFETEA-LU); and the Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted July 6, 2012, authorized the program to receive additional General Fund discretionary funding as needed. In 2012, $1,662 million was enacted to remain available until expended, and in 2013, $2,022 million was enacted to remain available until expended, both for necessary expenses resulting from major disasters declared pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.).

BUDGETARY RESOURCES

No further appropriations are requested for this account in FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EMERGENCY RELIEF

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-0500-0		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
New obligations:				
Obligations by program by activity:				
00.01	Direct program activity	473	321	321
09.00	Total new obligations (object class 41.0)	473	321	321
Budgetary resources:				
Unobligated balance:				
10.00	Unobligated balance brought forward, Oct 1	950	643	322
10.21	Recoveries of prior year unpaid obligations	166	.....	.....
10.50	Unobligated balance (total)	1,116	643	322
Budget authority:				
Appropriations, discretionary:				
11.00	Appropriation	.....	.....	.....
11.30	Appropriations permanently reduced	.....		
11.60	Appropriation, discretionary (total)	.....	.....	.....
19.30	Total budgetary resources available	1,116	643	322
Memorandum (non-add) entries:				
19.41	Unexpired unobligated balance, end of year	643	322	1
Change in obligated balances				
Obligated balance, start of year (net):				
30.00	Unpaid obligations, brought forward, Oct 1	870	604	409
30.10	Obligations incurred, unexpired accounts	473	321	321
30.20	Outlays (gross)	-573	-516	-365
30.40	Recoveries of prior year unpaid obligations, unexpired	-166	.....	.....
30.50	Unpaid obligations, end of year	604	409	365
Memorandum (non-add) entries:				
31.00	Obligated balance, start of year	870	604	409
32.00	Obligated balance, end of year	604	409	365
Budget authority and outlays, net:				
Discretionary:				
40.00	Budget authority, gross	.....	.....	.....
40.10	Outlays from new discretionary authority	.....	.....	.....
40.11	Outlays from discretionary balances	573	516	365
40.80	Outlays, net (discretionary)	573	516	365
41.80	Budget authority, net (total)	.....	.....	.....
41.90	Outlays, net (total)	573	516	365

OBJECT CLASSIFICATION
In millions of dollars

Identification code: 69-0500-0		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct Obligations:				
14.10	Direct obligations: Emergency Relief Backlog	473	321	321

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM

BACKGROUND

Funding for this program is used for the necessary expenses relating to construction of, and improvements to, corridors of the Appalachian Development Highway System as distributed to the following states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. This schedule shows the obligation and outlay of amounts made available in prior years.

BUDGETARY RESOURCES

No new budget authority is requested for FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-0640-0-1-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
New obligations:				
Obligations by program by activity:				
00.01	Appalachian Development Highway System	1	.....	.....
09.00	Total new obligations (object class 41.0)	1	.....	.....
Budgetary resources:				
Unobligated balance:				
10.00	Unobligated balance brought forward, Oct 1	50	49	49
10.21	Recoveries of prior year unpaid obligations	.....	.....	.....
10.50	Unobligated balance (total)	50	49	49
Budget authority:				
11.60	Appropriation, discretionary (total)	.....	.....	.....
19.30	Total budgetary resources available	50	49	49
	Memorandum (non-add) entries:			
19.41	Unexpired unobligated balance, end of year	49	49	49
Change in obligated balances				
Obligated balance, start of year (net):				
30.00	Unpaid obligations, brought forward, Oct 1	25	12	7
30.10	Obligations incurred, unexpired accounts	1	.....	.....
30.20	Outlays (gross)	-14	-5	-3
30.40	Recoveries of prior year unpaid obligations, unexpired	.....	.....	.....
30.50	Unpaid obligations, end of year	12	7	4
	Memorandum (non-add) entries:			
31.00	Obligated balance, start of year	25	12	7
32.00	Obligated balance, end of year	12	7	4
Budget authority and outlays, net:				
Discretionary:				
40.11	Outlays, gross			
	Outlays from discretionary balances	14	5	3
40.80	Outlays, net (discretionary)	14	5	3
41.80	Budget authority, net (total)	.....	.....	.....
41.90	Outlays, net (total)	14	5	3

APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM

OBJECT CLASSIFICATION
In millions of dollars

Identification code: 69-0640-0-1-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct Obligations:				
14.10	Direct obligations: Grants, subsidies, and contributions	1	.....	.....

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-8072-0-1-401	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Budgetary resources:			
Unobligated balance:			
10.00 Unobligated balance brought forward, Oct 1	……	……	……
10.29 Other balances withdrawn (-)	……	……	……
10.50 Unobligated balance (total)	……	……	……
Budget authority:			
Spending authority from offsetting collections, discretionary:			
17.50 Spending auth from offsetting collections, disc (total)	……	……	……
19.30 Total budgetary resources available	……	……	……
Memorandum (non-add) entries:			
19.41 Unexpired unobligated balance, end of year	……	……	……
Change in obligated balances			
Unpaid obligations:			
30.00 Unpaid obligations, brought forward, Oct 1	……	……	……
30.20 Outlays (gross)	……	……	……
30.50 Unpaid obligations, end of year	……	……	……
Memorandum (non-add) entries:			
31.00 Obligated balance, start of year	……	……	……
32.00 Obligated balance, end of year	……	……	……
Budget authority and outlays, net:			
Discretionary:			
Outlays, gross:			
40.11 Outlays from discretionary balances	……	……	……
40.80 Outlays, net (discretionary)	……	……	……
41.80 Budget authority, net (total)	……	……	……
41.90 Outlays, net (total)	……	……	……

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DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
MISCELLANEOUS APPROPRIATIONS

BACKGROUND

This consolidated schedule shows the obligation and outlay of amounts appropriated from the General Fund for miscellaneous programs. The schedule reflects a Transportation Infrastructure Finance and Innovation (TIFIA) Act program upward interest re-estimate of $159 million for FY 2015 and $216 million for FY 2016. The Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted July 6, 2012, includes the TIFIA Act program upward subsidy re-estimate with this account instead of its previous inclusion in the Federal-aid Highways account.

BUDGETARY RESOURCES

No further discretionary appropriations are requested for FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
MISCELLANEOUS APPROPRIATIONS

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-9911-01-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
New obligations:				
	Obligations by program by activity:			
00.02	Surface Transportation Priorities	22	38	38
00.03	Miscellaneous highway projects	10	14	14
00.83	Interest on TIFIA Upward Reestimate	159	216	.....
09.00	Total new obligation (object class 41.0)	191	268	52
Budgetary resources:				
	Unobligated balance:			
10.00	Unobligated balance brought forward, Oct 1	189	171	119
10.10	Unobligated balance transferred to other accounts [69-9911]	.....	.....	.....
10.11	Unobligated balance transferred from other accounts [69-9911]	.....	.....	.....
10.21	Recoveries of prior year unpaid obligations	14	.....	.....
10.50	Unobligated balance (total)	203	171	119
Budget authority:				
	Appropriations, discretionary:			
11.60	Appropriation (total discretionary)	.....	.....	.....
	Appropriations, mandatory:			
12.00	Appropriation	159	216	.....
12.60	Appropriations, mandatory (total)	159	216	.....
19.00	Budget authority (total)	159	216	.....
19.30	Total budgetary resources available	362	387	119
	Memorandum (non-add) entries:			
19.41	Unexpired unobligated balance, end of year	171	119	67
Change in obligated balance:				
	Unpaid obligations:			
30.00	Unpaid obligations, brought forward, Oct 1	99	71	77
30.10	Obligations incurred, unexpired accounts	191	268	52
30.20	Outlays (gross)	-205	-262	-51
30.40	Recoveries of prior year obligations, unexpired	-14	.....	.....
30.50	Unpaid obligations, end of year	71	77	78
	Memorandum (non-add) entries:			
31.00	Obligated balance, start of year	99	71	77
32.00	Obligated balance, end of year	71	77	78
Budget authority and outlays, net:				
	Discretionary:			
	Outlays, gross:			
40.11	Outlays from discretionary balances	46	46	51
	Offsetting collections (collected) from:			
40.33	Non-Federal sources (-)	.....		
40.80	Outlays, net (discretionary)	46	46	51
	Mandatory:			
40.90	Budget authority, gross	159	216	.....
	Outlays, gross:			
41.00	Outlays from new mandatory authority	159	216	.....
41.60	Budget authority, net (mandatory)	159	216	.....
41.70	Outlays, net (mandatory)	159	216	.....
41.80	Budget authority, net (total)	159	216	.....
41.90	Outlays, net (total)	205	262	51

OBJECT CLASSIFICATION
In millions of dollars

Identification code: 69-9911-01-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct obligations:				
14.10	Direct obligations: grants, subsidies, and contributions	191	268	52

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
MISCELLANEOUS TRANSPORTATION TRUST FUNDS

BACKGROUND

This account contains miscellaneous appropriations from the Transportation Trust Fund. Obligations and outlays result from prior year appropriations. In FY 2016 no new budget authority was appropriated.

BUDGETARY RESOURCES

No new budget authority is requested for FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
MISCELLANEOUS TRANSPORTATION TRUST FUNDS

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-9972-0-7-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
New obligations:				
Obligations by program activity:				
00.27	Miscellaneous highway projects	11	22	19
09.00	Total new obligations (object class 41.0)	11	22	19
Budgetary resources:				
Unobligated balance:				
10.00	Unobligated balance brought forward, Oct 1	82	75	53
10.21	Recoveries of prior year unpaid obligations	4	……	……
10.50	Unobligated balance (total)	86	75	53
Budget authority:				
Appropriations, discretionary:				
11.60	Appropriations, discretionary (total)	……	……	……
17.00	Spending authority form offsetting collections, disc (total)	……		
19.30	Total budgetary resources available	86	75	53
	Memorandum (non-add) entries:			
19.41	Unexpired unobligated balance, end of year	75	53	34
Change in obligated balances				
Unpaid obligations				
30.00	Unpaid obligations, brought forward, Oct 1	35	36	37
30.10	Obligations incurred, unexpired accounts	11	22	19
30.20	Outlays (gross)	-6	-21	-23
30.40	Recoveries of prior year unpaid obligations, unexpired	-4	……	……
30.50	Unpaid obligations, end of year	36	37	33
	Memorandum (non-add) entries:			
31.00	Obligated balance, start of year	35	36	37
32.00	Obligated balance, end of year	36	37	33
Budget authority and outlays net:				
Discretionary:				
40.11	Outlays, gross			
	Outlays from discretionary balances	6	21	23
40.80	Outlays, net (discretionary)	6	21	23
41.80	Budget authority, net (total)	……	……	……
41.90	Outlays, net (total)	6	21	23

OBJECT CLASSIFICATION
In millions of dollars

Identification code: 69-9972-0-7-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct Obligations:				
14.10	Direct obligations: Grants, subsidies, and contributions	11	22	19

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
MISCELLANEOUS TRUST FUNDS

BACKGROUND

Funds received by this account come completely from entities (governmental and non-governmental) outside of FHWA. FHWA holds these funds in trust until they outlay. The following programs are included in this fund:

1. Cooperative work, forest highways (Proprietary Receipts) – Contributions are received from States in connection with cooperative engineering, survey, maintenance, and construction projects for forest highways.

2. Technical assistance, U.S. dollar advances from foreign governments (Proprietary Receipts) – FHWA renders technical assistance and acts as agent for the purchase of equipment and materials for carrying out highway programs in foreign countries.

3. Contributions for highway research programs (Governmental Receipts) – Contributions are received from various sources in support of FHWA transportation research programs. The funds are used primarily in support of pooled-funds projects.

BUDGETARY RESOURCES

The budget estimates that $20 million of new authority will be available from non-Federal sources in FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
MISCELLANEOUS TRUST FUNDS

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-9971-0-7-999		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
New obligations:				
	Obligations by program by activity:			
00.01	Advances from State cooperating agencies 69-X-8054	20	33	33
00.02	Cooperative work, international highway transportation 69-X-8371	3	5	5
00.03	Below reporting threshold	1	1	1
09.00	Total new obligations	24	39	39
Budgetary resources:				
	Unobligated balance:			
10.00	Unobligated balance brought forward, Oct 1	42	41	22
10.21	Recoveries of prior year unpaid obligations	3	.....	.....
10.50	Unobligated balance (total)	45	41	22
Budget authority:				
	Appropriations, mandatory:			
12.01	Appropriation (trust fund)	20	20	20
12.60	Appropriations, mandatory (total)	20	20	20
19.00	Budget authority (total)	20	20	20
19.30	Total budgetary resources available	65	61	42
	Memorandum (non-add) entries:			
19.41	Unexpired unobligated balance, end of year	41	22	3
Change in obligated balance:				
	Obligated balance, start of year (net):			
30.00	Unpaid obligations, brought forward, Oct 1	21	20	18
30.10	Obligations incurred, unexpired accounts	24	39	39
30.20	Outlays (gross)	-22	-41	-43
30.40	Recoveries of prior year unpaid obligations, unexpired	-3	.....	.....
30.50	Unpaid obligations, end of year	20	18	14
	Memorandum (non-add) entries:			
31.00	Obligated balance, start of year	21	20	18
32.00	Obligated balance, end of year	20	18	14
Budget authority and outlays, net:				
	Mandatory:			
40.90	Budget authority, gross	20	20	20
	Outlays (gross)			
41.00	Outlays form new mandatory authority	3	16	16
41.01	Outlays from mandatory balances	19	25	27
41.10	Outlays, gross (total)	22	41	43
41.60	Budget authority, net (mandatory)	20	20	20
41.70	Outlays, net (mandatory)	22	41	43
41.80	Budget authority, net (total)	20	20	20
41.90	Outlays, net (total)	22	41	43

OBJECT CLASSIFICATION
In millions of dollars

Identification code: 69-9971-0-7-999		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct obligations:				
	Personnel compensation:			
11.1	Personnel Compensation: Full-time permanent	.....	.....	.....
12.1	Civilian personnel benefits	2	2	2
25.1	Advisory and assistance services	2	3	3
25.2	Other services from non-Federal sources	9	16	16
25.3	Other goods and services from Federal sources	10	17	17
99.0	Subtotal, obligations	23	38	38
99.5	Below reporting threshold	1	1	1
99.9	Total new obligations	24	39	39

EMPLOYMENT SUMMARY

Identification code: 69-9971-0-7-999		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
10.01	Direct civilian full-time equivalent employment	6	6	6

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION ACT
FINANCING ACCOUNTS

BACKGROUND

Federal-aid Highways

As required by the Federal Credit Reform Act of 1990, this non-budgetary account records cash flows to and from the Government resulting from direct loans made under the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program. The amounts in this account are a means of financing and are not included in the budget totals.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005: A Legacy for Users (SAFETEA-LU); and the Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted July 5, 2012, have provided contract authority for the TIFIA Program to assist in the funding of nationally or regionally significant transportation projects. The subsidy costs and administrative expenses associated with this program are included in the Federal-aid Highway schedules.

National Infrastructure Investment

The Office of the Secretary of Transportation (OST) received appropriations totaling $1,127 million for TIGER Discretionary Grants as part of the 2010 and 2011 Department of Transportation (DOT) Appropriations Acts. The appropriations authorized DOT to pay subsidy and administrative costs, not to exceed $300 million, of projects eligible for Federal credit assistance under Chapter 6 of Title 23 United States Code. In 2012, $45 million was provided for TIGER discretionary grants as part of the 2012 DOT Appropriation Act to pay subsidy and administrative costs. OST has delegated the authority to negotiate and administer Transportation Infrastructure Finance Innovation Act of 1998 loans under this program to the Federal Highway Administration.

American Recovery and Reinvestment Act of 2009

OST received a FY 2009 appropriation of $1.5 billion into its Supplemental Discretionary Grants for a National Surface Transportation System as part of the American Recovery and Reinvestment Act of 2009 (ARRA). The ARRA appropriation authorized the DOT to pay subsidy and administrative costs not to exceed $200 million, of projects eligible for Federal credit assistance under chapter 6 of title 23, United States Code. The Office of the Secretary of Transportation (OST) has delegated the authority to negotiate and administer TIFIA loans under this program to the FHWA.

BUDGETARY RESOURCES

No further amounts are requested for FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION
FINANCING ACCOUNT - DIRECT LOAN

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-4123-0-3-401	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Obligations by program activity:			
Credit program obligations:			
07.10 Direct loan obligations	2,982	3,673	3,736
07.13 Payment of interest to Treasury	265	356	416
07.40 Negative subsidy obligations	13	.....	.....
07.42 Downward reestimate paid to receipt account	158	190	.....
07.43 Interest on downward reestimate	15	16	.....
09.00 Total new obligations	3,420	4,235	4,152
Budgetary Resources:			
10.00 Unobligated balance brought forward , Oct 1	4	2	.....
Financing authority:			
Borrowing authority, mandatory:			
10.21 Recoveries of prior year unpaid obligations	.....	.....	.....
10.21 Authority withdrawn	.....	.....	.....
10.50 Unobligated balance (total)	4	2	0
14.00 Borrowing authority	3,082	2,994	6,227
14.20 Borrowing authority permanently reduced			
14.40 Borrowing authority, mandatory (total)	3,082	2,994	6,227
Spending authority from offsetting collections, mandatory:	.....	.....	.....
18.00 Collected	1,505	698	706
18.01 Change in uncollected payments, Federal sources	158	736	491
18.25 Spending Authority from offsetting collections to repay debt	-1,314	-401	-47
18.50 Spending authority from offsetting collections, mandatory (total)	349	1,033	1,150
19.00 Financing authority (total)	3,431	4,027	7,377
19.30 Total budgetary resources available	3,435	4,029	7,377
Memorandum (non-add) entries:			
19.41 Unexpired unobligated balance, end of year	2	0	3,225
Change in obligated balances			
Unpaid obligations;			
30.00 Unpaid obligations, brought forward, Oct 1	9,557	11,165	12,618
30.10 Obligations incurred, unexpired accounts	3,433	4,029	4,152
30.20 Financing disbursements (gross)	-1,825	-2,576	-6,829
30.40 Recoveries of prior year unpaid obligations, enexpired	.....	.....	.....
30.50 Unpaid Obligations, end of year	11,165	12,618	9,941
Uncollected payments:			
30.60 Uncollected pymts, Fed sources, brought forward, Oct 1	-601	-759	-1,495
30.70 Change in uncollected pymts, Fed sources, unexpired	-158	-736	-491
30.90 Uncollected pymts, Fed sources, end of year	-759	-1,495	-1,986
Memorandum (non-add) entries:			
31.00 Obligated balance, start of year	8,956	10,406	11,123
32.00 Obligated balance, end of year	10,406	11,123	7,955
Financing authority and disbursements, net:			
Mandatory:			
40.90 Financing authority, gross	3,431	4,027	7,377
41.10 Financing disbursements, gross	1,825	2,576	6,829
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
41.20.01 Federal sources: Subsidy from program account	-78	-128	-481
41.20.02 Federal sources: Upward Reestimate	-106	-149	.....
41.20.03 Federal sources: Interest on upward reestimate	-53	-67	.....
41.22.01 Interest on uninvested funds	-43	-48	-55
41.23.01 Non-Federal Sources - Interest payments	-102	-87	-127
41.23.02 Non-Federal Sources - Principal payments	-1,123	-219	-43
41.30 Offsets against gross financing authority and disbursements (total)	-1,505	-698	-706
Additional offsets against financing authority only (total):			
41.40 Change in uncollected payments, Federal Sources, unexpired	-158	-736	-491
41.60 Financing authority, net (mandatory)	1,768	2,593	6,180
41.70 Financing disbursements, net (mandatory)	320	1,878	6,123
41.80 Financing authority, net (total)	1,768	2,593	6,180
41.90 Financing disbursements, net (total)	320	1,878	6,123

STATUS OF DIRECT LOANS
In millions of dollars

Identification code: 69-4123-0-3-401	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Position with respect to appropriations act limitation on obligations:			
11.31 Direct loan obligations exempt from limitation	2,982	3,673	3,736
11.50 Total direct loan obligations	2,982	3,673	3,736
Cumulative balance of direct loans outstanding:			
12.10 Outstanding, start of year	8,314	10,330	13,216
12.31 Disbursement: Direct loan disbursements	1,825	2,038	6,363
12.51 Repayments: Repayments and Prepayments	-1,123	-219	-43
12.61 Adjustments: Capitalized interest	1,314	1,067	1,515
12.90 Outstanding, end of year	10,330	13,216	21,051

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION
FINANCING ACCOUNT - DIRECT LOAN

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-4347-0-3-401	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Obligations by program activity:			
Credit program obligations:			
07.13 Payment of interest to Treasury	19	23	18
07.42 Downward reestimate paid to receipt account	1	1	.....
07.43 Interest on downward reestimate	.....	1	.....
09.00 Total new obligations	20	25	18
Budgetary resources:			
14.00 Borrowing authority	20	25	5
14.40 Borrowing authority, mandatory (total)	20	25	5
Spending authority from offsetting collections, mandatory:			
Financing authority:			
Spending authority from offsetting collections, mandatory:			
18.00 Collected	2	.....	12
18.01 Change in uncollected payments, Federal sources	-1	.....	.....
18.50 Spending authority from offsetting collections, mandatory (total)	.....	.....	12
19.00 Financing authority (total)	20	25	17
19.30 Total budgetary resources available	20	25	17
Change in obligated balance:			
Unpaid obligations:			
30.00 Unpaid obligations, brought forward, Oct 1	9	.....	25
30.10 Obligations incurred, unexpired accounts	20	25	18
30.20 Financing disbursements (gross)	-29	.....	.....
30.50 Unpaid obligations, end of year	.....	25	43
Uncollected payments:			
30.60 Uncollected pymts, Fed sources, brought forward, Oct 1	-1	.....	.....
30.70 Change in uncollected pymts, Fed sources, unexpired	1	.....	.....
30.90 Uncollected pymts, Fed sources, end of year	.....	.....	.....
Memorandum (non-add) entries:			
31.00 Obligated balance, start of year	8	.....	25
32.00 Obligated balance, end of year	.....	25	43
Financing authority and disbursements, net:			
Mandatory:			
40.90 Financing authority, gross	20	25	17
Financing disbursements:			
41.10 Financing disbursements, gross	29	.....	.....
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
41.20 Federal sources	-1	.....	.....
Additional offsets against financing authority only (total):			
41.40 Change in uncollected pymts, Fed sources, unexpired	1	.....	.....
41.60 Financing authority, net (mandatory)	19	25	5
41.70 Financing disbursements, net (mandatory)	27	.....	-12
41.80 Financing authority, net (total)	19	25	5
41.90 Financing disbursements, net (total)	27	.....	-12

STATUS OF DIRECT LOANS
In millions of dollars

Identification code: 69-4347-0-3-401	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Cumulative balance of direct loans outstanding:			
12.10 Outstanding, start of year	481	509	531
12.31 Disbursement: Direct loan disbursements	9	.....	.....
12.61 Adjustments: Capitalized interest	19	22	17
12.90 Outstanding, end of year	509	531	548

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION
FINANCING ACCOUNT - DIRECT LOAN

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-4348-0-3-401	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Obligations by program activity:			
Credit program obligations:			
07.10 Direct loan obligations	.....	.....	.....
07.13 Payment of interest to Treasury	17	29	35
09.00 Total new obligations	17	29	35
Budgetary resources:			
10.00 Unobligated balance brought forward, Oct 1	.....	.....	299
Financing authority:			
Borrowing authority, mandatory:			
14.00 Borrowing authority	11	326	78
14.40 Borrowing authority, mandatory (total)	11	326	78
Spending authority from offsetting collections, mandatory:			
18.00 Collected	16	4	6
18.01 Change in uncollected payments, Federal sources	-10	-2	-2
18.50 Spending authority from offsetting collections, mandatory (total)	6	2	4
19.00 Financing authority (total)	17	328	82
19.30 Total budgetary resources available	17	328	381
Change in obligated balances			
Unpaid obligations:			
30.00 Unpaid obligations, brought forward, Oct 1	702	376	96
30.10 Obligations incurred, unexpired accounts	17	29	35
30.20 Financing disbursements (gross)	-343	-309	-52
30.50 Unpaid obligations, end of year	376	96	79
Uncollected payments:			
30.60 Uncollected pymts, Fed sources, brought forward, Oct 1	-14	-4	-2
30.70 Change in uncollected pymts, Fed sources, unexpired	10	2	2
30.90 Uncollected pymts, Fed sources, end of year	-4	-2	.....
Memorandum (non-add) entries:			
31.00 Obligated balance, start of year	688	372	94
32.00 Obligated balance, end of year	372	94	79
Financing authority and disbursements, net:			
Mandatory:			
40.90 Financing authority, gross	17	328	82
41.10 Financing disbursements, gross	343	309	52
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
41.20 Federal sources	-10	.....	.....
41.22 Interest on uninvested funds	-3	.....	.....
41.23 Non-Federal sources	-3	-4	-6
41.30 Offsets against gross financing auth and disbursements (total)	-16	-4	-6
Additional offsets against financing authority only (total):			
41.40 Change in uncollected pymts, Fed sources, unexpired	10	2	2
41.60 Financing authority, net (mandatory)	11	326	78
41.70 Financing disbursements, net (mandatory)	327	305	46
41.80 Financing authority, net (total)	11	326	78
41.90 Financing disbursements, net (total)	327	305	46

STATUS OF DIRECT LOANS
In millions of dollars

Identification code: 69-4348-0-3-401	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Position with respect to appropriations act limitation on obligations:			
11.31 Direct loan obligations exempt from limitation	.....	.....	.....
11.50 Total direct loan obligations	.....	.....	.....
Cumulative balance of direct loans outstanding:			
12.10 Outstanding, start of year	307	650	869
12.31 Disbursement: Direct loan disbursements	326	190	52
12.61 Adjustments: Capitalized interest	17	29	35
12.90 Outstanding, end of year	650	869	956

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION
TIFIA GENERAL FUND PROGRAM ACCOUNT

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-0542-0	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Obligations by program activity:			
00.01 Unused subsidy sent back to OST	.....	.....	.....
Credit program obligations:			
07.01 Direct loan obligations	.....	.....	.....
07.09 Administrative expenses	.....	.....	.....
07.91 Direct program activities, subtoal	.....		
09.00 Total new obligations	.....	.....	.....
Budgetary resources:			
Unobligated balance:			
10.00 Unobligated balance brought forward, Oct 1	.....	.....	.....
Budget authority:			
Spending authority from offsetting collections, discretionary:			
17.00 Collected	.....	.....	.....
17.50 Spending authority from offsetting collections, disc (total)	.....	.....	.....
19.30 Total budgetary resources available	.....	.....	.....
Memorandum (non-add) entries:			
19.41 Unexpired unobligated balance, end of year	.....	.....	.....
Change in obligated balances			
Unpaid obligations:			
30.00 Unpaid obligations, brought forward, Oct 1	14	4	.....
30.10 Obligations incurred, unexpired accounts	.....	.....	.....
30.20 Outlays (gross)	-10	-2	.....
30.50 Unpaid obligations, end of year	4	2	.....
Memorandum (non-add) entries:			
31.00 Obligated balance, start of year	14	4	.....
32.00 Obligated balance, end of year	4	.....	.....
Budget authority and outlays, net:			
Discretionary:			
40.00 Budget authority, gross	.....	.....	.....
Outlays, gross:			
40.10 Outlays from new discretionary authority	.....	.....	.....
40.11 Outlays from discretionary balances	10	2	2
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
40.30 Federal sources	.....	.....	.....
40.70 Budget authority, net (discretionary)	.....	.....	.....
40.80 Outlays, net (discretionary)	10	2	2
41.80 Budget authority, net (total)	.....	.....	.....
41.90 Outlays, net (total)	10	2	2

OBJECT CLASSIFICATION
In millions of dollars

Identification code: 69-0542-0	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct Obligations:			
12.51 Advisory and assistance services	.....	.....	.....
14.10 Grants, subsidies, and contributions	.....	.....	.....
99.99 Total new obligations	.....	.....	.....

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DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
RIGHT-OF-WAY REVOLVING FUND

BACKGROUND

The Federal-Aid Highway Act of 1968 authorized the establishment of a right-of-way revolving fund. This fund was used to make cash advances to States for the purpose of purchasing right-of-way parcels in advance of highway construction and thereby preventing the inflation of land prices from significantly increasing construction costs. The purchase of right-of-way is an eligible expense of the Federal-aid program.

This program was terminated by the Transportation Equity Act for the 21st Century of 1998 but will continue to be shown for reporting purposes as loan balances remain outstanding.

BUDGETARY RESOURCES

No new budgetary resources are requested in FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
RIGHT-OF-WAY (ROW) REVOLVING FUND
LIQUIDATING ACCOUNT

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-8402-0-8-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
	Budgetary resources:			
	Unobligated balance:			
10.00	Unobligated balance brought forward, Oct 1	.....	.....	.....
10.21	Recoveries of prior year unpaid obligations	.....	.....	.....
10.22	Capital transfer of unobligated balances to general fund	.....	.....	.....
10.50	Unobligated balance (total)	.....	.....	.....
	Budget authority:			
	Spending authority from offsetting collections, mandatory:			
18.00	Collected	.....	.....	.....
18.20	Capital transfer of spending authority from offsetting collections to general fund	.....	.....	.....
18.50	Spending authority from offsetting collections, mandatory (total)	.....	.....	.....
19.30	Total budgetary resources available	.....	.....	.....
	Change in obligated balance:			
	Unpaid obligations:			
30.00	Unpaid obligations, brought forward, Oct 1	4	4	.....
30.20	Outlays (gross)		-4	.....
30.40	Recoveries of prior year unpaid obligations, unexpired	.....	.....	.....
30.50	Unpaid obligations, end of year	4	.....	.....
	Memorandum (non-add) entries:			
30.01	Obligated balance, start of year	4	4	.....
32.00	Obligated balance, end of year	4	.....	.....
	Budget authority and outlays, net:			
	Mandatory:			
	Outlays, gross			
41.01	Outlays from mandatory balances	.....	4	.....
	Offsets against gross budget authority and outlays:			
	Offsetting collections (collected) from:			
41.23	Non-Federal sources	.....	.....	.....
41.60	Budget authority, net (mandatory)	.....	.....	.....
41.70	Outlays, net (mandatory)	.....	4	.....
41.80	Budget authority, net (total)	.....	.....	.....
41.90	Outlays, net (total)	.....	4	.....

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
STATE INFRASTRUCTURE BANKS

BACKGROUND

In FY 1997, FHWA received an appropriation from the General Fund for the State Infrastructure Banks (SIBs) program. This schedule shows the obligation and outlay of that funding.

All of the funds have been provided to the States to capitalize the infrastructure banks. Because the funding was provided as grants, and not loans, FHWA will not receive reimbursements of amounts expended for the SIBs program.

BUDGETARY RESOURCES

No new budgetary resources are requested in FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
STATE INFRASTRUCTURE BANKS
DIRECT LOAN FINANCING ACCOUNT

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-0549-0-1-401		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
	Budgetary Resources:			
	Unobligated balance:			
10.00	Unobligated balance brought forward, Oct 1	1	1	1
19.30	Total budgetary resouces available	1	1	1
	Memorandum (non-add) entries:			
19.41	Unexpired unobligated balance, end of year	1	1	1
41.80	Budget authority, net (total)	……	……	……
41.90	Outlays, net (total)	……	……	……

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
HIGHWAY INFRASTRUCTURE PROGRAMS

BACKGROUND

In FY 2010, the Federal Highway Administration received a General Fund appropriation of $650 million for the restoration, repair, and construction of highway infrastructure and other activities eligible under paragraph (b) of section 133 of title 23, United States Code. The authority for this appropriation is Division A, Title I of P.L. 111-117 (Consolidated Appropriations Act, 2010), Section 122 and was available through FY 2012.

BUDGETARY RESOURCES

No new budget authority is requested for FY 2017.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
HIGHWAY INFRASTRUCTURE PROGRAMS

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-0548-0	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
11.60 Appropriation, discretionary (total)	……	……	……
Change in obligated balance:			
Unpaid obligations			
30.00 Unpaid obligations, brought forward, Oct 1	40	12	1
30.20 Outlays (gross)	-16	-11	……
30.41 Recoveries of prior year unpaid obligations, expired	-12	……	……
30.50 Unpaid obligations, end of year	12	1	1
Memorandum (non-add) entries:			
31.00 Obligated balance, start of year	40	12	1
32.00 Obligated balance, end of year	12	1	1
Budget authority and outlays, net:			
Discretionary:			
40.11 Outlays form discretionary balances	16	11	……
40.80 Outlays, net (discretionary)	16	11	……
41.80 Budget authority, net (total)	……	……	……
41.90 Outlays, net (total)	16	11	……

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
PAYMENT TO THE TRANSPORTATION TRUST FUND

BACKGROUND

For FY 2015, Section 2002 of Public Law 114-41, Surface Transportation and Veterans Health Care Choice Improvement Act of 2015, authorized additional appropriations from the General Fund of the Treasury to the Highway Account and Mass Transit Account of the Highway Trust Fund in the amounts of $6.068 billion and $2.0 billion, respectively. This payment was not subject to sequestration, per OMB A-11 Section 100.15, because the budgetary resources were enacted after the Sequestration Order for Fiscal Year 2015 was signed.

For FY 2016, Section 31202 of Public Law 114-94, Fixing America's Surface Transportation (FAST) Act, authorized additional appropriations from the General Fund of the Treasury to the Highway Account and Mass Transit Account of the Highway Trust Fund in the amounts of $51.9 billion and $18.1 billion, respectively. This payment was not subject to sequestration, per OMB A-11 Section 100.15, because the budgetary resources were enacted after the Sequestration Order for Fiscal Year 2016 was signed.

BUDGETARY RESOURCES

The budget requests $19.0 billion to provide cash balances for outlays from the proposed 21st Century Clean Transportation Plan Investments.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
PAYMENT TO THE TRANSPORTATION TRUST FUND

PROGRAM AND FINANCING SCHEDULE
In millions of dollars

Identification code: 69-0534-0		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
New obligations:				
Obligations by program by activity:				
00.01	Direct program activity	8,068	70,000	19,000
09.00	Total new obligations	8,068	70,000	19,000
Budget authority:				
Appropriations, mandatory:				
12.00	Appropriation	8,068	70,000	19,000
	Appropriations and/or unobligated balance of			
12.30	appropriations permanently reduced	……	……	……
12.60	Appropriation, mandatory (total)	8,068	70,000	19,000
19.30	Total budgetary resources available	8,068	70,000	19,000
Change in obligated balances				
Unpaid obligations				
30.00	Unpaid obligations, brought forward, Oct 1	……	……	……
30.10	Obligations incurred, unexpired accounts	8,068	70,000	19,000
30.20	Outlays (gross)	-8,068	-70,000	-19,000
30.50	Unpaid obligations, end of year	……	……	……
Budget authority and outlays, net:				
Mandatory:				
40.90	Budget authority, gross	8,068	70,000	19,000
41.00	Outlays from new mandatory authority	8,068	70,000	19,000
41.60	Budget authority, net (mandatory)	8,068	70,000	19,000
41.70	Outlays, net (mandatory)	8,068	70,000	19,000
41.80	Budget authority, net (total)	8,068	70,000	19,000
41.90	Outlays, net (total)	8,068	70,000	19,000

OBJECT CLASSIFICATION
In millions of dollars

Identification code: 69-0534-0		FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST
Direct Obligations:				
14.10	Direct obligations: Grants, subsidies, and contributions	8,068	70,000	19,000

EXHIBIT IV-1
RESEARCH, TECHNOLOGY & EDUCATION
DEPARTMENT OF TRANSPORTATION
Budget Authority
($000)

FEDERAL HIGHWAY ADMINISTRATION Research, Technology & Education Program [1/]	FY 2015 ACTUAL	FY 2016 ENACTED	FY 2017 REQUEST	FY 2017 APPLIED	FY 2017 DEVELOP.
A. Highway Research and Development	**108,445**	**118,625**	**125,000**	**63,750**	**21,250**
Highway Research and Development		*85,410*	*85,000*	*63,750*	*21,250*
Highway Research and Development (T)		*33,215*	*40,000*		
B. Technology and Innovation Deployment Program (T)	**58,938**	**63,583**	**67,500**	**0**	**0**
C. Training and Education (T)	**22,632**	**22,776**	**24,000**	**0**	**0**
D. Intelligent Transportation Systems	**94,300**	**94,900**	**100,000**	**80,000**	**0**
Intelligent Transportation Systems	*75,890*	*75,920*	*80,000*	*80,000*	
Intelligent Transportation Systems (T)	*18,410*	*18,980*	*20,000*		
E. University Transportation Centers (UTC) (T) [2/]	**63,368**	**68,803**	**75,000**	**0**	**0**
F. State Planning and Research (SP&R) [3/]	**186,288**	**195,224**	**199,892**	**112,439**	**37,480**
State Planning and Research (SP&R)	*163,933*	*146,418*	*149,919*	*112,439*	*37,480*
State Planning and Research (SP&R) (T)	*22,355*	*48,806*	*49,973*		
G. Administrative Expenses	**19,027**	**19,531**	**19,852**	**11,167**	**3,722**
Administrative Expenses	*16,363*	*14,648*	*14,889*	*11,167*	*3,722*
Administrative Expenses (T)	*2,664*	*4,883*	*4,963*		
H. Advanced Transportation & Congestion Mgmt. Technologies Deployment [Non-add] [4/]	**[60,000]**	**[60,000]**	**[60,000]**	**0**	**0**
Subtotal, Research and Development [5/]	364,631	322,396	329,808	267,356	62,452
Subtotal, Technology Investment (T) [5/]	188,367	261,045	281,436		
	552,998	**583,442**	**611,244**	267,356	62,452
Add: Bureau of Transportation Statistics [2/]	26,000	26,000	26,000		
Less: Administrative Expenses	-19,027	-19,531	-19,852		
Less: State Planning and Research (SP&R)	-186,288	-195,224	-199,892		
Total Title V Programs [5/ 6/]	**373,683**	**394,687**	**417,500**		

This Exhibit IV-1, "Research, Development and Technology", and any related summary, fulfills the requirements of 23 USC 508 (b) – Annual Report, in effect on December 3, 2015. The Department of Transportation recognizes the changes to this requirement effected by the passage of the Fixing America's Surface Transportation (FAST) Act (P.L. 114-94; Dec. 4, 2015; 129 Stat. 1312), creating Chapter 65 – Research Planning in Subtitle III of title 49, United States Code. The Department will implement the new requirements with the FY 2018 Budget Estimates.

Footnotes:

1/ Line items with T reflect technology investments.

2/ Details for this program are contained in the Office of the Assistant Secretary for Research and Technology FY 2017 budget.

3/ Title 23 USC 505(b) requires State DOT's to expend no less than 25 percent of their annual SP&R funds on RT&E activities. Total SP&R funding represents 2 percent of apportioned programs.

4/ Per the Fast Act, the Advanced Transportation & Congestion Management Technologies Deployment Program will be funded by set-asides from Highway Research and Development, Technology and Innovation Deployment Program, and Intelligent Transportation Systems.

5/ Subtotals for Research and Development and Technology Development may not add due to rounding.

6/ All amounts shown for FY 2016 are amounts available for allocation after "lop-off" due to imposition of the obligation limitation.

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FEDERAL HIGHWAY ADMINISTRATION
RESEARCH, TECHNOLOGY, AND EDUCATION (RT&E)

RT&E PROGRAM NAME: HIGHWAY RESEARCH & DEVELOPMENT PROGRAM

AMOUNT REQUESTED FOR FY 2017: $125,000,000

Project Name or Program Activity: Core Highway Research and Development Programs

Objectives: To improve the mobility of people and goods; reduce congestion; promote safety; improve the durability and extend the life of transportation infrastructure; preserve the environment; and preserve the existing transportation system.

Description: FHWA's core R&D programs improve safety, enhance the transportation infrastructure, reduce congestion, provide data and analysis to transportation decision-makers, and improve infrastructure designs to enhance connectivity throughout communities.

- The Safety research area addresses the causes of deaths and injuries related to roadway design, construction, and maintenance, and develops robust data analysis tools that enable transportation professionals to match crash causes with cost-effective countermeasures.
- The Infrastructure area engages in forward-looking research that supports safety and environmental sustainability while modernizing bridges and roads through better materials, new construction techniques, and consistent quality control.
- The Operations area develops innovative technologies and processes that lead to system-wide improvements in how FHWA and its State and local partners manage and increase the reliability of the NHS.
- The Policy area evaluates the impacts of a broad range of policy options and analyzes current and emerging issues that will affect the way transportation systems are built, maintained, and used.
- The Planning and Environment area assesses new tools and processes that consider the complex relationships among individuals, communities, the economy, and the environment, to enable better decisions and lead to improved outcomes.
    - For FY 2017, FHWA will focus research resources on identifying strengths, weaknesses and gaps in infrastructure design guidance for road, bridge, tunnel, bike and pedestrian overpass, and freeway cap infrastructure on the National Highway System. The goal of the design research will be to develop recommendations to fill the gaps and strengthen the weaknesses to improve safety, mobility, accessibility, and connectivity for all users and avoid disconnecting neighborhoods and communities. The research effort will develop recommendations that will lead to providing guidance and encouragement of future transportation infrastructure improvements that enhance the connection and reconnection of surrounding neighborhoods, communities, and urban centers and improve overall quality of life. Also as part of this effort, FHWA will publicly recognize entities that successfully have incorporated these design elements and utilized outreach procedures that focus on reconnecting communities.

- The Exploratory Advanced Research program conducts longer-term, higher-risk research in all the research areas above. These research products have the potential for dramatic breakthroughs in transportation.
- The Turner-Fairbank Highway Research Center is a federally-owned and operated research facility in McLean, VA, where most of FHWA's research projects are conducted, sponsored, or coordinated.

Outputs and Deliverables	**Outcomes and Impacts**
Safety analysis tools, procedures, and design guides.	Better highway, intersection, roadside, pedestrian, and bicyclist safety design.
Countermeasures to keep vehicles on the road and to reduce the severity of crashes, particularly pedestrian and bicycle crashes.	Improved safety through reduction of crash frequency and severity.
Improved design systems, materials selection, and performance prediction technologies to optimize infrastructure performance for new and recycled materials.	Enhanced quality and durability of pavements, bridges, tunnels, and other highway structures.
Advanced materials and accelerated construction technologies for new construction and in the repair and rehabilitation of existing highway infrastructure.	Improved highway performance. Minimized impact of construction on traffic.
Expanded guidance on environmentally sound highway construction practices.	Decreased environmental impacts from highway construction.
Publicly available data sets documenting the performance of a well-characterized set of pavement test sections and bridges.	Improved evidence-based highway decisions based on current data.
Climate change mitigation, adaptation, and livability strategies.	Improved state of the practice regarding the impact of transportation on the environment.
Promotion of environmental streamlining/stewardship and sustainability.	Strengthened and advanced State/local and Tribal capabilities regarding surface transportation and the environment.
Techniques to measure congestion when it occurs and to assess the performance of the highway system.	Improved decision-making tools to address causes of congestion.
Techniques to measure the role freight movement plays in congestion and the effects of congestion on interstate commerce.	Improved freight operations and interstate commerce.
Techniques and tools to proactively manage the transportation system during disruptions such as traffic incidents, work zones, adverse weather, special events, and emergency situations.	Decreased congestion during disruptive events.
Innovative techniques to better balance transportation supply and demand through congestion pricing.	Improved tools for decision-makers addressing congestion; improved traffic flow.
Status of the Nation's Highways, Bridges, & Transit: Conditions & Performance report to Congress.	Reliable data and analysis for improved transportation decisions.

Project Name or Program Activity: Surface Transportation System Funding Alternatives

Objectives: To develop solutions to maintain the long-term solvency of the Highway Trust Fund.

Description: As required by the FAST Act, this program will provide grants to States to demonstrate user-based revenue mechanisms that utilize a user fee structure to maintain the long-term solvency of the Highway Trust Fund. The FAST Act made available $19.0 million in FY 2016 and $20.0 million for each year from FY 2017 through FY 2020 for this program.

Outputs and Deliverables	Outcomes and Impacts
Recommendations regarding adoption of user-based alternative revenue mechanisms.	Improved functionality of user-based alternative revenue mechanisms.
Lessons learned for future deployment of alternative revenue mechanisms that utilize a user fee structure.	Increased public awareness regarding the need for alternative funding sources for surface transportation programs.

Project Name or Program Activity: Performance Management Data Support Program

Objectives: To improve data collection for performance analysis

Description: Per the FAST Act, up to $10 million for each of fiscal years 2016 through 2020 may be used to carry out this program. This initiative will develop, use, and maintain data sets and data analysis tools to assist metropolitan planning organizations, States, and the FHWA in carrying out performance management analyses.

Outputs and Deliverables	Outcomes and Impacts
Reliable data sets and data analysis tools for performance management analysis.	Improved decision-making tools to evaluate the effects of project investments on performance.

RT&E PROGRAM NAME: TECHNOLOGY AND INNOVATION DEPLOYMENT PROGRAM (TIDP)

AMOUNT REQUESTED FOR FY 2017: $67,500,000
Objectives: To accelerate the adoption of proven innovative practices and technologies as standard practices to significantly improve safety, system efficiency, infrastructure health, reliability and performance, and livable/sustainable communities.

Description: FHWA achieves the objectives of this program though the following sub-programs:

- *Every Day Counts Initiative (EDC)*: The FAST Act recognizes the success of the EDC program and adds it as a required program. EDC identifies under-utilized market-ready

technologies with high pay-offs and accelerates their deployment and acceptance throughout the Nation.

- *Accelerated Innovation Deployment Demonstration Program*: Provides incentive funding for eligible entities to accelerate the implementation and adoption of innovation in highway transportation.
- *State Transportation Innovation Council (STIC) Incentive Program*: Offers technical assistance and up to $100,000 per STIC per year to support the costs of standardizing innovative practices in a State DOT or other public sector STIC stakeholder.
- *Accelerated deployment of pavement technologies*: The FAST Act extends the designation of $12 million per fiscal year to promote, demonstrate, support, and document the application of innovative pavement technologies, practices, performance, and benefits.
- *Advanced Transportation and Congestion Management program*: The FAST Act requires FHWA to award grants to States and other entities to deploy technologies with the potential to relieve congestion and improve the quality of life.

Outputs and Deliverables	**Outcomes and Impacts**
Accelerated deployment of innovative methods, practices, and technologies to States and transportation practitioners.	Improved safety and infrastructure integrity; increased support of all DOT and FHWA goals and objectives.
Accelerated adoption of market-ready technologies through the EDC initiative.	Significant acceleration of the benefits provided by new technologies.
Incentive funding to STICs to conduct internal assessments, develop guidance, standards, and specifications, implement process changes, or fund other activities to deploy innovations.	Increased use of innovations though assisting States offset the risks of trying innovations.
Grants to States to implement advanced transportation and congestion management technologies.	Reduced congestion, improved travel reliability.

RT&E PROGRAM NAME: TRAINING AND EDUCATION (T&E)

AMOUNT REQUESTED FOR FY 2017: $24,000,000

Objectives: To create ladders of opportunity; to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing the knowledge of the transportation workforce and decision makers through training and information exchanges. To attract qualified students to the field of transportation and advance transportation workforce development.

Description: This program provides leadership, training, educational materials and resources for the development and delivery of training, professional development and education programs to

improve the quality of our highway system and its intermodal connections. It also provides educational opportunities to the surface transportation community through developing core competencies and new skills, enabling technology transfer, and sharing best practices.

Outputs and Deliverables	**Outcomes and Impacts**
Training resources to customers, partners, and learners in every State.	Improved workforce training.
Information, professional development, training, and facilitate technology transfer to local governments and Tribal agencies.	Advancements in State, local, and Tribal capabilities regarding the complex relationships in surface transportation.
Scholarships, fellowships, educational grants.	Advancement of careers in transportation.
The National Network for the Transportation Workforce (NNTW) consisting of five Regional Surface Transportation Workforce Centers serves as a resource to support, grow and maintain a skilled and career-ready transportation workforce.	The Centers will engage existing regionally based programs, to catalyze new strategic partnerships and to communicate programs and best practices to educators, employers and those on the transportation career pathway.
Grants to educational pipeline organizations for educational materials and innovative practices in transportation.	A well-educated transportation workforce.
Congressionally-mandated centers for surface transportation excellence to address the areas of environment, surface transportation safety, rural safety, and project finance.	Improved safety, mitigation of environmental impacts, and promotion of project finance options.

RT&E PROGRAM NAME: INTELLIGENT TRANSPORTATION SYSTEMS PROGRAM (ITS)

AMOUNT REQUESTED FOR FY 2017: $100,000,000

Project Name or Program Activity: Connected Vehicles (CV)

Objectives: To integrate CV system needs into legacy ITS Systems (Research); to collect benefits and costs and implementation lessons learned information from high priority CV applications (Development); and to support State and local, and transit agency functions in the CV environment deployments (Adoption).
Description: The connected vehicle program, like all ITS research, benefits from a multimodal planning and coordination processs utilized by the ITS Joint Program Office. This includes participation of all surface modes through the modal Strategic Planning Group (modal associate administrators), with concurrence by the Management Council (comprised of all surface mode administrators, chaired by the Deputy Secretary) to coordinate ITS project funding. This allows

for the leveraging of research opportunities while limiting duplication of effort and integrating ITS research across the modes (e.g. FHWA/FTA joint effort "Accessible Transportation Technologies Research Initiative (ATTRI)"; FHWA's "Integrated Corridor Management" and "Deployment Readiness" efforts; MARAD's "ITS Assessment" etc.).

The agency plans to focus on completing the transition from research to national deployment of this transformational program. Building on over a decade and nearly $600 million in ITS investments, this program will continue to support: the issuance of the NHTSA Vehicle to Vehicle (V2V) rule; the FHWA Vehicle to Infrastructure (V2I) guidance; the development of a scalable operational Security Certification Management System (SCMS) to accommodate tens of millions of vehicles; and expand the deployment of both vehicles and infrastructure beyond southeast Michigan through the continued support of the connected vehicle pilots.

In addition, this program will commit additional resources to conduct research to respond to Wi-Fi and congressional challenges to the use of Dedicated Short Range Communications spectrum (DSRC) for this collision avoidance technology. The primary focus is to spur widespread adoption and deployment of the system nationwide. The secondary goal is to promote technology transfer of over 60 connected vehicle applications, that in addition to promoting safety, also enhance traveler and freight efficiency, address impacts of weather on road transportation, reduce fuel consumption and reduce greenhouse gas and other pollutants. Connected vehicle technology research and development will also be included in the agency's smart city challenge efforts.

Outputs and Deliverables	**Outcomes and Impacts**
• Development and demonstration of prototype system for Heavy Vehicles V2V basic safety message (BSM) and implementation issues for deployment. • Final Report for Heavy Vehicle V2V BSM and implementation issues for deployment. • White paper and roadmap for Cyber Security and Guide for Implementers for Connected Vehicle Policy. • Analysis on Accreditation Models for Certification for Connected Vehicle Policy.	Increase in safety, mobility, system efficiency and access to resources for disadvantaged groups, and decreases in negative environmental impacts such as vehicle emissions, the need for physical expansion and noise.
• Preliminary guidance document for Advanced Connected Vehicle Enabled Weather Responsive Traffic Management (WRTM). • Evaluation for Connected Vehicle Policy. • Issuance for final strategic implementation and research plan for the Mobility on Demand program.	Decreases in undesirable transportation impacts to the environment and society.

• V2I focus group meetings for FHWA Agency Guidelines – Marketing Plan • Implementation of CVRIA Connected Vehicle Policy. • Project report and documentation for Southeast Michigan Advanced Data Capture Field Testing. • Delivery of test results and documentation of SEMP and testing plants for V2V systems engineering and vehicle integration research for deployment project. • Continuation of On-Board Equipment Minimum Performance Requirements and Test Procedure development for V2V system engineering and vehicle integration research for deployment project.	Increased opportunities to partner with non-government groups, such as private industry and universities.
• SCMS end-to-end testing for V2V system engineering and vehicle integration research for deployment project. • Implementation handbook and training materials for V2V systems engineering and vehicle integration research for deployment project. • Delivery of Field Test and Evaluation (FT&E) report for freeway traffic control message sets. • Spectrum support for connected vehicle policy. • Program evaluation based on user feedback for Data Capture and Management (DCM) program.	Real-time and real-world data to help with transportation planning and transportation system operations.
• Impacts Assessment Report for I-35 TIDC Deployment Independent Evaluation. • Training workshop to USDOT test bed operator for V2V system engineering and vehicle integration research deployment project. • Field test for Freeway Traffic Control Message sets.	Demonstrations of CV environments that fit into real-world environments of today.

• Final algorithm and documentation for traffic signal controller logic. • V2I traffic control message sets requirement report for Freeway Traffic Control Message sets. • V2I fact sheets and briefs for FHWA Public Agency Guidelines - Marketing Plan. • Technical analysis and reports for V2I technical services support. • Application of guidance for Advanced Connected Vehicle Enabled Weather Responsive Traffic Management (WRTM).	Reduction of fatalities through weather-related safety, infrastructure-based, and other applications.

Project Name or Program Activity: Automated Vehicles

Objectives: To define the core elements and the performance criteria for automation (Research); to test automation components in the CV Pilots, as well as in other test situations (Development); and to define the Federal role in facilitating and encouraging deployment of automated systems (Adoption).

Description: The world is facing the emergence of automated vehicles and the focus of this program is to enable the USDOT to engage in the fast pace of technology development by industry. Introduction of this technology poses both an opportunity and a risk for safety, efficiency and sustainability of the transportation system. U.S. leadership in this industry is not a forgone conclusion and USDOT is lagging behind a number of government and private entities already focused on topics related to automated road-vehicle systems and related technologies. The development and adoption of safe vehicle automation through real-world pilot projects would enable the USDOT to engage and catch up with other international activities. At our current budget levels, our participation will be more on the level of observation and planning preparation rather than the extensive research needed to safely expedite these technologies into operation in the U.S. A key component of our smart city challenge includes investigating the impact of automated vehicle technology on mobility, safety and sustainability.

Outputs and Deliverables	Outcomes and Impacts
• Final report for Automated Speed Harmonization – Testing and Evaluation.	Reduce the number and severity of crashes caused by drivers or by other conditions (e.g. weather, pedestrians, and roadway conditions).
• Safety requirements for conventional braking and automated lane centering for functional safety of automated lane centering controls.	Reduction of aggressive driving.
• Technical memorandum: Multimodal Shared-Use Operational Strategies for Universal	Expand the reach of transportation modes to disabled and older users and

Automated Community Transport. • Final report and briefing: Operational Concept for Universal Automated Community Transport.	provide "last mile" connectivity services for all users.
• Final report for CACC- Enabling Research. • Technical finding briefs and reports: simulator experiments for Universal Automated Community Transport. • Report for extension of technical and operations cyber security requirements to automated vehicles.	Increasing the efficiency and effectiveness of existing transportation systems.
• Report documenting 2015 testing for Functional Testing of Varying Levels of Automated Vehicles. • Model for benefits estimation of automated vehicle operations. • Initial roadmap for development of automated vehicle standards for standards planning for automation. • White paper on state regulations harmonization; needs for functional safety of automated lane centering controls. • White paper on consumer education needs for AV for functional safety of automated lane centering controls.	Provide guidance to State and local agencies to help the understanding of impacts of automated vehicles on the assets they manage.

Project Name or Program Activity: Emerging Technology

Objectives: To establish ways to use new technologies and decision support tools for real-time needs, and to meet longer-term public policy objectives (Research); and to integrate the operational characteristics of new technologies into CV and legacy systems and applications (Development).

Description: This area scans the technology horizon for emerging technologies and trends. It addresses our statutory requirement for the Small Business Innovation Research (SBIR) program as well as conducting focused technology inquiries on emerging capabilities with a focus on future generations of transportation systems. ITS Joint Program Office is working with the Saint Lawrence Seaway Corporation and United States Maritime Administration to implement freight related emerging technologies in projects to enhance goods movement.

Outputs and Deliverables	Outcomes and Impacts
• Presentations for Accessible Transportation Technologies Research Initiative (ATTRI) Socio-Economic Impact.	Forge stronger relationships and partnerships with private industry and universities.
• Final report, potential impacts of ATTRI Socio-Economic Impact.	Ability to adapt existing or upcoming program to accommodate new ITS technologies. Stimulate economic growth through innovation and technological leadership.

Project Name or Program Activity: Enterprise Data

Objectives: To integrate new data sets with other legacy data management systems (Research); to identify a model for data management and ownership (Development); and to enable new business relationships between the public and private section to ensure privacy protection (Adoption).

Description: This program area will continue existing efforts in operational data capture from stationary sensors, mobile devices, and connected vehicles and expansion into research activities involving the development of mechanisms for housing, sharing, analyzing, transporting, and applying the data for improved safety and mobility across all modes of travel. Ultimately, these efforts are at the root of developing the transportation sector of the Internet of Things and Smart Cities. Smart cities research aims to demonstrate and test the use of connected and automated vehicles with the ability to share data to provide innovative transportation services, such as mobility on demand and urban freight and logistic services.

Outputs and Deliverables	Outcomes and Impacts
• Innovative approaches to integrate CV data into transportation management systems for integrated big data in operational practice. • Field demo for user-focused smartphone – based incentives.	Provide new revenue opportunities.
• Identification of opportunities to integrate CV data and enhanced data collection into transportation management systems for integrated big data in operational practice. • Report on analysis of data-related program needs for the Dynamic Interrogative Data Capture project.	Monitor performance and enabling more efficient responses.

• Gap analysis for roadside devices and transportation management systems to collect CV data for integrated big data in operational practice. • Delivery of data website Federal plan for Dynamic Interrogative Data Capture project.	Increase efficiency of information sharing.
• Report on international and domestic data standard harmonization and recommendations for Dynamic Interrogative Data Capture project. • Recommendations on architecture to enable hosting large data sets on RDE for connected vehicle data privacy investigation. • Technical paper on Dynamic Driver and Device Characteristics for Connected Vehicle Data Privacy Investigation. • Privacy analysis of data sets and environments for connected vehicle data privacy investigation. • Enhancement of de-identification procedures for connected vehicle data privacy investigation.	Assuring the public that the privacy of data will be protected.
• Mobile devices initiative FY 2017-2022 work plan report for crowdsourcing/social media/mobile devices.	Improve quality (accuracy and timeliness) of data.
• Webinar promoting innovative practices for data challenges. • State of practice assessment for energy, automation and smart grid. • Stakeholder workshops for connected cycling and energy, automation and smart grid. • Agreements for strategic partnerships and stakeholder engagements.	Stimulate innovation in new applications by enabling research.
• Final report for data challenges. • Operational performance measures for basic mobility message for Dynamic Interrogative Data Capture project.	Efficiently managing large datasets.

Project Name or Program Activity: Interoperability

Objectives: To develop and maintain a National ITS Architecture sufficient to ensure required nationwide interoperability while maximizing flexibilities (Development); to develop and maintain an inventory of candidate interfaces for standardization and support of standards development efforts for interfaces where there is greatest public interest, including those required to support regulatory activity (Development); to develop international harmonization standards and architectures in line with the public interest (Adoption); and to facilitate availability of testing and certification processes and procedures to ensure required interoperability and regulatory compliance (Adoption).

Description: This funds key technical research on ITS architecture and standards, cyber security human factors required for regulatory decision making, test beds to ensure a sound industrial base and national, and international interoperability and economies of scale. The goal of this research is to ensure effective connectivity from the device level to the transportation system level.

Outputs and Deliverable	Outcomes and Impacts
• Support for ITS stakeholders who are implementing ITS architecture for architecture deployment support.	Increase efficiency in communication and information sharing between transportation agencies and users.
• Cyber security research. • Maintenance and updating of the National Architecture and Turbo Architecture for architecture deployment support. • National ITS Architecture V 8.0 Update for national architecture evolution/turbo support. • SET IT Software V 3.0 release for national architecture evolution/turbo support. • Technical support to ITS architecture activities along the U.S.-Canada and U.S.-Mexico borders for border architecture. • Support for cooperative ITS architecture activities with Canadian and Mexican Governments for border architecture.	Nationwide interoperability for vehicles and other participants in the ITS system.

• Lifecycle auto cyber approach for automotive cyber security guidelines development support. • Content for IEEE 1609.2 security standard for DSRC:1609.2/Security Work.	Maintenance of the forward and backward interoperability of ITS equipment and reduce need for re-investment over time.
• Final report for Automotive Cybersecurity Guidelines.	Greater adoption rates with reduced anxiety over obsolescence.
• Final self-sustaining certification testing report for next state certification and testing.	More efficient transportation usage based on innovations and new commercial applications.
• Cyber security research considerations for heavy vehicles. • Oversight for certification technical support services.	Transportation solutions that resolve interoperability among developers, users, agencies, and modes to increase efficiencies, reduce costs, and provide real-time and effective information.
• Briefing materials for next stage certification and testing.	Increase efficiencies in the economic enterprise.

Project Name or Program Activity: Accelerating Deployment

Objectives: To define collaboration and communication mechanisms and targets to encourage public and private investment (Research); to develop comprehensive cost benefits and analytic tools that allow deployers to understand the financial and operational benefits of new technologies and systems (Development); and to establish the tools that support the new user base (Adoption).

Description: This objective seeks to: spur adoption of technology and help stakeholders and localities deploy maturing ITS systems; and fund directed technical assistance, training, outreach, program evaluation and other stakeholder engagement to advance ITS work from research to initial adoption to wider scale deployment in coordination with other stakeholders at the federal, State, regional and local level.

Outputs and Deliverables:	Outcomes and Impacts
• Publication of final report for Rural Connected Vehicle GAP Analysis. • Final report for ICM Independent Evaluation.	Provide deployment support by assisting with transition planning, training, transition plans, timelines and milestone development.

• Stakeholder outreach for C-ITS protection profile analysis. • Publication in ITE Journal for ITE Connected Vehicle Support. • 2016 BCLL Update Report for Evaluation.	Provide communication and education support to facilitate awareness, understanding, acceptance, adoption, and deployment of ITS technologies across all stakeholder groups.
• Research site recommendations for ITS transit technical support. • Presentations, articles, and fact sheets for MSAA Implementation materials. • MSAA best practices workshops for MSAA Knowledge and Technology Transfer.	Ensure effective partnerships are fostered and developed at various levels – executive, program and project. The partnerships will encompass a wide range of public and private partners.

RT&E PROGRAM NAME: STATE PLANNING & RESEARCH (SP&R)

AMOUNT REQUESTED FOR FY 2017: $199,891,837 (non-add)

Objectives: To solve transportation problems identified by the States. To encourage cooperation among States to leverage funds and conduct research of relevance to multi-State regions.

Description: States are required to set aside 2 percent of the apportionments they receive from five of the major Federal-aid programs authorized in MAP-21 for their State Planning and Research Program. At least 25 percent of the total SP&R has to be used for research, development, and technology transfer purposes. Each State may tailor its SP&R program to meet local needs. High priority is given to applied research on State or regional problems, transfer of technologies from researchers to users, and research for setting standards and specifications. States can contribute SP&R research funds to cooperative research programs such as the National Cooperative Highway Research Program and transportation pooled fund studies.

Outputs and Deliverables	Outcomes and Impacts
Reports, data, and tools that meet State and local needs.	Enhanced solutions to highway problems identified by the States.
Technology deployment activities essential to States and local transportation agencies.	Adapting findings to practical applications by developing and transferring new technologies.
Contribution to cooperative research programs such as the National Cooperative Highway Research Program, TRB, and Transportation Pooled Fund projects.	Enhanced collaboration practices with transportation stakeholders.

EXPECTED OUTPUTS OF INTERNAL DOT COLLABORATION (Applies to all RT&E programs)

Examples of current and ongoing collaborative efforts include:

- Accessible Transportation Technologies Research Initiative (ATTRI): FHWA participates in the ATTRI, a multi-modal USDOT effort designed to enhance mobility choices and quality for travelers with disabilities, including those with mobility, vision, hearing and intellectual impairments, veterans with disabilities, as well as our aging population. The goal is to provide these groups with the capability to reliably, safely and independently plan and execute their travel, which in turn allows for more opportunities to work and connect. The National Institute of Disability and Rehabilitation Research and other Federal agencies are participating.
- FHWA coordinates annual publication of the "Freight Facts and Figures", developed in partnership with BTS, FTA and MARAD-- a multi-modal snapshot of freight movement information.
- Due to FAA's interest, FHWA has expanded its Traffic Speed Deflection study; and also with other Federal agencies, created a government group examining alternative cementitious materials.

EXPECTED OUTPUTS OF EXTERNAL DOT COLLABORATION (applies to all RT&E programs)

Examples of current and ongoing collaborative efforts include:

- FHWA staff annually participates in the National Cooperative Highway Research Program (NCHRP) by providing problem statements, participating in selection panels and synthesis groups. In addition, projects not selected for NCHRP funding are considered under FHWA's Exploratory Advanced Research program.
- FHWA administers the Transportation Pooled Fund program, which pools funds (generally SP&R funds) for the States to perform research in areas of interest to one or more States.
- National Transportation Liaison Community of Practice: Transportation liaisons facilitate the environmental and permit review processes for transportation projects by providing technical assistance and coordinating between resource and regulatory agencies, State departments of transportation, and metropolitan planning organizations. FHWA created a Web site to assist liaisons in sharing information and resources. The site includes a resource library, list of subject matter experts, quarterly liaison profiles, a calendar of events, and a newly launched discussion board.

Internal DOT Collaboration Partners **(applies to all RT&E programs)**
National Highway Traffic Safety Administration (NHTSA), Federal Motor Carrier Safety Administration (FMCSA), Federal Aviation Administration (FAA), Federal Transit Administration (FTA), FRA, OST-R, Volpe Center.

External DOT Collaboration Partners: **(applies to all RT&E programs)**
State Transportation Agencies, MPOs, Local Public Agencies, STICs, TRB, AASHTO, UTCs, The Human Factors Coordinating Council, academia, industry, National Association of County Engineers (NACE), ITS Institute, Society of Automotive Engineers, American Concrete

Pavement Association, National Steel Bridge Alliance, Portland Cement Association, the National Asphalt Pavement Association, National Stone Sand and Gravel Association, National Concrete Bridge Council, American Concrete Institute, Association of Metropolitan Planning Organizations (AMPO), National Association of Regional Councils (NARC), non-governmental organizations, first responder community, freight community, International transportation groups, foreign ministries and departments responsible for road transportation; other U.S. Federal agencies and departments, Local and Tribal Technical Assistance Program Centers.

Does this Program/Project have a Technology Component? **(applies to all RT&E programs)**
All FHWA's research programs have a technology component.

Is this Program/Project listed in the USDOT Research Hub or TRB Research in Progress Database? **(applies to all RT&E programs)**
Per the FAST Act, all research programs must be included in the USDOT Research database.

RT&E PROGRAM NAME: UNIVERSITY TRANSPORTATION CENTERS (UTC)

AMOUNT REQUESTED FOR FY 2017: $75,000,000
Project and activity summaries are contained in the Office of the Secretary of Transportation (OST) -- Office of the Assistant Secretary for Research and Technology FY 2017 budget submission.

RT&E PROGRAM NAME: BUREAU OF TRANSPORTATON STATISTICS (BTS)

AMOUNT REQUESTED FOR FY 2017: $26,000,000
Project and activity summaries are contained in the Office of the Secretary of Transportation (OST) -- Office of the Assistant Secretary for Research and Technology FY 2017 budget submission.

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