



**U.S. Department of
Transportation**

BUDGET ESTIMATES

FISCAL YEAR 2019

**NATIONAL HIGHWAY
TRAFFIC SAFETY
ADMINISTRATION**

**SUBMITTED FOR THE USE OF
THE COMMITTEES ON APPROPRIATIONS**

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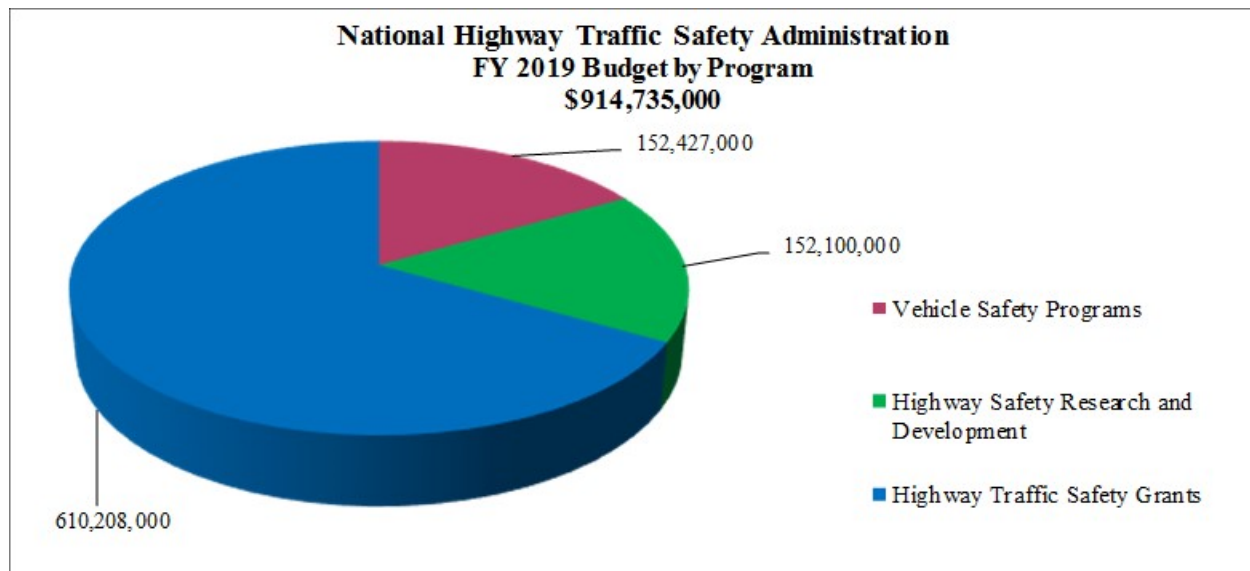
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National Highway Traffic Safety Administration

FY 2019 Budget Request

Overview



The National Highway Traffic Safety Administration's (NHTSA) mission is to save lives, prevent injuries, and reduce economic costs due to road traffic crashes, through education, research, safety standards, and enforcement activity. NHTSA's Fiscal Year (FY) 2019 budget request of \$914.74 million supports the full spectrum of the agency's vehicle and behavioral safety activities. Vehicles on our Nation's roadways are the safest in the world, and NHTSA remains dedicated to making them safer every day. Advancements in automotive technology and vehicle innovation have created new possibilities and offer enormous safety potential for all road users in the United States.

However, the data remind us that three facts remain in traffic safety:

- Nearly half (48 percent) of all passenger vehicle occupants killed in crashes are unbelted;¹
- More than a fourth (28 percent) of highway crash fatalities involve an impaired driver;² and
- In an estimated 94 percent of serious crashes studied in a crash causation survey, the critical reason for the crash is attributed to the driver.³

In 2016, the Nation lost 37,461 people in traffic crashes.⁴ Additionally, preliminary data for 2017 reflects a flat trend in fatalities.

¹ Fatality Analysis Reporting System (FARS) 2016. National Highway Traffic Safety Administration.

² FARS 2016. National Highway Traffic Safety Administration.

³ Singh, S. (2015, February). Critical reasons for crashes investigated in the National Motor Vehicle Crash Causation Survey. (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 115). Washington, DC: National Highway Traffic Safety Administration.

⁴ FARS 2016. National Highway Traffic Safety Administration.

In recent years, the U.S. has experienced an increasing rate of emerging technology. NHTSA is committed to ensuring that these innovative technologies increase public safety. The automotive industry is undergoing a technological revolution, one that promises to improve safety and expand mobility for millions of Americans. NHTSA must ensure the testing and safe deployment of driver assistance technologies, and the FY 2019 budget request supports the agency's ability to do so. Furthermore, in the past few years, NHTSA witnessed the largest vehicle recalls in the agency's history. A rise in crash fatalities, technological advances, and several high-profile enforcement activities have raised public awareness of the importance of NHTSA's safety mission.

NHTSA's FY 2019 budget request includes \$152.43 million for Vehicle Safety, \$152.10 million for Highway Safety Research and Development, and \$610.21 million for Highway Traffic Safety Grants. This budget is a critical step in improving safety for all road users, keeping our economy moving forward, and enhancing NHTSA's recall and enforcement efforts. NHTSA can never put a price on a life lost, but the agency estimates that motor vehicle crashes imposed \$836 billion in U.S. economic costs and societal harm in 2010 alone. This FY 2019 budget request addresses these costs.

To address the role of human choices and errors in auto crashes, the FY 2019 budget request will allow NHTSA to further influence driver behaviors to reduce injuries and fatalities on our roadways; continue its efforts in rulemaking, enforcement, and vehicle research; and develop and implement data-driven, workable, and self-sustaining highway safety programs. This budget request enables the agency to work effectively with its Federal, State, local, and private sector partners to achieve the greatest reduction possible in roadway crashes, injuries, and fatalities. All of these entities play vital roles in reducing injuries and fatalities on our Nation's roadways. Public and private sector partnerships work to enforce laws against drunk and distracted driving, provide technical assistance on graduated driver licensing and other safety issues, and support high visibility activities that save lives.

Priority Areas

Vehicle Safety

The FY 2019 budget requests \$152.43 million to continue advancing the Vehicle Safety efforts initiated over the past several years. NHTSA is tasked with making sure the Nation's highways are safe, and safe vehicles are a vital component of preventing crashes and the resulting injuries and fatalities. The Vehicle Safety program includes vehicle research, rulemaking, enforcement, and data collection and analysis activities.

This budget request supports research into complex safety-critical electronic control systems; vehicle cybersecurity; and new and emerging technologies that can help drivers avoid crashes. In addition to covering core research needs associated with Automated Driving Systems under the Vehicle Electronics and Emerging Technologies program, the FY 2019 budget requests an additional \$10 million for a new Automated Driving Systems program activity. Reflecting Secretary Chao's priorities of safety and innovation, and in light of the rapidly evolving

technological and regulatory landscape, NHTSA is requesting resources targeted to support the safe development and deployment of Automated Driving Systems. While successful deployment of these technologies promise a new level of safety, they come with a new set of challenges. To best protect the safety of the American public, it is imperative that NHTSA keeps pace with rapid technological progress.

The principal focus of this initiative is on the most promising safety-enhancement segment of automation (Society of Automotive Engineers [SAE] Levels 4 and 5). NHTSA will align agency activities to support and maintain the United States' global leadership in the safe deployment of automated vehicles through technological innovation and open market access. Through ongoing collaboration with industry, NHTSA will address the barriers that challenge the rollout of higher-level Automated Driving Systems in the United States. These systems have the potential to address the 94 percent of serious crashes where the critical reason for the crash is attributed to the driver. The requested resources are essential to address new challenges while maintaining agency efforts that support NHTSA's safety mission.

For rulemaking activities to establish average fuel economy standards, the Secretary of Transportation retains primary and final decision-making authority. In consultation with the Administrator of the Environmental Protection Agency and as delegated to NHTSA, the Department of Transportation prescribes or amends the Corporate Average Fuel Economy (CAFE) program requirements under the Energy Conservation Policy Act of 1975 and the Energy Independence and Security Act of 2007 (EISA). These efforts include:

- Conducting analytical work and drafting documents to support the development of standards for the years beginning in 2022. NHTSA may evaluate the model year (MY) 2021 standards it finalized in 2012 to ensure they remain maximum feasible.
- Funding work by the National Academy of Sciences to develop a report evaluating technologies to improve medium- and heavy-duty vehicle fuel efficiency.
- Continuing development and maintenance of the CAFE management suite, including hosting, software, and contract labor costs.

The request also provides funding for enforcement program activities that support the Department's emphasis on safety by investigating safety-related defects in motor vehicles and motor vehicle equipment; ensuring that manufacturers conduct recalls to remove unsafe motor vehicles and equipment from the highways; ensuring industry compliance with motor vehicle safety standards; and enforcing the Federal odometer law.

Highway Safety

The FY 2019 budget requests \$152.10 million for NHTSA's behavioral safety programs. Through this funding, the agency will prioritize educating roadway users and community leaders to adopt safe behaviors, in conjunction with strong laws and effective law enforcement.

NHTSA will continue to engage with law enforcement officers, prosecutors, and judges in priority agency behavioral programs. These partnerships are crucial to the success of the agency's key

behavioral safety programs. NHTSA will continue to mobilize and enable a network of peer outreach law enforcement liaisons (LELs) to advance its programs and provide ongoing technical assistance to law enforcement officials at the State and local level. NHTSA will also support the Data-Driven Approaches to Crime and Traffic Safety (DDACTS) program, and will continue its research initiatives in the areas of drug-impaired driving and driver fatigue.

In FY 2019, the National Center for Statistics and Analysis (NCSA) will support the Department's safety efforts through the collection and analysis of crash data to identify safety problems and trends; and the assessment of costs, benefits, and effectiveness of programs and regulations. The funding will allow NCSA to maintain its core programs, including the Fatality Analysis Reporting System, and continue implementing the new modernized data collection systems. Key ongoing initiatives include: providing FastFARS data to publish quarterly and annual projections of motor vehicle traffic fatalities; conducting on-site and remote crash investigations to identify unintended consequences of vehicle-related crashes or incidences; supporting potential recalls and other agency enforcement efforts; and improving data quality and analytical methods including electronic data transfer and new analytical tools.

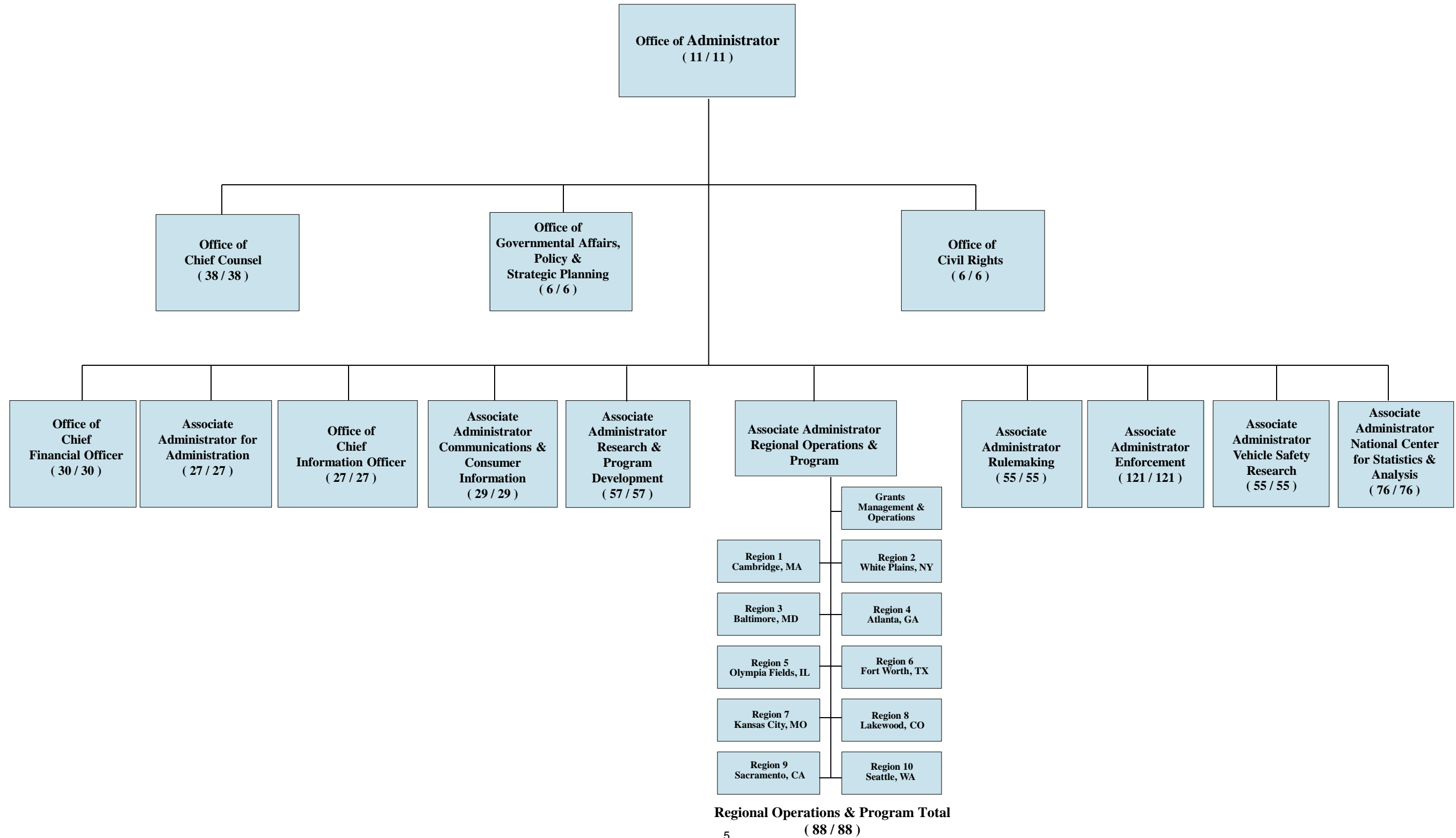
Traffic Safety Grants

The FY 2019 Budget requests \$610.21 million for Highway Traffic Safety Grants. Authorized under the Fixing America's Surface Transportation (FAST) Act (P.L. 114-94), the Highway Traffic Safety Grants account continues the grant programs established under the Moving Ahead for Progress in the 21st Century Act (MAP-21) (P.L. 112-141). Through these programs, including the Section 402 State and Community Highway Safety Program and the Section 405 National Priority Safety Programs, the agency provides grants to States and local governments that are critical to the success of NHTSA's behavioral and data programs. Additionally, the High Visibility Enforcement program will continue to provide funding for NHTSA's annual *Click It or Ticket* and *Drive Sober or Get Pulled Over* media campaigns that have proven effective in reducing injuries and fatalities on our Nation's highways.

Conclusion

NHTSA's FY 2019 budget request of \$914.74 million will continue to support the agency's safety programs and activities, while ensuring that the agency keeps pace with industry innovation in driver distraction, vehicle electronics, and highly Automated Driving Systems. Funding at the requested level will allow NHTSA to continue helping all Americans drive, ride, and walk safely.

FY 2018 FTE Estimate
National Highway Traffic Safety Administration
(Total 626 FTE/626 FTP)



FY 2019 FTE Estimate
National Highway Traffic Safety Administration
(Total 626 FTE/626 FTP)

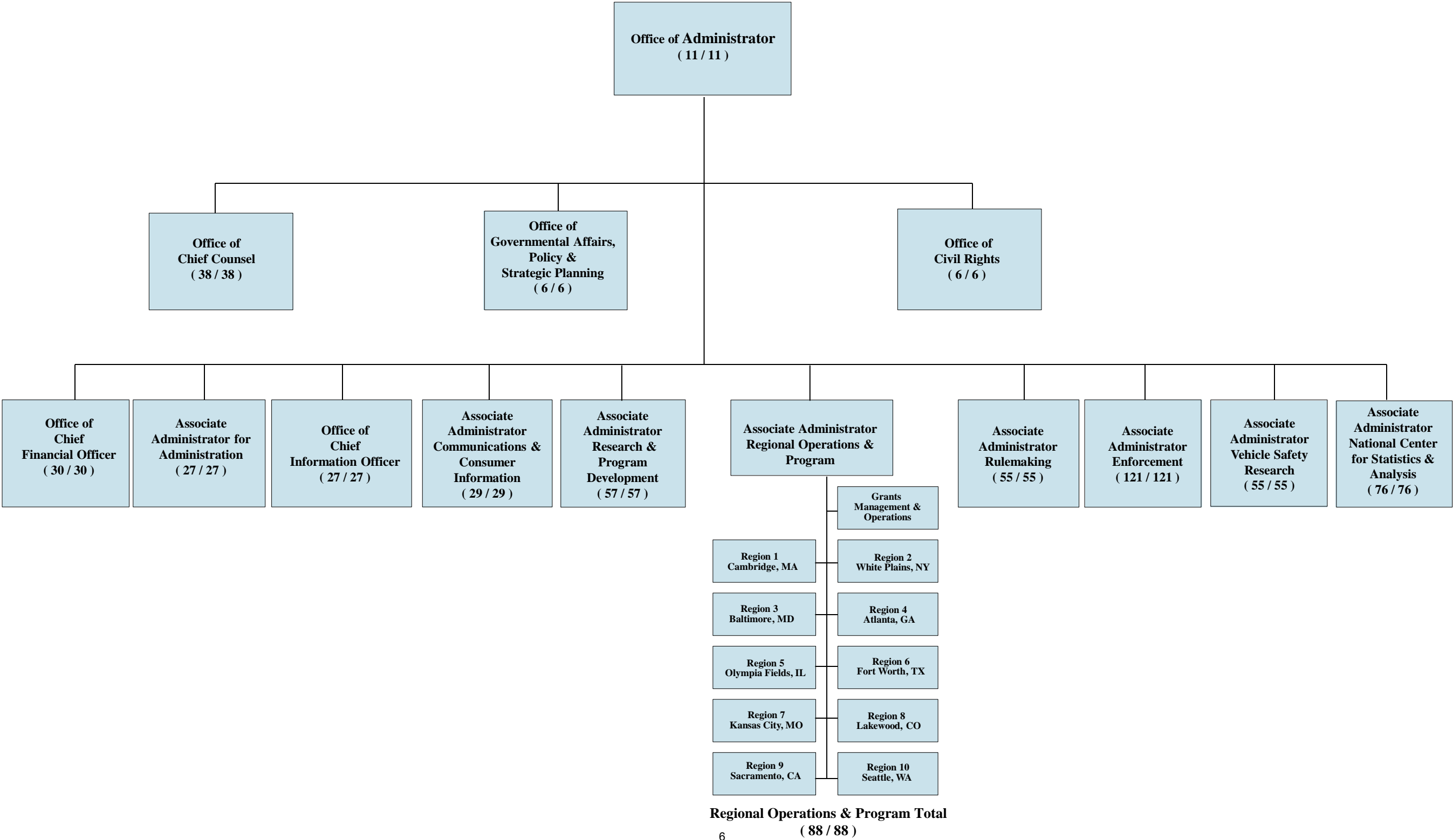


EXHIBIT II - 1
FY 2019 COMPARATIVE STATEMENT OF NEW BUDGET AUTHORITY
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
(\$000)

<u>ACCOUNT NAME</u>	<u>FY 2017 ENACTED</u>	<u>FY 2018 ANNUALIZED CR</u>	<u>FY 2019 REQUEST</u>
Operations and Research	\$ 325,975	\$ 327,852	\$ 304,527
Vehicle Safety Programs (GF)	180,075	178,852	152,427
Highway Safety Research & Development (TF)	145,900	149,000	152,100
Highway Traffic Safety Grants (TF)	686,613	696,891	610,208
Highway Traffic Safety Grants (TF)	585,372	597,629	610,208
Transfer from FHWA ¹	101,241	99,262	-
TOTAL	\$ 1,012,588	\$ 1,024,743	\$ 914,735

¹. NHTSA anticipates transfers from FHWA in FY 2019 in amounts to be determined based on State penalty information.

Note: Totals may not add due to rounding.

EXHIBIT II-2
FY 2019 TOTAL BUDGETARY RESOURCES BY APPROPRIATION ACCOUNT
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations

(\$000)

ACCOUNT NAME	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
VEHICLE SAFETY PROGRAMS (GF)	\$ 180,075	\$ 178,852	\$ 152,427
Rulemaking	23,510	23,203	21,520
Enforcement	38,899	36,769	17,016
Research and Analysis	43,966	40,426	37,805
Administrative Expenses	73,700	78,455	76,086
HIGHWAY SAFETY RESEARCH AND DEVELOPMENT (TF)	\$ 145,900	\$ 144,909	\$ 152,100
Highway Safety Programs	55,362	59,761	61,782
Research and Analysis - NCSA	41,094	38,730	40,290
Administrative Expenses	49,444	46,419	50,028
TOTAL OPERATIONS AND RESEARCH	\$ 325,975	\$ 323,761	\$ 304,527
HIGHWAY TRAFFIC SAFETY GRANTS			
Section 402 Formula Grants	252,300	250,587	270,400
Section 2009 High Visibility Enforcement Program	29,500	29,300	30,200
Section 405 National Priority Safety Programs	277,500	275,615	283,000
<i>Section 405 Occupant Protection Grants</i>	36,075	35,830	36,790
<i>Section 405 State Traffic Safety Information System Grants</i>	40,238	39,964	41,035
<i>Section 405 Impaired Driving Countermeasures Grants</i>	145,688	144,698	148,575
<i>Section 405 Distracted Driving Grants</i>	23,588	23,427	24,055
<i>Section 405 Motorcyclist Safety Grants</i>	4,163	4,134	4,245
<i>Section 405 State Graduated Driver Licensing Laws</i>	13,875	13,781	14,150
<i>Section 405 Non-Motorized Safety Ped/Bikes</i>	13,875	13,781	14,150
Administrative Expenses	26,072	25,895	26,608
Transfer from FHWA ¹	101,241	99,262	-
TOTAL HIGHWAY TRAFFIC SAFETY GRANTS (TF)	\$ 686,613	\$ 680,659	\$ 610,208
TOTAL	\$ 1,012,588	\$ 1,004,420	\$ 914,735

¹ NHTSA anticipates transfers from FHWA in FY 2019 in amounts to be determined based on State penalty information.

Note: Totals may not add due to rounding.

EXHIBIT II-3
FY 2019 BUDGET REQUEST BY DOT STRATEGIC AND ORGANIZATIONAL GOALS
Appropriations, Obligation Limitation, and Exempt Obligations
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
(\$000)

<u>ACCOUNT NAME</u>	<u>Safety</u>	<u>Infrastructure</u>	<u>Innovation</u>	<u>Accountability</u>	<u>Total</u>
Vehicle Safety Programs (GF)	\$ 129,443	\$ -	\$ 14,402	\$ 8,583	\$ 152,427
Highway Safety Research & Development (TF)	\$ 148,071	\$ -	\$ -	\$ 4,029	\$ 152,100
Highway Traffic Safety Grants (TF)	\$ 610,208	\$ -	\$ -	\$ -	\$ 610,208
TOTAL	\$ 887,722	\$ -	\$ 14,402	\$ 12,612	\$ 914,735

Note: Totals may not add due to rounding.

EXHIBIT II-4
FY 2019 BUDGET AUTHORITY
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
(\$000)

<u>ACCOUNT NAME</u>	<u>Mandatory/ Discretionary</u>	<u>FY 2017 ENACTED</u>	<u>FY 2018 ANNUALIZED CR</u>	<u>FY 2019 REQUEST</u>
Vehicle Safety Programs (GF)	D	\$ 180,075	\$ 178,852	\$ 152,427
Vehicle Safety Research (GF)		\$ 180,075	\$ 178,852	\$ 152,427
Highway Safety Research & Develop. (TF)	M	\$ 145,900	\$ 149,000	\$ 152,100
Highway Safety Research & Develop. (TF)		\$ 145,900	\$ 149,000	\$ 152,100
Highway Traffic Safety Grants (TF)	M	\$ 686,613	\$ 696,891	\$ 610,208
Highway Traffic Safety Grants (TF)		\$ 585,372	\$ 597,629	\$ 610,208
Transfer from FHWA ¹		101,241	99,262	-
TOTAL:		\$1,012,588	\$ 1,024,743	\$ 914,735
[Mandatory]		832,513	845,891	762,308
[Discretionary]		180,075	178,852	152,427

¹. NHTSA anticipates transfers from FHWA in FY 2019 in amounts to be determined based on State penalty information.
Note: Totals may not add due to rounding.

EXHIBIT II-5

**FY 2019 OUTLAYS
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
(\$000)**

	M/D	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Vehicle Safety Programs (GF)	D	135,140	179,000	156,000
Highway Safety Research & Development (TF)	D	140,692	153,000	156,000
Highway Traffic Safety Grants (TF)	D	678,720	688,000	694,000
Next Generation 911 Implementation Grants (GF)	M	(7,814)	22,000	43,000
TOTAL OUTLAYS		946,738	1,042,000	1,049,000
Mandatory Outlays (M)		\$ (7,814)	\$ 22,000	\$ 43,000
Discretionary Outlays (D)		\$ 954,552	\$ 1,020,000	\$ 1,006,000

EXHIBIT II-6

SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

SUMMARY TABLE
Baseline Changes

Program Category	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	Annualization of 2018 Pay Raises	Annualization of 2018 FTE	FY 2019 Pay Raise	Compensable Days (260)	GSA Rent	WCF Increase / Decrease	Inflation / Deflation	FY 2019 Baseline Estimate	Program Increases / Decreases	FY 2019 REQUEST
PERSONNEL RESOURCES (FTE)												
Direct Program FTE	541	626	-	-	-	-	-	-	-	626	-	626
Reimbursable FTE	-	-	-	-	-	-	-	-	-	-	-	-
Total Direct and Indirect FTE	541	626	-	-	-	-	-	-	-	626	-	626
Salaries and Benefits (11 & 12)*	90,324	102,489	489	-	-	-	-	-	-	102,978	-	102,978
Travel (21)	1,421	1,421	-	-	-	-	-	-	-	1,421	143	1,564
Transportation of Things (22)	70	70	-	-	-	-	-	-	-	70	-	70
GSA Rent (23)	8,186	8,622	-	-	-	-	259	-	-	8,881	-	8,881
Rent, Communications & Utilities (23)	10,858	5,870	-	-	-	-	-	-	-	5,870	(768)	5,102
Printing (24)	357	357	-	-	-	-	-	-	-	357	-	357
Other Services (25)	29,841	25,824	-	-	-	-	-	(771)	-	25,053	3,435	28,488
Supplies (26)	7,134	5,091	-	-	-	-	-	-	-	5,091	(831)	4,260
Equipment (31)	1,025	1,025	-	-	-	-	-	-	-	1,025	-	1,025
Subtotal, Administrative	149,216	150,769	489	-	-	-	259	(771)	-	150,745	1,979	152,721
VEHICLE SAFETY AND HIGHWAY SAFETY PROGRAMS	202,831	198,888	-	-	-	-	-	-	-	198,888	(20,474)	178,414
VS - Rulemaking	23,510	23,203	-	-	-	-	-	-	-	23,203	(1,682)	21,521
VS - Enforcement	38,899	36,769	-	-	-	-	-	-	-	36,769	(19,753)	17,016
VS - Research and Analysis	43,966	40,426	-	-	-	-	-	-	-	40,426	(2,621)	37,805
HS - Highway Safety Programs	55,362	59,761	-	-	-	-	-	-	-	59,761	2,022	61,783
HS - Research and Analysis	41,094	38,730	-	-	-	-	-	-	-	38,730	1,560	40,290
HIGHWAY TRAFFIC SAFETY GRANTS	559,300	555,502	-	-	-	-	-	-	-	555,502	28,098	583,600
Sec. 402 Formula Grants	252,300	250,587	-	-	-	-	-	-	-	250,587	19,813	270,400
Sec. 2009 High Visibility Enforcement	29,500	29,300	-	-	-	-	-	-	-	29,300	900	30,200
Section 405 National Priority Safety Programs	277,500	275,615	-	-	-	-	-	-	-	275,615	7,385	283,000
<i>Section 405 Occupant Protection Grants</i>	36,075	35,830	-	-	-	-	-	-	-	35,830	960	36,790
<i>Section 405 State Traffic Safety Information System Grants</i>	40,238	39,964	-	-	-	-	-	-	-	39,964	1,071	41,035
<i>Section 405 Impaired Driving Countermeasures Grants</i>	145,688	144,698	-	-	-	-	-	-	-	144,698	3,877	148,575
<i>Section 405 Distracted Driving Grants</i>	23,588	23,427	-	-	-	-	-	-	-	23,427	628	24,055
<i>Section 405 Motorcyclist Safety Grants</i>	4,163	4,134	-	-	-	-	-	-	-	4,134	111	4,245
<i>Section 405 State Graduated Driver Licensing Laws</i>	13,875	13,781	-	-	-	-	-	-	-	13,781	369	14,150
<i>Section 405 Non-Motorized Safety Ped/Bikes</i>	13,875	13,781	-	-	-	-	-	-	-	13,781	369	14,150
Subtotal, Programs	762,131	754,391	-	-	-	-	-	-	-	754,391	7,624	762,014
GRAND TOTAL	911,347	905,158	489	-	-	-	259	(771)	-	905,136	9,603	914,735

Note: Totals may not add due to rounding.

*The pay raise for Salaries and Benefits is 1.9 percent for FY 2018.

EXHIBIT II - 6
SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

OPERATIONS AND RESEARCH
VEHICLE SAFETY PROGRAMS

Baseline Changes												
Program Category	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	Annualization of 2018 Pay Raises	Annualization of 2018 FTE	FY 2019 Pay Raise	Compensable Days (260)	GSA Rent	WCF Increase / Decrease	Inflation / Deflation	FY 2019 Baseline Estimate	Program Increases / Decreases	FY 2019 REQUEST
<u>PERSONNEL RESOURCES (FTE)</u>												
Direct Program FTE	311	363	-	-	-	-	-	-	-	363	-	363
Reimbursable FTE	-	-	-	-	-	-	-	-	-	-	-	-
Total Direct and Indirect FTE	311	363	-	-	-	-	-	-	-	363	-	363
Salaries and Benefits (11 & 12)*	50,304	59,579	284	-	-	-	-	-	-	59,863	-	59,863
Travel (21)	538	538	-	-	-	-	-	-	-	538	54	592
Transportation of Things (22)	70	70	-	-	-	-	-	-	-	70	-	70
GSA Rent (23)	1,522	1,958	-	-	-	-	259	-	-	2,217	-	2,217
Rent, Communications & Utilities (23)	5,288	4,800	-	-	-	-	-	-	-	4,800	(1,313)	3,487
Printing (24)	357	357	-	-	-	-	-	-	-	357	-	357
Other Services (25)	9,542	7,117	-	-	-	-	-	166	-	7,283	(937)	6,346
Supplies (26)	5,054	3,011	-	-	-	-	-	-	-	3,011	(881)	2,130
Equipment (31)	1,025	1,025	-	-	-	-	-	-	-	1,025	-	1,025
Subtotal, Administrative	73,700	78,455	284	-	-	-	259	166	-	79,163	(3,077)	76,085
<u>PROGRAMS</u>												
Rulemaking	23,510	23,203	-	-	-	-	-	-	-	23,203	(1,682)	21,521
Enforcement	38,899	36,769	-	-	-	-	-	-	-	36,769	(19,753)	17,016
Research and Analysis	43,966	40,426	-	-	-	-	-	-	-	40,426	(2,621)	37,805
Subtotal, Programs	106,375	100,398	-	-	-	-	-	-	-	100,398	(24,056)	76,342
TOTAL, VEHICLE SAFETY PROGRAMS	180,075	178,853	284	-	-	-	259	166	-	179,560	(27,133)	152,427

Note: Totals may not add due to rounding.

*The pay raise for Salaries and Benefits is 1.9 percent for FY 2018.

EXHIBIT II - 6
SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

OPERATIONS AND RESEARCH
HIGHWAY SAFETY RESEARCH & DEVELOPMENT

Program Category	Baseline Changes										Program Increases / Decreases	FY 2019 REQUEST
	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	Annualization of 2018 Pay Raises	Annualization of 2018 FTE	FY 2019 Pay Raise	Compensable Days (260)	GSA Rent	WCF Increase / Decrease	Inflation / Deflation	FY 2019 Baseline Estimate		
<u>PERSONNEL RESOURCES (FTE)</u>												
Direct Program FTE	156	175	-	-	-	-	-	-	-	175	-	175
Reimbursable FTE	-	-	-	-	-	-	-	-	-	-	-	-
Total Direct and Indirect FTE	156	175	-	-	-	-	-	-	-	175	-	175
Salaries and Benefits (11 & 12)*	27,649	29,698	142	-	-	-	-	-	-	29,840	-	29,840
Travel (21)	506	506	-	-	-	-	-	-	-	506	51	557
Transportation of Things (22)	-	-	-	-	-	-	-	-	-	-	-	-
GSA Rent (23)	6,236	6,236	-	-	-	-	-	-	-	6,236	-	6,236
Rent, Communications & Utilities (23)	5,570	1,070	-	-	-	-	-	-	-	1,070	471	1,541
Printing (24)	-	-	-	-	-	-	-	-	-	-	-	-
Other Services (25)	7,403	6,829	-	-	-	-	-	-	-	6,829	2,897	9,726
Supplies (26)	2,080	2,080	-	-	-	-	-	-	-	2,080	50	2,130
Equipment (31)	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal, Administrative	49,444	46,419	142	-	-	-	-	-	-	46,561	3,469	50,028
<u>PROGRAMS</u>												
Highway Safety Programs	55,362	59,761	-	-	-	-	-	-	-	59,761	2,022	61,783
Research and Analysis - NCSA	41,094	38,730	-	-	-	-	-	-	-	38,730	1,560	40,290
Subtotal, Programs	96,456	98,490	-	-	-	-	-	-	-	98,490	3,582	102,072
TOTAL, HIGHWAY SAFETY RESEARCH & DEVELOPMENT	145,900	144,909	142	-	-	-	-	-	-	145,051	7,051	152,100

Note: Totals may not add due to rounding.

*The pay raise for Salaries and Benefits is 1.9 percent for FY 2018.

EXHIBIT II - 6
SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

HIGHWAY TRAFFIC SAFETY GRANTS

Baseline Changes												
Program Category	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	Annualization of 2018 Pay Raises	Annualization of 2018 FTE	FY 2019 Pay Raise	Compensable Days (260)	GSA Rent	WCF Increase / Decrease	Inflation / Deflation	FY 2019 Baseline Estimate	Program Increases / Decreases	FY 2019 REQUEST
PERSONNEL RESOURCES (FTE)												
Direct Program FTE	74	88	-	-	-	-	-	-	-	88	-	88
Reimbursable FTE	-	-	-	-	-	-	-	-	-	-	-	-
Total Direct and Indirect FTE	74	88	-	-	-	-	-	-	-	88	-	88
Salaries and Benefits (11 & 12)*	12,371	13,212	63	-	-	-	-	-	-	13,275	-	13,275
Travel (21)	377	377	-	-	-	-	-	-	-	377	38	415
Transportation of Things (22)	-	-	-	-	-	-	-	-	-	-	-	-
GSA Rent (23)	428	428	-	-	-	-	-	-	-	428	-	428
Rent, Communications & Utilities (23)	-	-	-	-	-	-	-	-	-	-	74	74
Printing (24)	-	-	-	-	-	-	-	-	-	-	-	-
Other Services (25)	12,896	11,878	-	-	-	-	-	-	-	11,878	538	12,416
Supplies (26)	-	-	-	-	-	-	-	-	-	-	-	-
Equipment (31)	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal, Administrative	26,072	25,895	63	-	-	-	-	-	-	25,958	650	26,608
PROGRAMS												
Sec. 402 Formula Grants	252,300	250,587	-	-	-	-	-	-	-	250,587	19,813	270,400
Sec. 2009 High Visibility Enforcement	29,500	29,300	-	-	-	-	-	-	-	29,300	900	30,200
Section 405 National Priority Safety Programs	277,500	275,615	-	-	-	-	-	-	-	275,615	7,385	283,000
Section 405 Occupant Protection Grants	36,075	35,830	-	-	-	-	-	-	-	35,830	960	36,790
Section 405 State Traffic Safety Information System Grants	40,238	39,964	-	-	-	-	-	-	-	39,964	1,071	41,035
Section 405 Impaired Driving Countermeasures Grants	145,688	144,698	-	-	-	-	-	-	-	144,698	3,877	148,575
Section 405 Distracted Driving Grants	23,588	23,427	-	-	-	-	-	-	-	23,427	628	24,055
Section 405 Motorcyclist Safety Grants	4,163	4,134	-	-	-	-	-	-	-	4,134	111	4,245
Section 405 State Graduated Driver Licensing Laws	13,875	13,781	-	-	-	-	-	-	-	13,781	369	14,150
Section 405 Non-Motorized Safety Ped Bikes	13,875	13,781	-	-	-	-	-	-	-	13,781	369	14,150
Subtotal, Programs	559,300	555,502	-	-	-	-	-	-	-	555,502	28,098	583,600
TOTAL, HIGHWAY TRAFFIC SAFETY GRANTS	585,372	581,397	63	-	-	-	-	-	-	581,460	28,748	610,208

Note: Totals may not add due to rounding.

*The pay raise for Salaries and Benefits is 1.9 percent for FY 2018.

EXHIBIT II-7

**WORKING CAPITAL FUND
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
(\$000)**

	<u>FY 2017 ENACTED</u>	<u>FY 2018 ANNUALIZED CR</u>	<u>FY 2019 REQUEST</u>
DIRECT:	\$ 13,041	\$ 13,603	\$ 13,768
SUBTOTAL	<u>13,041</u>	<u>13,603</u>	<u>13,768</u>
TOTAL	<u>\$ 13,041</u>	<u>\$ 13,603</u>	<u>\$ 13,768</u>

EXHIBIT II-8**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
PERSONNEL RESOURCE - SUMMARY
TOTAL FULL-TIME EQUIVALENT EMPLOYEES**

	<u>FY 2017 ENACTED</u>	<u>FY 2018 ANNUALIZED CR</u>	<u>FY 2019 REQUEST</u>
<u>DIRECT FUNDED BY APPROPRIATION</u>			
<u>Operations and Research</u>	<u>467</u>	<u>538</u>	<u>538</u>
Vehicle Safety Programs (GF)	311	363	363
Highway Safety Research and Development (TF)	156	175	175
Highway Traffic Safety Grants (TF)	74	88	88
SUBTOTAL, DIRECT FUNDED	<u>541</u>	<u>626</u>	<u>626</u>
TOTAL FTEs	<u>541</u>	<u>626</u>	<u>626</u>

EXHIBIT II-9**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
RESOURCE SUMMARY - STAFFING
FULL-TIME PERMANENT POSITIONS**

	<u>FY 2017 ENACTED</u>	<u>FY 2018 ANNUALIZED CR</u>	<u>FY 2019 REQUEST</u>
<u>DIRECT FUNDED BY APPROPRIATION</u>			
<u>Operations and Research</u>	<u>476</u>	<u>538</u>	<u>538</u>
Vehicle Safety Programs (GF)	317	363	363
Highway Safety Research and Development (TF)	159	175	175
 Highway Traffic Safety Grants (TF)	 75	 88	 88
SUBTOTAL, DIRECT FUNDED	<u>551</u>	<u>626</u>	<u>626</u>
 TOTAL POSITIONS	 <u>551</u>	 <u>626</u>	 <u>626</u>

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OPERATIONS AND RESEARCH

For expenses necessary to discharge the functions of the Secretary, with respect to traffic and highway safety authorized under chapter 301 and part C of subtitle VI of title 49, United States Code, \$152,427,000, of which \$20,000,000 shall remain available through September 30, 2020.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OPERATIONS AND RESEARCH
(LIQUIDATION OF CONTRACT AUTHORIZATION)
(LIMITATION ON OBLIGATIONS)
(HIGHWAY TRUST FUND)

For payment of obligations incurred in carrying out the provisions of 23 U.S.C. 403, section 4011 of the Fixing America's Surface Transportation (FAST) Act, and chapter 303 of title 49, United States Code, \$152,100,000, to be derived from the Highway Trust Fund (other than the Mass Transit Account) and to remain available until expended: *Provided*, That none of the funds in this Act shall be available for the planning or execution of programs the total obligations for which, in fiscal year 2019, are in excess of \$152,100,000, of which \$146,700,000 shall be for programs authorized under 23 U.S.C. 403 and section 4011 of the FAST Act and \$5,400,000 shall be for the National Driver Register authorized under chapter 303 of title 49, United States Code: *Provided further*, That within the \$152,100,000 obligation limitation for operations and research, \$20,000,000 shall remain available until September 30, 2020, and shall be in addition to the amount of any limitation imposed on obligations for future years.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
HIGHWAY TRAFFIC SAFETY GRANTS
(LIQUIDATION OF CONTRACT AUTHORIZATION)
(LIMITATION ON OBLIGATIONS)
(HIGHWAY TRUST FUND)

For payment of obligations incurred in carrying out provisions of 23 U.S.C. 402, 404, and 405, and section 4001(a)(6) of the Fixing America's Surface Transportation Act, to remain available until expended, \$610,208,000, to be derived from the Highway Trust Fund (other than the Mass Transit Account): *Provided*, That none of the funds in this Act shall be available for the planning or execution of programs the total obligations for which, in fiscal year 2019, are in excess of \$610,208,000 for programs authorized under 23 U.S.C. 402, 404, and 405, and section 4001(a)(6) of the Fixing America's Surface Transportation Act, of which \$270,400,000 shall be for "Highway Safety Programs" under 23 U.S.C. 402; \$283,000,000 shall be for "National Priority Safety Programs" under 23 U.S.C. 405; \$30,200,000 shall be for "High Visibility Enforcement Program" under 23 U.S.C. 404; \$26,608,000 shall be for "Administrative Expenses" under section 4001(a)(6) of the Fixing America's Surface Transportation Act: *Provided further*, That none of these funds shall be used for construction, rehabilitation, or remodeling costs, or for office furnishings and fixtures for State, local or private buildings or structures: *Provided further*, That not to exceed \$500,000 of the funds made available for "National Priority Safety Programs" under 23 U.S.C. 405 for "Impaired Driving Countermeasures" (as described in subsection (d) of that section) shall be available for technical assistance to the States: *Provided further*, That with respect to the "Transfers" provision under 23 U.S.C. 405(a)(8), any amounts transferred to increase the amounts made available under section 402 shall include the obligation authority for such amounts: *Provided further*, That the Administrator shall notify the House and Senate Committees on Appropriations of any exercise of the authority granted under the previous proviso or under 23 U.S.C. 405(a)(8) within five days.

ADMINISTRATIVE PROVISIONS—NATIONAL HIGHWAY TRAFFIC SAFETY
ADMINISTRATION

Sec. 140. An additional \$130,000 shall be made available to the National Highway Traffic Safety Administration, out of the amount limited for section 402 of title 23, United States Code, to pay for travel and related expenses for State management reviews and to pay for core competency development training and related expenses for highway safety staff.

Sec. 141. The limitations on obligations for the programs of the National Highway Traffic Safety Administration set in this Act shall not apply to obligations for which obligation authority was made available in previous public laws but only to the extent that the obligation authority has not lapsed or been used.

[SEC. 142. None of the funds made available by this Act may be used to obligate or award funds for the National Highway Traffic Safety Administration's National Roadside Survey.]

SEC. 143. None of the funds made available by this Act may be used to mandate global positioning system (GPS) tracking in private passenger motor vehicles without providing full and appropriate consideration of privacy concerns under 5 U.S.C. chapter 5, subchapter II.

Explanation of Proposed Change:

Language Provision	Explanation
[SEC. 142. None of the funds made available by this Act may be used to obligate or award funds for the National Highway Traffic Safety Administration's National Roadside Survey.]	This provision substantially limits NHTSA's ability to obtain objective information on drug and alcohol use. The data is used to develop effective countermeasures. The National Roadside Survey is strictly voluntary. Drivers can choose not to participate at any stage of the survey. The elimination of this provision allows NHTSA to provide relevant and reliable data to our partners in the States, law enforcement agencies, as well as other governmental entities.

EXHIBIT III-1

**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OPERATIONS AND RESEARCH
VEHICLE SAFETY PROGRAMS**

**Summary by Program Activity
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)**

	<u>FY 2017 ENACTED</u>	<u>FY 2018 ANNUALIZED CR</u>	<u>FY 2019 REQUEST</u>
Rulemaking	\$ 23,510	\$ 23,203	\$ 21,520
Enforcement	38,899	36,769	17,016
Research and Analysis	43,966	40,426	37,805
Administrative Expenses	73,700	78,455	76,085
<u>TOTAL, VEHICLE SAFETY (GF)</u>	<u>\$ 180,075</u>	<u>\$ 178,852</u>	<u>\$ 152,427</u>
<u>FTEs:</u>			
Direct Funded	311	363	363

Note: Totals may not add due to rounding.

VEHICLE SAFETY

Program and Performance Statement

The FY 2019 budget request includes \$152.43 million for Vehicle Safety activities to reduce roadway fatalities, prevent injuries, improve fuel economy and significantly reduce the societal costs related to unsafe motor vehicles, and motor vehicle equipment. These objectives are met through:

- The issuance and enforcement of Federal Motor Vehicle Safety Standards (FMVSS);
- Dissemination of consumer information;
- Research involving electronics, advanced crash avoidance and mitigation technologies, crashworthiness, and alternative fuels;
- Advanced testing of emergent technologies, including Automated Driving Systems (ADSs – SAE International Automation Levels 3-5; conditional, high, and full automation, respectively); and
- Development, issuance, and enforcement of U.S. fuel economy and efficiency standards.

FY 2019 – Vehicle Safety Budget Request \$152,427,000

(\$000)			
Program	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Rulemaking	\$23,510	\$23,203	\$21,520
Enforcement	\$38,899	\$36,769	\$17,016
Research and Analysis	\$43,966	\$40,426	\$37,805
Vehicle Safety Administrative Expenses	\$73,700	\$78,455	\$76,085
Account Total	\$180,075	\$178,852	\$152,427

Rulemaking Programs
\$21,520,400

The activities funded through the Rulemaking programs will support the Department's efforts to promote safety and innovation through effective use of consumer information and deregulation, as well as revision of Federal Motor Vehicle Safety Standards (FMVSS) that govern newly-manufactured vehicles and related safety equipment. In FY 2019, Rulemaking programs will participate in efforts to facilitate the development of autonomous vehicles by reducing regulatory barriers to technology innovation. These programs will enhance safety related to advanced crash avoidance technologies, motor coaches, and child passengers. Rulemaking also supports the safety goal by providing safety information to consumers from testing the new vehicle fleet, as part of the New Car Assessment Program (NCAP). The requested funding will allow NHTSA to continue its efforts in providing consumers with safety information in the key safety areas of crashworthiness and crash avoidance, and dissemination of the 5-star Safety Rating consumer information to the public. The funding enables NHTSA to test and rate approximately 85 percent of the annual new cars and light-trucks sold in the nation. Additionally, the Rulemaking program issues automotive fuel economy and efficiency standards and promotes adoption of United States safety standards internationally. International collaboration helps leverage the agency's resources through the shared exchange of research and data.

Enforcement Programs
\$17,015,900

The activities in NHTSA's Enforcement programs support the Department's emphasis on safety by investigating safety-related defects in motor vehicles and motor vehicle equipment; ensuring that manufacturers conduct recalls to remedy unsafe motor vehicles and equipment from the highways; ensuring industry compliance with motor vehicle safety standards; enforcing the Federal odometer law; and encouraging enforcement of State odometer laws. The Enforcement program is working to enhance NHTSA's current system for notification of open recalls to include text messaging and promoting greater awareness of recalls and the defect identification process through an outreach campaign. The Fixing America's Surface Transportation (FAST) Act requires NHTSA to implement a 2-year pilot program to evaluate the feasibility and effectiveness of a State process for informing consumers of open motor vehicle recalls at the time of motor vehicle registration in the State. The agency will work with the selected State to develop a system to advise consumers of open recalls during the registration process, then evaluate the extent to which open recalls have been remedied. Lessons learned will be shared with all State Department of Motor Vehicles (DMVs) and other stakeholders.

Requested funding will also support enforcement initiatives to enhance import safety through oversight of new entrant manufacturers; improve the collection, storage, analysis and dissemination of defect and compliance data; and continue CAFE-related enforcement and compliance activities and related civil penalty collections. Funding will enable Enforcement programs to address concerns with the effectiveness, reliability, interoperability, privacy and security of electronic control systems being introduced into the vehicle fleet with increasing frequency. Finally, the requested funding level will enable the Office of Defects Investigation to

improve its effectiveness and meet growing challenges to identify safety defects quickly, ensure remedies are implemented promptly, and effectively inform the public of critical information.

Vehicle Safety Research and Analysis

\$37,805,300

The Vehicle Safety Research and Analysis programs support the Department's efforts to improve motor vehicle and motor vehicle equipment safety by strengthening agency knowledge and expertise, developing test procedures to assess the safety impact and risks of new technologies, and developing countermeasures to vehicle safety issues. Major research areas include automation; advanced vehicle safety technologies; and crash survivability.

Requested funding will support research into vehicle-based options to address distracted driving and alcohol involvement in crashes; measure the reliability and security of complex safety-critical electronic control systems; assess the cybersecurity of vehicles; and assessing new and emerging technologies that can help drivers avoid crashes. Requested funding will support the development and demonstrated application of new physical and virtual test tools for assessing the crashworthiness of future vehicles including those with non-standard seating arrangements. The request will support NHTSA's efforts to develop enhanced computer modeling tools and expertise to quickly and efficiently identify changes in the vehicle fleet that could have safety ramifications, particularly in areas related to alternative fuel vehicles. It will also support advanced battery control modeling and analysis; assessment of crash notification technology and emergency response; and the agency's other cross-cutting initiatives. NHTSA will also undertake further activities to enhance and expand testing capability of advanced technologies at the Vehicle Research and Test Center (VRTC) in East Liberty, Ohio. Lastly, the budget requests \$10 million, as an initial installment in a five-year initiative, to focus NHTSA's research into enabling the safe development and deployment of Level 4 and Level 5 Automated Driving Systems (ADSs), particularly vehicles that are envisioned to exclude manual driving controls (with no expectation of a human driver in the vehicle).

NHTSA's crash data collection efforts administered by the agency's National Center for Statistics and Analysis' (NCSA) are funded from both the Vehicle Safety and Highway Safety Research and Development accounts. The FY 2019 request includes \$500 thousand in Vehicle Safety funding to supplement the \$35.86 million provided in Highway Safety Research and Development funding for crash data collection. This funding will allow NHTSA to continue its data modernization project and support NCSA's overall crash data collection efforts. Quality data acquired through this program is critical to NHTSA programs and policies, by providing the empirical information necessary for saving lives and reducing economic costs.

Detailed Justification for Rulemaking Programs

FY 2019 – RULEMAKING – SUB-PROGRAM BUDGET REQUEST

(\$000)		
Rulemaking Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Safety Standards Support	\$2,086	\$2,041
New Car Assessment Program	\$13,509	\$12,034
Fuel Economy Program	\$7,608	\$7,445
Rulemaking Total	\$23,203	\$21,520

The Rulemaking programs support the Department's efforts to improve safety while reducing regulatory cost and burden by providing the technical support needed to develop or revise Federal Motor Vehicle Safety Standards (FMVSS) and other regulations in the key areas of crash avoidance, crashworthiness, post-crash safety, consumer information, and fuel economy.

In FY 2019, NHTSA requests \$21.52 million for the Rulemaking program. The funding level requested is for three program activities: safety standards support, new car assessment, and fuel economy. Funding will support the Department's safety priority. Through the Safety Standards Support program, NHTSA provides the technical support to assess and develop FMVSSs and other regulations, including through regulatory reviews and deregulation. It also supports the New Car Assessment Program (NCAP), which informs consumers of the safety performance and technologies of new vehicles. Finally, these funding levels allow NHTSA to conduct new rulemakings for fuel economy standards for years beginning in 2022 and to support related compliance activities.

The funds request will also enable NHTSA to maintain its core programs and advance key safety initiatives including:

- Reviewing the regulatory portfolio and identifying opportunities to reduce regulation and control regulatory costs;
- Facilitating the safe development of Automated Driving Systems;
- Expanding capabilities for advances in safety technology that reduce fatalities and injuries and increase efficiencies;
- Continuing progress on mandated regulations, such as those to enhance motor coach and child passenger safety in MAP-21 and tire safety in the FAST Act; and
- Continuing to conduct analytical work to support light vehicle fuel economy rulemaking for years beginning in 2022. NHTSA also may evaluate the MY 2021 standards it finalized in 2012 to ensure they remain maximum feasible.

RULEMAKING
Safety Standards Support

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Safety Standards Support	\$2,086	\$2,041

What is this program and what does this funding level support?

The activities funded through NHTSA's Safety Standards Support program will support the Department's safety priority. The Safety Standards Support program provides the technical support to assess and develop FMVSSs and other regulations in the key areas of crash avoidance, crashworthiness, post-crash and consumer information. This support includes test method development to modernize existing standards or promulgate new ones, determination of injury reduction benefits and product testing to establish baseline performance. This program also promotes adoption of United States Federal motor safety standards internationally, and it will continue to support Congressional mandates associated with MAP-21 and the FAST Act, among others. Funding may also support additional testing in response to public comments on proposed rules or to address petitions for reconsideration.

In FY 2019, NHTSA requests \$2.04 million for the Safety Standards Support program. Motor vehicle technology is becoming increasingly complex and more knowledge and expertise are needed to inform policy decisions. As the ability of motor vehicles to sense and respond to the driving environment increases, there is a greater need to modernize standards to keep pace with technology.

Funding at this level will support NHTSA's continued efforts on mandated regulations, such as those to enhance motor coach and child passenger safety authorized by MAP-21, as well as to continue to facilitate the safe development of advanced safety technologies, including Automated Driving Systems. For FY 2019, these activities include:

- Continuing work toward improving motor coach and heavy truck vehicle safety under MAP-21;
- Advancing work on child safety rulemakings to upgrade the frontal impact sled test, add child restraint side impact protection and improve the usability of child restraint anchorage systems under MAP-21;
- Continuing to support consumer information and theft prevention standards; and
- Working on a rulemaking proposal to allow adaptive driving-beam headlights in the United States.

What benefits will be provided to the American public through this request and why is this program necessary?

With 37,461 fatalities due to motor vehicle crashes in 2016, there is much work to be done improving vehicle safety.⁵ Motor vehicle safety has improved over the years due to improved vehicle designs, many of which were a result of FMVSSs developed through domestic rulemaking, and international engagement to encourage harmonization with the FMVSSs. The public will be served by having vehicles that meet or exceed a minimum level of safety performance, as evidenced by people avoiding injuries and surviving crashes which may have been un-survivable in the past, or the avoidance of crashes that would otherwise be inevitable. The funding is requested to ensure safety, enable new technologies, and identify and eliminate unnecessary regulations.

⁵ FARS 2016. National Highway Traffic Safety Administration.

RULEMAKING
New Car Assessment Program

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
New Car Assessment Program (NCAP)	\$13,509	\$12,034

What is this program and what does this funding level support?

The New Car Assessment Program (NCAP) informs consumers of the safety performance of new vehicles so that they can make informed purchasing decisions. Based on a series of NHTSA-performed crash tests and advanced crash avoidance technology performance evaluations on new vehicles, NCAP rates the performance of new cars and light trucks. Specifically, NCAP informs consumers using a 5-Star Safety Ratings system of the relative safety of vehicles based on frontal and side impact crash tests, as well as rollover resistance tests. Child safety seats are similarly rated for their ease of use. Certain advanced crash avoidance technologies that are equipped in new vehicles are additionally recommended to consumers (not part of the 5-star Safety Rating system) if they are certified to pass NCAP's performance specifications. Vehicle safety ratings, advanced technology recommendations, child safety seat ease of use ratings, child safety-related information, and other consumer information related to vehicle safety are provided on the agency's website, www.nhtsa.gov. Vehicle safety ratings are also provided at the point of sale on the window sticker (also known as the Monroney label) that is applied to new vehicles.

NHTSA uses appropriated funds to support program operations to include (1) new vehicle information, (2) crash testing of new vehicles, (3) performance testing of advanced crash avoidance technology systems on new vehicles, (4) reviewing test data, (5) disseminating safety rating information to the public, and (6) educating consumers about adult and child occupant protection related to vehicle safety.

A key performance measure for NHTSA is the percentage of new vehicles rated by NCAP for a given model year vehicle fleet. For FY 2017, NHTSA tested and rated 86 percent of the new model year vehicle fleet (based on projected sales volume) under NCAP. The agency anticipates similar performance for FY 2018.

In FY 2019, NHTSA requests \$12.03 million for NCAP to support vehicle procurement, testing, oversight, and execution of the numerous operations of the NCAP program as well as the dissemination of safety information to the American public. More specifically, the requested funding will support:

- Crash testing of new vehicles to provide safety ratings information as part of the 5-star safety rating system on approximately 85 percent of the new vehicle fleet;

- Performance testing of new vehicles equipped with certain advanced crash avoidance technology systems and assign credit to those that meet NCAP's performance testing criteria;
- Ease of use assessments for child safety seats, with ratings posted on www.nhtsa.gov and in NHTSA publications;
- Side air bag testing to protect out-of-position occupants;
- Promotion of up-to-date information about dangers to children in and around vehicles, and other vehicle safety information such as 15-passenger van and tire safety;
- Outreach and education campaigns to continually promote the program's 5-Star Safety Rating system and increase consumer awareness of vehicle safety;
- NCAP infrastructure operations and maintenance, including software and contract labor costs; and
- Development of the database for vehicle safety information submission and dissemination.

What benefits will be provided to the American public through this request and why is this program necessary?

Consumers consider safety to be an influential factor when making vehicle purchasing decisions. NCAP provides a reliable, transparent, and unbiased assessment of the safety performance of passenger cars and trucks sold in America. NCAP also provides information and performance evaluations on advanced crash avoidance technologies. NCAP information and safety ratings are displayed on new car window stickers at the point of sale, on NHTSA's website, and other consumer information outlets.

The requested funding amount in FY 2019 enables NHTSA to provide vehicle safety information to consumers, including technology innovations in vehicle safety. The funding will allow the agency to test and rate approximately 85 percent of the vehicle fleet sold in the United States.

RULEMAKING
Fuel Economy Program

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Fuel Economy Program (CAFE)	\$7,608	\$7,445

What Is This Program and Why Is It Necessary?

The Department of Transportation has been setting Corporate Average Fuel Economy (CAFE) standards since the late 1970s under the guidance of the Energy Policy and Conservation Act of 1975 (EPCA), which mandated the doubling of fuel economy of light duty vehicles in 10 years. CAFE standards are intended to reduce energy consumption by increasing the fuel economy of cars and light-trucks. In 2007, Congress enacted the Energy Independence and Security Act (EISA), which amended EPCA. EISA reformed the CAFE structure by mandating vehicle attribute-based standards as well as ratable and substantial increases in fuel economy. The overall light duty fleet must reach 35 miles per gallon (mpg) by 2020 and be set at maximum feasible levels. In addition, EISA authorizes and directs the Department to issue standards for medium and heavy duty vehicles.

For rulemaking activities to establish average fuel economy standards under chapter 329 of title 49, United States Code, the Secretary of Transportation retains primary and final decision-making authority including with respect to any joint rulemaking with EPA concerning this topic.

In FY 2019, NHTSA requests \$7.45 million for the Fuel Economy Programs. The requested funding will be used to provide support for future rulemaking programs, including the establishment of passenger car and light-duty truck CAFE standards. In 2012, NHTSA issued final passenger car and light-duty truck CAFE standards for model years (MY) 2017-2025. However, because EISA requires NHTSA to establish CAFE standards for no more than five years at a time, standards for MY 2022-2025 were augural. NHTSA will conduct new rulemaking to establish passenger and light-duty truck CAFE standards for years beginning in 2022. NHTSA also may evaluate the MY 2021 standards it finalized in 2012 to ensure they remain maximum feasible. The agency will continue to improve the fuel economy programs, conducting new assessments of technology effectiveness, cost, and the capability of industry to implement new technologies. NHTSA will also conduct assessments of the factors considered and approaches used to estimate feasibility and impacts of potential standards. Requested funding will be used to cover part of the publication cost for rulemaking documents.

The budget request also supports the CAFE Management Suite, which allows for a standardized method to receive compliance data from the Environmental Protection Agency (EPA) and manufacturers. The Management Suite makes the data easily accessible to NHTSA's fuel economy rulemaking and compliance programs and certain data available on a web page to the public.

The FY 2019 budget request will support work in the following areas of fuel economy regulation required by EISA:

- Continuing to conduct analytical work to support light vehicle fuel economy rulemaking for the years beginning in 2022. NHTSA may also evaluate the MY 2021 standards it finalized in 2012 to ensure they remain maximum feasible;
- Funding work by the National Academy of Sciences to develop a report evaluating technologies to improve medium- and heavy-duty vehicle fuel efficiency; and
- Continuing development and maintenance of the CAFE Management Suite including hosting, software and contract labor costs.

What benefits will be provided to the American Public through this request?

The CAFE and medium- and heavy-duty fuel efficiency programs play a key role in the nation's energy policy, and they address energy independence and energy security. The funding will provide NHTSA with resources to ensure that the analysis for future CAFE standards and work on medium- and heavy-duty vehicle fuel efficiency standards will be based on sound science and empirical evidence.

The EPCA of 1975 and EISA of 2007 direct the Department of Transportation to set passenger car, light-truck and medium-duty passenger vehicle CAFE standards and medium- and heavy-duty vehicle fuel efficiency standards.

Detailed Justification for Enforcement Programs

FY 2019 – ENFORCEMENT - SUB-PROGRAM BUDGET REQUEST

(\$000)		
Enforcement Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Vehicle Safety Compliance	\$8,856	\$7,755
Defects Investigation	\$27,760	\$9,112
Odometer Fraud	\$153	\$149
Enforcement Total	\$36,769	\$17,016

In FY 2019, NHTSA requests \$17.02 million for Enforcement programs. Activities in NHTSA's Enforcement programs support the Department's safety priorities by ensuring industry compliance with motor vehicle safety standards; investigating safety-related defects in motor vehicles and motor vehicle equipment; enforcing the Federal odometer law; encouraging enforcement of State odometer law; and by ensuring that manufacturers conduct recalls to remove unsafe motor vehicles and equipment from the nation's highways. The FY 2019 budget request will support Enforcement work in the following areas:

- Completing critical vehicle crashworthiness compliance testing, including developing new test procedures and testing for compliance with new safety regulations issued in response to MAP-21 and continued in the FAST Act;
- Completing critical compliance testing of regulated equipment, including items such as child restraints, motorcycle helmets, tires, seat belts, and brake hoses;
- Continuing outreach to foreign vehicle and equipment manufacturers, and focused enforcement of imported motor vehicle equipment;
- Identifying defective products and getting them quickly recalled and remedied;
- Maintaining a dedicated source of training for the Office of Defects Investigations (ODI) investigators and data analysts to remain abreast of new technologies to better identify potential defects;
- Providing contract support for additional field investigations;
- Continuing to support import and Corporate Average Fuel Economy (CAFE) enforcement activities; and
- Continuing to target odometer fraud that often masks the actual condition of used vehicles, thereby increasing safety risks associated with their use that could hide the need for safety maintenance and repairs.

ENFORCEMENT
Vehicle Safety Compliance

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Vehicle Safety Compliance	\$8,856	\$7,755

What is this program and what does this funding level support?

The Vehicle Safety Compliance program (OVSC) contributes directly to NHTSA's mission to save lives, prevent injuries, and reduce economic costs due to road traffic crashes, by conducting investigations through ongoing testing, inspections, analysis, and cooperation with other Government entities, namely U.S. Customs and Border Protection (CBP).⁶ These investigations uncover violations of the Safety Act by identifying motor vehicles and motor vehicle equipment (e.g., tires, child restraints, motorcycle helmets, etc.) that do not meet applicable Federal Motor Vehicle Safety Standards (FMVSS) and other regulations, and cannot be lawfully imported or sold in the United States. Failure of motor vehicles and items of motor vehicle equipment to comply with FMVSS can lead to fatalities, injuries, and property damage. When a noncompliance is confirmed, OVSC helps ensure that the manufacturer or importer recalls the vehicle or equipment item and provides an adequate remedy for the noncompliance.

OVSC is also responsible for administering various NHTSA regulations. OVSC registers importers of nonconforming vehicles and reviews conformity data those importers submit on the vehicles they import. OVSC processes import eligibility petitions submitted by registered importers and requests for permission to temporarily import nonconforming vehicles for research or demonstration purposes. OVSC also operates and maintains a tire test facility in San Angelo, Texas, which is utilized both by NHTSA and commercial entities to collect data necessary to publish consumer information related to tires. OVSC enforces the Corporate Average Fuel Economy (CAFE) regulations by ensuring proper vehicle classification, collecting civil penalties, tracking available credits, and monitoring the transfer and trading of credits.

The funding also supports OVSC's web portal and databases and the Motor Vehicle Importation Information (MVII) system. OVSC provides manufacturer, modifier, and testing databases to the public through the NHTSA web site. The MVII is a tracking system that provides the ability to record and report on basic identifying information related to imports such as registered importers, petitions, compliance periods, official correspondence, and applicable fees.

NHTSA's funding for this program will allow OVSC to develop objective and repeatable test procedures and maintain contracts with test facilities to complete critical testing of new motor vehicles for compliance with crashworthiness standards; to complete critical testing of motor vehicle equipment; to provide consumer information related to tires; to process applications related

⁶ In 2016, NHTSA responded to approximately 750 port inquiries

to the importation of Canadian and grey market vehicles; and to enforce CAFE regulations for passenger vehicles and light-trucks. OVSC will also continue to work with CBP to help prevent noncompliant and/or defective motor vehicles and equipment from entering the United States as part of the statutory requirements of MAP-21 and the FAST Act.

In FY 2019, NHTSA requests \$7.76 million for the Vehicle Safety Compliance program. The requested funding will enable NHTSA to accomplish the following objectives:

- Completing critical vehicle crashworthiness compliance testing;
- Completing critical compliance testing of regulated equipment, including items such as child seats, motorcycle helmets, tires, seat belts, and brake hoses;
- Maintaining contracts with independent test facilities for performing compliance testing;
- Continuing outreach to foreign vehicle and equipment manufacturers and focused enforcement of imported motor vehicle equipment;
- Continuing to monitor new entrants into motor vehicle and equipment manufacturing both inside and outside the United States for compliance with the FMVSS;
- Continuing enforcement of existing CAFE standards and regulations, including the 2017-2025 light duty vehicle regulations and the 2014-2018 commercial medium and heavy duty vehicle regulations, and the increased enforcement responsibilities resulting from credit trading and expanded test procedures for CAFE attribute measurements;
- Maintaining NHTSA's existing tire safety facility to include repairs and improvements to buildings, grounds and test track areas;
- Continuing operations and maintenance of the Vehicle Safety Compliance web portal and databases and the MVII system including hosting, software and contract labor costs; and
- Continuing support of NHTSA's efforts towards the introduction, regulation, and testing of Automated Driving Systems.

What benefits will be provided to the American public through this request and why is this program necessary?

In 2016, 37,461 people died on U.S. roads in motor vehicle crashes and millions were injured.⁷ Based on a recent study that examined motor vehicle crashes in 2010, the annual societal costs of these crashes total \$836 billion, including costs associated with lost quality of life, lost productivity, medical costs, legal and court costs, emergency medical service costs, insurance administration costs, congestion costs, property damage, and workplace losses.⁸ All of these costs are borne by the American public, either directly through out of pocket expenses and physical injury associated with the crash, or indirectly through higher insurance premiums, taxes that cover public revenue-based health programs, or higher medical care costs that subsidize unpaid charges. These costs continue today, and are likely even higher due to increases in the number of motor vehicle crashes and inflation.

⁷ FARS 2016. National Highway Traffic Safety Administration.

⁸ Blincoe, L. J., Miller, T. R., Zaloshnja, E., & Lawrence, B. A. (2015, May). *The economic and societal impact of motor vehicle crashes, 2010. (Revised)* (Report No. DOT HS 812 013). Washington, DC: National Highway Traffic Safety Administration.

The work OVSC performs is essential to enforce compliance with minimum safety standards for motor vehicles and motor vehicle equipment which prevent fatalities, injuries, and property damage. NHTSA estimates that 613,501 lives have been saved from 1960 through 2012 because of vehicle safety technologies associated with FMVSS.⁹ In the absence of an active enforcement program, compliance would essentially be voluntary. This situation would likely lead to the markets being flooded with noncompliant vehicles and equipment, creating enormous safety risks for consumers and increased costs for U.S. households.

OVSC develops and implements performance tests to help ensure the motor vehicle and motor vehicle equipment industry's compliance with the FMVSS, thus saving thousands of lives in recent years through crash protection and crash avoidance. Consumers have benefited greatly from the industry's generally successful attempts to comply with the FMVSS, which are influenced by OVSC's compliance tests and investigations. These tests and investigations help protect millions of consumers from the risks posed by noncompliant vehicles and items of equipment.

As previously noted, the costs to society resulting from motor vehicle crashes is substantial. The evidence that this program works is two-fold. Over the past three years, approximately 475 compliance recalls affecting over 6.8 million motor vehicles or motor vehicle equipment were submitted to NHTSA. OVSC's compliance programs influence manufacturers to submit recalls directly and indirectly. Without the compliance programs in place, the number of noncompliance products used by the public would be substantially greater, and the ability of vehicles and motor vehicle equipment to reduce injuries and fatalities would be diminished.

⁹ Kahane, C.J. (2015, January). *Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs – With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes.* (Report No. DOT HS 812 069). Washington, DC: National highway Traffic Safety Administration.

ENFORCEMENT
Defects Investigation

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Defects Investigation	\$27,760	\$9,112

What is this program and what does this funding level support?

NHTSA's Office of Defects Investigation (ODI) investigates potential vehicle defects through analysis of trends in data received by ODI from many sources, and where appropriate, seeks recalls of vehicles and vehicle equipment that pose an unreasonable risk to safety. From 2014-2016, ODI opened 121 investigations into potential defects and issued 14 consent orders to vehicle manufacturers that were found to be non-compliant with their defect reporting obligations. Vehicle and equipment recalls have risen sharply in the past three years due to increased ODI oversight and actions taken with and by manufacturers. In 2016, ODI's recall management division processed 1,039 vehicle and vehicle equipment recalls resulting in over 79 million units under recall, including vehicles and equipment.

NHTSA continues to develop and maintain a comprehensive and sophisticated data warehouse/system, Artemis, to securely store and manage a voluminous amount of Early Warning Reporting (EWR) data submitted by manufacturers, per requirements of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act. Under ODI's new processes and organizational structure, screening of more than 75,000 annual complaints from vehicle owners is systematically coupled to review of EWR and other data to determine whether anomalies or trends exist that potentially indicate the presence of a safety-related problem. ODI then applies a risk severity and frequency-based approach to determine whether to open a defect investigation. This program enhances safety on our Nation's highways by allowing NHTSA to investigate motor vehicles and items of motor vehicle equipment for possible defect trends and, where appropriate, seek recalls of vehicles and vehicle equipment that pose an unreasonable safety risk. When recalls are issued, this program monitors manufacturers and ensures that the manufacturer sufficiently and quickly remedies the identified vehicle safety issues.

In 2018, ODI intends to complete its reorganization to have five fully staffed investigative divisions processing the data received through the Artemis system. Current funding supports Artemis operations and maintenance on a daily, round-the-clock schedule. Modernization of Artemis, begun in FY 2017, will continue in 2018 that will potentially reduce maintenance costs of Artemis while improving efficiency. In addition, in FY 2018, ODI will have staffed a Trends Analysis Division to perform advanced data analytics on EWR and other identified data sources to assist in defect investigation processes. Finally, more testing for potential safety defects by staff at NHTSA's Vehicle Research and Test Center (VRTC) in Ohio will add to ODI's abilities to assess vehicle defects. With these operations in place for FY 2019, ODI will be able to more

effectively screen data, perform data analysis, and carry out investigations that may ultimately lead to vehicle and equipment recalls.

In FY 2019, NHTSA requests \$9.11 million for the Defects Investigation program. This requested level will enable ODI to continue to improve its effectiveness and meet growing challenges to identify safety defects quickly, ensure remedies are implemented promptly, and inform the public of critical information in an effective manner.

More specifically, the requested funding for FY 2019 will support continuation of the following activities:

- Enhanced screening of consumer complaints of potential safety-related defects with motor vehicles or motor vehicle equipment, including child safety seats and tires;
- Investigations into allegations of safety-related defects, including recalls where the remedy or the scope of the vehicles included was allegedly inadequate;
- Expanded reviews of manufacturer technical service bulletins and dealer field reports to ensure that consumers receive appropriate notification of safety-related problems;
- Stakeholder outreach efforts to encourage the reporting of safety-related problems in motor vehicles and motor vehicle equipment;
- Resolution of petitions requesting NHTSA to open investigations into alleged safety problems; and
- Expeditious review of all manufacturer input to the Early Warning System to help determine trends and inform investigations.

What benefits will be provided to the American public through this request and why is this program necessary?

The funding requested will allow NHTSA to improve the quality of ODI's screening and investigation processes, increase the vehicle recall completion rates, monitor recalls for adequacy of scope and remedy, continue to respond to Congressional and consumer inquiries, and ensure that all public information related to investigations, recalls, and complaints is current. The requested funding will support field investigators standing ready to travel on a moment's notice to begin an investigation as close in time to the crash or incident as possible. It also supports investigation coordinators who would assist other NHTSA offices by providing information, documents, and data to respond to Congressional, media, and legal inquiries that come to NHTSA from external sources.

Without NHTSA's investigative process, millions of vehicles would likely go uncorrected, thus putting consumers at risk. The ODI public website receives on average 50,000 visitors per day who are using the agency's VIN Look-up tool to see whether their vehicles have open recalls, to search for recalls and investigations, to file complaints, or to conduct research before purchasing a vehicle. Furthermore, the collection of EWR data has forced manufacturers to take a closer look at their fleet performance and, in some instances, has led to identification of defects and recalls much earlier in a vehicle's lifecycle.

ENFORCEMENT
Odometer Fraud

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Odometer Fraud Investigations	\$153	\$149

What is this program and what does this funding level support?

Odometer tampering has evolved into a cyber-security issue and continues to be a serious crime and consumer fraud issue. Odometer fraud often masks the actual condition of used vehicles, which increases the safety risks associated with their use and hides the need for necessary safety maintenance and repairs. NHTSA's criminal investigators conduct investigations of large-scale odometer fraud schemes and work closely with the Department of Justice's Office of Consumer Protection prosecutors to ensure that worthy cases are effectively prosecuted. NHTSA also works under cooperative agreements with several State agencies to provide notification to owners of vehicles identified during investigations and advise them of the mileage discrepancies and their rights and remedies under the Federal odometer law. NHTSA encourages all State agencies to provide this notification and assists them when necessary.

In FY 2019, NHTSA is requesting \$149 thousand for the Odometer Fraud program. The FY 2019 funding will enable a continuation of cooperative agreements with multiple States as well as supplement efforts to research the rate of odometer fraud occurrence in older vehicles, electronic odometer security, and e-odometer statements. Cooperative agreements with multiple State enforcement agencies assist our efforts to encourage States to start new odometer fraud activities or enhance existing programs to reduce the occurrence of odometer fraud in those States. Through these cooperative agreements, NHTSA helps deter future odometer law violations, saving consumers millions of dollars in maintenance and repair costs and better enabling purchasers of used vehicles to keep their vehicles safe and roadworthy. The funding will also allow the Office of Odometer Fraud to maintain and improve its electronic case management system and address specialized criminal law enforcement needs to ensure officer safety and efficient investigative practices.

This funding level for FY 2019 supports:

- Investigations of odometer fraud for criminal prosecution;
- Seeking injunctions against violators;
- Seeking recovery of damages for defrauded consumers;
- Continuing to fund cooperative agreements with multiple State enforcement agencies;
- Analyzing available data and continuing to seek new data regarding the frequency of odometer fraud in older vehicles for which odometer statements are not required at sale or change of ownership;

- Continuing to support enforcement efforts against vendors of odometer tampering devices, as well as vehicle sellers who use the devices to defraud their customers and place potentially unsafe vehicles on the road;
- Continuing to explore secure protocols for the use of e-odometer statement; and
- Continuing operations and maintenance of the Program's case management system (SPARTACUS) including hosting, software, and contract labor costs.

What benefits will be provided to the American public through this request and why is this program necessary?

Because vehicles now last longer than in years past, Federal and State odometer enforcement personnel are dealing with an increase in odometer fraud related to older vehicles that are currently exempt from written odometer statements at the time of transfer. In addition, odometer tampering devices are being imported, sold on the Internet, and used to tamper with certain types and generations of digital odometers with almost no way for detection and no conclusion about the extent of damage they may cause to other data recorders on a vehicle. These handheld programming devices are capable of "hacking" into a vehicle's controller area network and manipulating software code related to odometer settings. This type of manipulation could not only deceive consumers, but it could also tap into other vehicle systems that use mileage data in their algorithms and potentially mask safety problems with vehicles.

The Program's criminal investigators are engaged in multiple interstate odometer fraud investigations involving thousands of vehicles and hundreds of illicit programming devices.

Strong enforcement of the Federal and State odometer laws through prosecutions with stiff sentences appears to be one of the most effective way to address the problem. Since 1984, the Program's odometer fraud investigations have resulted in more than 281 criminal convictions in 36 States with prison sentences ranging from one month to ten years, criminal fines totaling more than \$3 million, and court ordered restitution totaling more than \$17 million.

Detailed Justification for Vehicle Safety Research and Analysis Programs

FY 2019 – VEHICLE SAFETY

RESEARCH AND ANALYSIS - SUB-PROGRAM BUDGET REQUEST

(\$000)		
Research and Analysis Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Safety Systems	\$7,350	\$5,210
Biomechanics	\$9,226	\$8,237
Heavy Vehicles	\$1,887	\$915
Crash Avoidance	\$10,219	\$8,301
Alternative Fuels Vehicle Safety	\$1,390	\$674
Vehicle Electronics and Emerging Technology	\$9,357	\$3,469
Automated Driving Systems	\$0	\$10,000
Vehicle Research and Test Facility	\$497	\$500
Crash Data Collection	\$500	\$500
Research and Analysis Total	\$40,426	\$37,805

In FY 2019, NHTSA requests \$37.81 million for Vehicle Safety Research and Analysis activities. The request will allow NHTSA to build upon the critical research implemented in FY 2017 and planned for FY 2018 that is necessary to support agency decisions. These activities aim to enhance the safety and security of automotive electronic control systems while supporting the safe adoption of vehicle automation technologies. This funding level will enable the Vehicle Safety Research and Analysis programs to keep pace with modern technologies and any potential safety issues they may pose.

The requested funding also allows NHTSA to continue research projects for emerging safety areas associated with safety systems that protect vehicle occupants in the event of a crash and alternative fuel vehicles, for addressing new technologies in the areas of crash avoidance and heavy vehicles, and improving NHTSA's ability to evaluate vehicles at its facilities for research purposes and for potential defects. By continuing to support current projects and initiate new projects, the agency will be able to accelerate the safe deployment of advanced technologies, and to support agency decisions in a number of areas including heavy vehicle crash avoidance systems, new occupant protection standards for adults and children, and the completion of several Congressional mandates.

RESEARCH AND ANALYSIS
Safety Systems

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Safety Systems	\$7,350	\$5,210

What is this program and what does this funding level support?

In FY 2019, NHTSA requests \$5.21 million for Safety Systems research. This funding level will enable NHTSA to continue research on advanced restraint systems for older and obese occupants. NHTSA will continue the development, validation, and demonstration of predictive engineering tools to evaluate safety systems for reclined and rotated occupants in a range of crash situations. Research will emphasize rear seat occupants, optimized seat, seat belt, and air bag design, and demonstrate how advanced crash test dummies can be used to enhance occupant safety. The funding also supports the integration of the crash test data collection into the overall NHTSA data repository. NHTSA annually provides over three (3) million test data downloads to support vehicle safety research worldwide.

Specifically, the requested funding will allow NHTSA to pursue the following activities in FY 2019:

- Leverage private/public partnerships to understand the safety implications for occupants of evolving light-weighted, fuel efficient vehicle designs;
- Complete assessment of the THOR 5th percentile female dummy in frontal, oblique, and rear seat test conditions. Evaluate the dummy's sensitivity to changes in crash type and restraint configurations;
- Current vehicle restraints present safety challenges for increasing demographic segments of the public, such as elderly and obese occupants. Through collaboration with industry, NHTSA is analyzing occupant restraints that improve safety performance for vehicle occupants of these demographics without degrading performance for other occupants;
- Evaluate how rear seat restraints could be improved for 10-year-old children that need to be protected using rear seat restraints both with and without belt positioning booster seat. This will include evaluation of real world injury mechanics and laboratory sled testing using the newest dummies;
- Complete research to reduce injuries from occupant contact with seat backs and other surfaces in the rear seats; and
- Complete research to develop test procedures and demonstrate countermeasures to reduce occupant ejections through roof openings.

What benefits will be provided to the American public through this request and why is this program necessary?

The Safety Systems division conducts research to support agency actions aimed at reducing the number of fatal and serious injuries to occupants in motor vehicles that occur in the United States each year from crashes. This research program is responsible for evaluating new crash safety concerns and for developing safety concepts, test procedures, and performance measures. Safety Systems research examines existing designs, new and improved vehicle designs, safety countermeasures, and equipment to enhance safety for all occupants in the event of a crash.

In the past five years, new test procedures have been developed for frontal oblique and child seat side impact. The safety potential for adaptive front seat and novel rear seat restraint systems have been better understood and implemented based on information from this research program. Additional research is needed to further improve crash safety. Frontal crashes continue to account for the largest number of fatalities to belted occupants. This program studies advanced seat belt and air bag technologies, and innovative vehicle designs that can further enhance protection for occupants of all ages and sizes. Activities in NHTSA's Safety Systems program provide information to support agency decision making and specifically address the Department's roadway safety fatality goals.

RESEARCH AND ANALYSIS
Biomechanics

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Biomechanics	\$9,226	\$8,237

What is this program and what does this funding level support?

The Biomechanics program conducts real-world data collection, experimental- and computer modelling-based research to support agency and public initiatives aimed at reducing the number of fatalities and serious injuries associated with motor vehicle crashes in the United States. In particular, the Biomechanics program completes detailed crash and medical investigations of real-world crashes that improves the agency's knowledge of injuries and their causes. Our investigations of these detailed crash cases and analysis of other NHTSA data sources suggest that despite recent new or improved safety standards, many preventable fatalities and serious injuries still occur and are projected to continue occurring. NHTSA's efforts aim to describe the factors associated with the serious head/brain, thorax, spine, abdomen, and lower extremity injuries that still frequently occur as a result of motor vehicle crashes. The Biomechanics program develops the required knowledge of those injuries (causation scenarios, mechanisms, tolerance, human response) and applies that knowledge in the development of advanced test devices (human-like crash test dummies), detailed mathematical models of humans, and other new tools and criteria that can be used to predict and mitigate against injuries and fatalities that result from motor vehicle crashes. The products of this research are directly used to support the Department's priority programs and provide the public with detailed crash data and advanced tools for mitigating injuries and fatalities that result from motor vehicle crashes.

In FY 2019, NHTSA requests \$8.24 million for the Biomechanics research program. The Biomechanics research program is a highly complex area of research requiring a high level of expertise that provides state-of-the art test devices, tools, and injury criteria that can be used to improve vehicle safety and reduce injuries and fatalities resulting from motor vehicle crashes. Funding at the requested level is necessary to complete the development, evaluation, documentation, and public release of new adult frontal and side impact dummies and a new frontal child dummy. Funding is also required to support the collection and analysis of advanced head/brain, thorax, spine, abdominal, and lower extremity injury response/tolerance data that can be used to create more human-like test dummies and human body models, as well as their associated injury measures, to improve the mitigation of injuries and fatalities due to motor vehicle crashes. Additionally, funding is needed to support continued injury research for vulnerable occupants (e.g. children, older occupants, and obese occupants) such that appropriate injury criteria, test dummies, and/or mathematical human models can be developed that address the special needs of these vulnerable populations. These finite element mathematical models of humans can be used efficiently and cost-effectively in efforts to better understand factors and possible optimization strategies for improving occupant safety and complement crashworthiness

efforts that involve physical testing of test dummies and vehicles. Funding is also required to support the development, evaluation, and application of human body models for use in virtual studies of the latest advances in vehicle crashworthiness and restraint system technologies. Finally, funding supports efforts through the Crash Injury Research and Engineering Network (CIREN) to understand how occupants are injured in motor vehicle crashes. CIREN collects comprehensive medical data and is used to complete detailed engineering and medical review of occupant injuries resulting from motor vehicle crashes in modern vehicles. These detailed injury cases provide the agency, the safety community, and the public with insight into the crash, vehicle, and occupant factors that contribute to injuries and fatalities in newer vehicles despite current testing programs and advanced restraint systems.

Specifically, the requested funding will allow NHTSA to pursue the following activities in FY 2019:

- Complete development, evaluation, documentation, and public release of the THOR 5th percentile female adult frontal dummy.
- Support development, evaluation, and application of models for use by the agency and public in identifying the causes of and mitigation strategies for injuries and fatalities that continue to occur in new vehicles despite current testing programs and advanced vehicle systems.
- Conduct new research on injury mechanisms/tolerance and anthropometry of vulnerable occupants through experimental and mathematical studies aimed at developing unique injury criteria, concepts for mathematical human body models, and physical dummies.
- Support operations and maintenance of the Biomechanical Test database including hosting, software, and contract labor costs and continued efforts to modernize and improve usability of the database. The Biomechanics Test Database has over 12,000 tests worth of data that is widely used by academia, industry, and government.

What benefits will be provided to the American public through this request and why is this program necessary?

The Biomechanics research program has made significant contributions to safety by developing publicly available data, tools, techniques, and procedures that NHTSA and industry have and will continue to use to understand how occupants are injured in crashes and what systems are protecting them. Below are some expected public benefits that will result from the current funding request:

- Public release of 250 new expert-reviewed cases into the CIREN dataset containing detailed injury and medical data associated with seriously injured motor vehicle crash occupants.
- Public release of the advanced THOR 5th female crash test dummies that can be applied toward agency and public/industry crash safety programs aiming to reduce the number of injuries and fatalities on U.S. roadways.
- Development, evaluation, demonstrated application, and public release of mathematical models such as detailed human body models, a brain injury model, and dummy-based models such as the THOR 5th percentile female.

- NHTSA's Biomechanics Test Database, which includes over 12,000 NHTSA-funded or acquired tests, is used by the agency, academia, and industry for injury assessment and criteria development.

RESEARCH AND ANALYSIS
Heavy Vehicle Research

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Heavy Vehicles	\$1,887	\$915

What is this program and what does this funding level support?

To support continued economic growth, the fleet of heavy trucks also needs to grow and provide for the safe and efficient transport of goods across the Nation. In addition, travel by motor coach has increased significantly over the last decade and overall freight tonnage is projected to grow by 44 percent over the next 30 years.¹⁰ The number of traffic fatalities involving heavy vehicles (defined here as a vehicle with a gross vehicle weight rating above 10,000 pounds) account for more than 10 percent of all fatalities. Over the past decade, on average, more than 4,000 fatalities and 400,000 police-reported crashes each year involved heavy vehicles. Heavy truck crashes tend to be particularly deadly or otherwise severely damaging because of their heavy mass. Crashes involving heavy vehicles often damage roadway infrastructure, close freeways, lead to subsequent multi-collision events, result in the death of other occupants, and cost millions of dollars in lost productivity to the economy.

The Heavy Vehicle Crash Avoidance research program is focused on assessing technologies that offer the promise of making these vehicles less prone to crashes through improvements in braking and handling characteristics, and through leading edge driver assistance and automatic vehicle control systems for tractor semi-trailer, single unit trucks, motor coaches, and many other types of light-, medium-, and heavy-duty trucks and buses. Research is also progressing on Automatic Emergency Braking (AEB) systems for different types of heavy vehicles, which first warn the driver, and then if necessary, automatically intervene with emergency braking in the event of potential rear-end crashes. This technology shows promise for significantly reducing the frequency and severity of these types of crashes.

In addition to their importance as stand-alone safety systems, these crash avoidance technologies form some of the basic building blocks of Automated Driving Systems (ADSs – specifically SAE International Automation Levels 4 and 5). By researching them, NHTSA will be able to leverage this knowledge and apply it to automated driving technologies as well.

The research completed in the heavy vehicle crash avoidance research program results in the development of objective test procedures, benefits analyses, overall product evaluations, and customer acceptance assessments. The output of such research can be used by the heavy-vehicle industry stakeholders to help improve their products' performance, by truck manufacturers to help

¹⁰ U.S. Department of Transportation, Bureau of Transportation Statistics and Federal Highway Administration, Freight Analysis Framework, version 4.1, 2016

improve the way crash avoidance technologies are integrated into new vehicles and their overall product lines, and by fleet managers to help them make informed purchase decisions about new safety technologies. For example, NHTSA is developing objective testing procedures for measuring the performance of heavy vehicle systems. In addition to AEB, NHTSA is investigating other crash avoidance technologies for heavy vehicles including forward collision warning (FCW) and lane departure warning (LDW) systems.

Specifically, the requested funding will allow NHTSA to pursue the following activities in FY 2019:

- With support from industry associations, NHTSA will work to refine objective test procedures and performance metrics for heavy vehicle systems for both single-unit trucks as well as tractor trailers. Robust test procedures help expedite the development and voluntary deployment of life saving technologies across many vehicle platforms.
- Utilizing hardware-in-the-loop apparatus and modeling techniques (refined in prior years' work) to enhance the efficiency and safety of NHTSA's evaluation of crash avoidance technologies. If proven successful, such innovative evaluation techniques may be leveraged by industry to more efficiently refine product designs and validate calibration settings.
- Working with industry standards organizations such as the SAE International, NHTSA will engage in research related to the unique cybersecurity challenges for heavy vehicles. The output of this work may inform continuing standards.

What benefits will be provided to the American public through this request and why is this program necessary?

The Heavy Vehicle Crash Avoidance research program has made important contributions to NHTSA's decisions such as the development of test procedures and performance standards for stability control which is estimated to prevent a significant number of rollover crashes involving tractor trailers and motor coaches. In addition, stability control systems provide a technology foundation for systems that hold the promise for substantial reductions in rear-end crashes involving heavy vehicles.

The research completed in this program will provide data that the heavy vehicle builders and vehicle equipment suppliers can use to tailor their product designs and calibrations. For example, the information from field testing can be used to better understand the conditions leading to "false positives" (i.e., warnings given even though a collision threat did not actually exist). Such false warnings can occur if the system calibrations are overly sensitive, or if the sensor systems have certain limitations. Information about the frequency and circumstances of false positives, documented in the field testing sponsored by NHTSA, can be used by the heavy vehicle industry suppliers and Original Equipment Manufacturers (OEMs) to better balance system calibrations, tailor sensor configurations, and/or modify driver vehicle interface designs. Such changes can lead to more optimal performance for many driving conditions, help to enhance customer acceptance, and ultimately provide enhanced safety benefits for the American public. Similarly, technology effectiveness and crash avoidance system benefit estimates from NHTSA's heavy

vehicle crash avoidance research program can be used by large commercial fleet operators, as well as owner-operators (small fleets and individual truck owners) to make more informed decisions about what specific crash avoidance technologies to request when ordering new trucks or buses.

RESEARCH AND ANALYSIS
Crash Avoidance

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Crash Avoidance	\$10,219	\$8,301

What is this program and what does this funding level support?

The automotive industry has made significant progress in the development of advanced technologies intended to prevent and/or mitigate crashes. In NHTSA's programs, the agency uses the term "crash avoidance" or "advanced driver assistance systems" (ADAS) to mean lower levels of automated systems, where the human driver is still performing the driving task but automation assists them in terms of warnings or temporary interventions (if and when needed) to provide safety benefits. In the Society of Automotive Engineers (SAE) International's taxonomy (SAE J3016), these systems correspond to SAE Levels 0, 1, and 2.

Today's crash avoidance systems rely on sensors such as radar, LIDAR, camera, ultrasonic, and other systems to detect potential collisions with other vehicles, pedestrians, or objects and then warn the driver to take appropriate action. Advanced systems may also automatically apply brakes or provide steering inputs to avoid or mitigate the crash if the driver's actions (in response to an alert) are delayed or insufficient. Crash avoidance systems address several common crash scenarios that account for the majority of fatal crashes including: forward collisions; collisions during backing up; lane and roadway departures; and head-on collisions. Such systems can also be leveraged to enhance safety and convenience during "normal" driving conditions through features such as lane centering and traffic-jam (or low-speed) assist.

With crash fatalities on the rise in 2015 and 2016, NHTSA has identified the need for increased emphasis on crash avoidance technologies with significant potential to reduce fatalities and injuries by preventing the crash from occurring; significantly reducing the severity of crashes through automatic braking or steering interventions; or by providing timely warnings to the driver. The rapid advance of crash avoidance safety systems will radically change the design and performance of automobiles over the next decade. The investment in crash avoidance technology research will give industry needed data to reduce fatalities and injuries on America's roadways through advanced safety technologies.

Furthermore, these systems are precursors, and necessary building blocks, for Automated Driving Systems (SAE International Automation Levels 3-5), in which automation goes beyond "assisting the driver" to "performing the driving task for the driver." NHTSA's research related to higher levels of automation fall under the "Vehicle Electronics and Emerging Technologies" program area and the proposed "Automated Driving Systems" program area. (see program descriptions below).

Crash avoidance and ADAS technologies present unique research challenges. Evaluation of driver-vehicle interface designs, sensor technology strengths and improvement opportunities, overall performance metrics, and consumer education materials are needed to ensure that the maximum safety benefits are derived from these technologies, while producing a minimum distraction burden for the driver.

Research areas include human factors and intelligent vehicle technologies for crash avoidance with an emphasis on passenger vehicles. Within the human factors program, a continuing focus will be on crash warning characteristics, technology to combat impaired drivers (e.g. alcohol detection), driver monitoring technology, technology to increase seat belt use, advanced controls and displays, advanced lighting systems, and driver inattention. For intelligent vehicle technologies, research areas include advanced technologies that help the driver and vehicle react to imminent crash situations involving other vehicles and pedestrians. Countermeasures include crash avoidance warning systems, advanced vehicle control systems, and driver monitoring technologies.

A major emphasis of the NHTSA Crash Avoidance Research program is to leverage life-saving technologies that can make an immediate impact on roadway safety. This program area focuses on technologies that are here today, available on vehicle platforms, and hold the promise to significantly reduce the big crash problem that results in more than 35,000 fatalities each year. NHTSA's crash avoidance research is focused in the following areas:

- Through market research and industry outreach, continually identify leading-edge safety technologies that may help drivers avoid a crash or reduce crash severity. Linking this information with detailed crash causation analyses provides data-driven basis for the agency to align its focus and resources in studying the most promising technologies.
- Evaluate customer acceptance, system reliability, possible driver adaption over time, and overall performance of crash avoidance technologies using field trials, controlled closed-course testing, driving simulators, and other means. This information helps inform the industry improve their products over time to optimize user acceptance and overall societal benefits.
- Estimate the overall safety benefits of crash avoidance technologies using a combination of information sources and analyses techniques including; real-world crash data; test track performance results; field test evaluations; driver simulator results; and computer modeling. For example, conduct analyses using real-world crash data to estimate safety performance of production vehicles equipped with crash avoidance technologies versus those without such equipment. This information helps validate safety benefits estimates and informs agency decisions.
- Develop objective, repeatable, and efficient test procedures for evaluating the performance of crash avoidance technologies. Robust test methods help expedite industry's voluntary adoption and rollout of proven safety technologies on various platforms and democratize the technology by addressing uncertainty around performance expectations.
- Evaluate the effectiveness of driver-vehicle interface (DVI) systems for alerting the driver to potential collision threats and eliciting an appropriate driver response. The knowledge attained through human factors studies enhances industry's ability to design systems that are better compatible with driver expectations and responsiveness and hence helps avoid foreseeable driver misuse, disuse, and abuse of the technology.

NHTSA will also research the cybersecurity of ADASs under this research program area. Similar to human factors, vehicle cybersecurity is cross-cutting all technologies that rely on software and electronics. Therefore, NHTSA is allocating funds to research vehicle cybersecurity associated with driver assistance technologies in this program area. Cybersecurity is addressed across two concurrent fronts – 1) research to support the evolution of vehicle technologies that better defends against cyber-attacks, and 2) to effectively detect, contain, and safely recover from a successful cyber intrusion. Knowledge attained through this research applies to technologies and enhances industry’s ability to improve the posture of their vehicles that feature driving automation systems of all levels.

In FY 2019, NHTSA requests \$8.30 million for the Crash Avoidance research program. The FY 2019 Crash Avoidance funding request will place an emphasis on addressing important human factors issues related to driver inattention; enhanced understanding of DVI system issues; exploring driver adaption impacts of ADAS technologies; harmonization of testing methods with Europe and Japan (so as to reduce overall test-burden for industry); and on addressing potential regulatory barriers and safety impacts of leading-edge headlight systems and camera-based side view mirrors.

Specifically, the requested funding will allow NHTSA to pursue the following activities in FY 2019:

- Engage in efforts to support international harmonization of testing methods associated with modern crash avoidance systems that react to vehicles, pedestrians, and cyclists. This work will include continuing efforts to harmonize “guided soft targets” used in test-track research, as well pedestrian detection test apparatus. Such harmonization reduces overall costs associated with product evaluations for both government and industry.
- Explore potential for utilizing hardware-in-the-loop apparatus and modeling techniques to enhance the efficiency and safety of NHTSA’s evaluation of crash avoidance technologies. If proven successful, such innovative evaluation techniques may be leveraged by industry to more efficiently refine product designs and validate calibration settings.
- Initiate research into the role of advanced, camera-based driver monitoring systems and the role they play in determining driver impairment status (e.g., inattention or drowsiness) and take-over readiness for automated vehicle systems.
- Build upon past knowledge to initiate new human factors research into drivers’ interaction with emerging driver assistance systems in relation to their impact on the real-world safety effectiveness of these systems.
- Continue research into the use of observational and naturalistic driving data to improve understanding in factors that impact distracted driving. This knowledge will inform agency priorities in mitigating emerging challenges and expansion in distracted driving that lead to catastrophic crashes.
- Initiate new research in advancements in modern vehicle technologies such as electronic mirrors.
- Complete research on the vehicle architecture evolution for cybersecurity resilience and cyber-attack remediation strategies that facilitate effective containment and recovery.

- Continue the agency's close coordination with other stakeholders including: automotive manufacturers and other industry entities, the Department of Homeland Security (DHS), Department of Defense (DOD), National Science Foundation (NSF), and National Institute of Science and Technology (NIST) on the cyber protection of vehicles and expanding ongoing projects to encompass the timely revision of cybersecurity best practices for road vehicles.

What benefits will be provided to the American public through this request and why is this program necessary?

The light vehicle crash avoidance program is engaged in a body of research on driver assistance technologies that present safety warnings to drivers; can take control of the vehicle in crash imminent situations; modify unsafe driving behaviors such as distraction and alcohol impairment; and technologies to enhance the safety of vulnerable and at-risk populations such as teen drivers, older drivers, and pedestrians. NHTSA's research in crash avoidance technology will continue to focus on identifying emerging safety technologies, partnering with industry to develop more efficient and comprehensive testing methods; long-term safety impacts of these advanced technologies; and associated cybersecurity challenges and needs for architectural improvements. The result of this research investment will equip industry to build safety technologies that save lives and prevent injuries for all road users and mitigate potential unintended consequences.

The output of this work will help automotive manufacturers, suppliers, and other industry entities with improving their products through more accurate and efficient product evaluations. Furthermore, the field testing of new ADAS systems to be completed by NHTSA and industry partners will provide insights for further product refinements, as well as for developing programs to promote voluntary adoption of crash avoidance systems and enhance competitiveness among vehicle manufacturers for offering high value, high performance systems.

RESEARCH AND ANALYSIS
Alternative Fuels Vehicle Safety

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Alternative Fuel Vehicle Safety	\$1,390	\$674

What is this program and what does this funding level support?

NHTSA is gathering information from all sources regarding the safety of emerging transportation fuels including battery, stored gas, and fuel cell technologies. This advanced knowledge is helping to focus the research projects, refine safety assessments, and develop performance tests. NHTSA is partnering with industry and other Federal agencies to develop appropriate safety performance for these alternative fuel vehicles.

In FY 2019, NHTSA requests \$674 thousand for the Alternative Fuels Vehicle Safety research program. Specifically, the requested funding will allow the agency to pursue the following activities:

- Conduct Thermal Propagation testing at the pack level to assess test procedure suitability and evaluate performance criteria.
- Continue evaluation of lithium ion (Li-ion) battery diagnostics that can detect damage prior to battery fire initiation.

What benefits will be provided to the American public through this request and why is this program necessary?

There has been frequent media attention to a variety of Li-ion battery fires in consumer products including: e-cigarettes, hoverboards, laptop computers, and automobiles. Working with the Department of Energy (DOE) National Laboratories, major manufacturers, test facilities, and suppliers, NHTSA is partnering in research to reduce risk of fire due to Li-Ion thermal runaway propagation. Building on a body of fundamental research developed by the Department of Energy, NHTSA's research will focus on the development and demonstration of best safety practices for automotive systems. In addition, NHTSA will continue research on early detection of safety related failures to prevent catastrophic failures.

RESEARCH AND ANALYSIS
Vehicle Electronics and Emerging Technology

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Vehicle Electronics and Emerging Technology	\$9,357	\$3,469

What is this program and what does this funding level support?

Automated Driving Systems (ADSs) have the potential to address the 94 percent of serious crashes where the critical reason for the crash is attributed to the driver.¹¹ Furthermore, ADSs offer efficient mobility to thousands of Americans currently lacking accessibility, and the ability to drive safely through innovation. On the automation spectrum, ADS refers to driving automation systems that perform the full dynamic driving task (SAE Automation Levels 3-5). The sooner these technologies are safely tested and deployed by the industry, the earlier the nation can reap these benefits. The goal of the Vehicle Electronics and Emerging Technology research program is to advance the safe deployment of ADSs through advanced research that seeks to identify and remove regulatory barriers that hinder innovation while optimizing the safety benefits and mitigating inherent risks. Three rapidly emerging and related vehicle safety topics –ADSs, software intensive vehicles and vehicle cybersecurity are the main research areas within this program area.

To keep pace with these rapidly changing and dynamic technologies, NHTSA will continue to perform collaborative, foundational research to facilitate industry's safe deployment of life-saving technologies with proven safety benefits and address emerging challenges associated with their safety and security assurance. This program conducts research to support agency decisions, leveraging the unique role of government research to contribute to the aggregate body of knowledge on relevant advanced technologies that benefit the automotive community at large. Research is also performed to identify and assess the utility in facilitating, supporting, and convening industry's collaboration to establish consensus-based voluntary standards where needed. The transfer of vehicle control and the primary driving functions between the human to the machine highlights the need for new methods for testing, evaluation, validation and verification. In addition, this program performs research in emerging vehicle technologies with respect to electronics systems safety, software assurance, and vehicle cybersecurity associated with ADSs. This builds upon the knowledge gained in researching cybersecurity under the crash avoidance program area and expands to unique risks and vulnerabilities that emerge due to removal of the driver from the dynamic driving task.

Developing, testing, and validating for purposes of deploying ADSs is a difficult challenge. As the technology providers are focused on pursuing a multitude of approaches to get their technologies

¹¹ Singh, S. (2015, February). Critical reasons for crashes investigated in the National Motor Vehicle Crash Causation Survey. (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 115). Washington, DC: National Highway Traffic Safety Administration.

to work in differing ways, there are many overarching challenges that are emerging beyond the technology, such as the establishment of common safety principles, and generally accepted validation approaches with the objective of building public confidence in these technologies. NHTSA's research leverages industry's investments and technological innovation through close collaboration and frequent technical information exchange that aims to fill the research gaps that benefit the broader and expanding industry at large.

In FY 2019, the Vehicle Electronics and Emerging Technologies program will focus on ADSs (technologies that are at SAE levels 3-5), build upon research completed in FY 2018 and initiate new projects to close identified gaps in support of agency decisions on automated driving technologies, vehicle electronics reliability, safety-critical system software assessment, and cybersecurity. These activities aim to enhance the safety and security of automotive electronic control systems that employ automation, complex software, and at-times, various forms of connectivity. This program also conducts research on emerging technologies that employ increasingly complex software systems and provide higher levels of vehicle automation which transfer increasing levels of the dynamic driving task from the human drivers to the ADS. Research will be performed to explore the multitude of human-machine-interface implications that arise from increasing levels of automation and the ultimate removal of all human control mechanisms. This division's work encompasses all fundamental control systems (e.g. steering, braking, throttle, motive power), as well as other safety critical systems.

This program will continue to carry out needed research in coordination with other offices and organizations and will also be closely coordinated with the advanced crash avoidance and human factors research programs. Research collaboration is performed to leverage resources, knowledge and best practices with other Governmental entities including Department of Homeland Security (DHS), National Institute of Standards and Technology (NIST), Department of Defense (DOD), National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF).

In FY 2019, NHTSA requests \$3.47 million for the Vehicle Electronics and Emerging Technologies program. Funding provided in FY 2019 will allow NHTSA to pursue the following activities:

- Perform research into methods and performance metrics that can provide appropriate measure to assess the quality of risk management effectiveness for ADSs.
- Complete research on "takeover-ready driver" attributes and governing factors for SAE L3 systems and synthesize best practices.
- Establish research into the methods to measure and engender human trust and the mechanics of cognitive teaming in ADSs.
- Conduct preliminary research into potential applications of Cooperative Decision Making, Distributed Perception, and Distributed Planning and how they might impact NHTSA's role and mission.
- Extend research into the complex distributed vehicle software as expanded to include ADSs.
- Continue research with key stakeholders, including the automotive industry, standards setting organizations, and government agencies to refine safety principles for ADSs and

develop of test procedures and performance criteria for promising safety enhancing systems.

- Complete preliminary research to assess FMVSS test procedures for non-traditional vehicles.

What benefits will be provided to the American public through this request and why is this program necessary?

The focus of this effort will be to develop research findings and data to advance industry's safe testing and deployment of Automated Driving Systems (SAE Levels 3-5). Through advanced, proactive, and collaborative research, emerging challenges can be addressed in a timely manner such that transformative automated driving technologies with proven safety benefits can be introduced sooner. Agency data gathering and strategic planning efforts as well as incoming research results will continue to guide agency research priorities in this area.

RESEARCH AND ANALYSIS
Automated Driving Systems

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Automated Driving Systems (ADS)	\$0	\$10,000

What Is This Program and What Does This Funding Level Support?

To fulfill its mission, NHTSA needs a clear and comprehensive understanding of new vehicle designs and new technologies and how they perform in the real world with respect to safety. The agency's research efforts are driven by its objective to ensure multi-industry, technology-driven advances that require a combination of public and private investments in technology, products, infrastructure, and standards. This is particularly necessary in disciplines that interface with public infrastructure and benefit a broad spectrum of the American public.

For safety problems that occur with high frequency and severity in the crash statistics, the agency needs research to evaluate new safety countermeasures that can address these issues and/or new crash tests that can drive better occupant protective vehicle designs. Research efforts support agency decisions with respect to new technologies and crash tests so that cost-effective life-saving technologies are adopted by industry. Research data also influences and supports industry decisions with respect to safety engineering of their vehicles, providing a neutral perspective and facilitating unbiased results on key issues to balance industry and safety advocate interests. On the other hand, when vehicles are deployed that develop a safety defect, agency actions often need resources from its Office of Vehicle Safety Research to perform testing and analysis to support investigations.

For NHTSA's work on Automated Driving Systems, the agency has adopted the Society of Automotive Engineers (SAE) International's taxonomy for automation levels (SAE J3016). SAE Level 3, or conditional automation, is where a driver is still a necessity, but is not required to monitor the environment and must be available to take over at any time (e.g., hands off driving on an interstate). SAE Level 4, or high automation, is where the vehicle can perform all driving functions under certain conditions (e.g., driving on most roads in normal weather). SAE Level 5, or full automation, allows the vehicle to perform all driving functions under all conditions.

To accelerate the safe testing and deployment of Automated Driving Systems (ADSs – SAE Automation Levels 3-5) and other emerging technologies, NHTSA is planning a holistic approach to perform foundational research that builds upon the body of knowledge employed across the stakeholder community (including many new non-traditional, small startup companies who are developing novel and innovative designs), while coordinating a framework and prioritization for ADS sector-wide research needs. This strategy empowers private sector innovation and market competition, while also employing an agile approach to facilitate collaboration, uniformity, and interoperability in a manner that accelerates the development, testing, validation, and deployment

of promising life-saving technologies across the full spectrum of automated driving technologies. The principal objective is to focus on the most promising safety-enhancement segment of automation – ADSs – and align NHTSA activities to support and maintain the U.S.’s global leadership in their safe deployment through technological innovation and open market access.

This program area is focused on building the knowledge to support agency decisions with respect to regulatory innovative updates needed to enable concepts; develop the necessary tools and knowledge to evaluate the safety of these systems; and perform the research necessary to determine if current tools can properly evaluate the safety of new vehicle designs. The research conducted under this program will also support the deployment of systems on commercial vehicles. NHTSA is addressing other core research associated with these systems such as software safety, vehicle cybersecurity, and human factors needs under the Vehicle Electronics and Emerging Technologies program area.

Specifically, with the \$10 million per year incremental funding requested for 5 years, NHTSA plans to collaborate with industry to expeditiously and proactively address the visible (e.g., Federal Motor Vehicle Safety Standards (FMVSS) test procedures) and invisible (e.g., public confidence) barriers that challenge or may delay the rollout of ADSs on U.S. roadways. The increased funding level will involve work that will require multiple years to complete the research needs.

NHTSA anticipates the following funding and resource needs:

- Regulatory Barriers and Unnecessary Burdens (\$4.5 million) - NHTSA sees a combination of both agency and industry actions to address this issue. However, only NHTSA can directly change and amend FMVSS standards and/or associated compliance test procedures.
 - i. Finalize updates to FMVSS test procedures that can be applied to vehicles with alternative designs that do not feature manual driving controls.
 - ii. Support collaborative research with international stakeholders and governments to leverage research data from the international community to establish a stronger basis for global standards and methods.
- Component and Systems Testing (\$2 million) - Given the increasing use of complex electronics and software in safety critical vehicle control systems (steering, braking, and propulsion) and other vehicle systems that interact with them, NHTSA sees the need to take a leadership role in working with industry to make sure any new safety issues that are identified as potentially being caused by or in part by vehicle electronic systems, vehicle software, or otherwise, are well understood so that government, industry, and the general public can collectively assess what additional requirements, if any, may be needed in this area. Similar to Components Testing, NHTSA needs to be involved in Systems Testing for many of the same reasons, but also to develop objective repeatable performance tests that can be used by government, industry, and other stakeholders to evaluate the safety performance of new vehicles and safety systems.

- i. Research on factors and metrics that differentiate “Perception systems’ capabilities” with respect to ADSs’ object and event detection and response (OEDR) needs independent of the control algorithms or actions.
 - ii. New research to support and expedite the establishment of voluntary industry standards and approaches for novel simulation methods, tools, and testbeds beneficial to test and evaluate ADSs in order to identify a finite set of minimum test track tests that might be necessary.
 - iii. New research on mode-specific considerations in collaboration with associated sister DOT agencies, such as potential unique challenges of large trucks and buses.
- Alternative Designs (\$3 million) – NHTSA’s work on Alternative Designs will include collaboration with the industry to assist in developing the appropriate tests and new tools so that safety aspects can be comprehensively and accurately addressed.
 - i. New research on unique Level 4+ vehicle design concepts, such as on vehicles with non-standard seating configurations, and implications on crashworthiness (understanding of occupant protections in non-standard seating configurations).
 - ii. New research on unique human-machine interaction (HMI) considerations, such as monitoring of the state/fitness of occupants, whether there is such need, and encouraging designs that minimize the need for driver interactions to ensure safety. Special emphasis will be made to spur innovation in this area.
 - iii. Considerations for remote/wireless manual control of vehicle motions (teleoperations).
 - iv. Implications on crashworthiness requirements if never intended to be occupied by humans.
- Continuous Improvement and Consumer Acceptance Efforts (\$500 thousand) – As with any new technology, public trust and confidence needs to be instilled for acceptance. As lessons are learned, improvements can be made as necessary.
 - i. New research towards consumer awareness, comprehension, and acceptance of automated driving technologies. This research will support the development of effective consumer educational materials and the need for an ongoing, comprehensive evaluation program as ADSs evolve.

What Benefits Will Be Provided to the American Public Through This Request and Why is this Program Necessary?

Due to flexible policies, proactive government involvement, public-private collaborative work, and innovation leadership inherent to the American culture and the market-driven investments, the US established an early worldwide leadership in ADSs development. NHTSA is particularly interested in researching key topics to enable the safe deployment of higher levels of ADSs that do not plan for a driver in the vehicle (or offer manual driving controls). Preliminary research indicates that there are significant safety enhancement potentials associated with the highest levels of ADSs (SAE Level 4 and Level 5 systems). The FY 2019 request and subsequent funding will enable expeditious and practical updates to FMVSS test procedures to accommodate non-standard

vehicle design concepts and proactive mitigation of public perception concerns through improved transparency and a data-driven approach.

RESEARCH AND ANALYSIS
Vehicle Research and Test Center

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Vehicle Research and Test Center	\$497	\$500

What is this program and what does this funding level support?

The Vehicle Research and Test Center (VRTC) is NHTSA's in-house research, development, test, and evaluation facility located in East Liberty, Ohio. VRTC has access to world class testing facilities similar to those used by automotive suppliers and manufacturers. Research and testing activities conducted at the VRTC support agency decisions and actions with respect to new vehicle systems and issues; agency consumer information programs; test dummy development; injury criteria development; advanced research into cutting edge technologies; and safety issues that require quick reaction, including defect investigations. The full range of testing and research capabilities available to NHTSA at VRTC allows the agency to maximize its testing capabilities to more rapidly study emerging safety issues and more quickly provide benefits to the American public.

In FY 2019, NHTSA requests \$500 thousand for the Vehicle Research and Test Center program. Funding received in past years has been used to purchase cybersecurity test equipment, a limited amount of automated driving technologies test equipment, pedestrian automatic emergency braking test apparatus, and a new tensile test machine (needed for defects investigations and for crashworthiness and biomechanics research). Having this equipment at NHTSA's laboratory has allowed the agency to more quickly respond to cybersecurity incidents, defects, and consumer complaints and to better understand issues associated with automated driving technologies and pedestrian automatic emergency braking.

The FY 2019 funding will support the procurement of equipment needed to conduct research and analysis of automated driving technologies, cybersecurity, or other advanced technologies to support agency actions to improve safety on our nation's roadways. With new sophisticated electronic control systems emerging in the market, NHTSA needs to maintain a well-equipped and dedicated center to test, monitor, and investigate these and other emerging safety issues. Considerations for upgrading testing capabilities include instrumentation, hardware, software, and equipment for the following:

- Material and component composition/failure analysis;
- Advanced technology and controls;
- Automated vehicles;
- Cybersecurity; and
- Electronics reliability.

What benefits will be provided to the American public through this request and why is this program necessary?

Modern vehicles have evolved greatly over the last 35 years, and the advent of modern electronic controls, alternative fuels, and electric powertrains will drive that evolution even farther in the very near future. The expertise and technical capability of NHTSA's Vehicle Research and Test Center has been well demonstrated for over 40 years. Numerous high profile programs have been successfully completed by VRTC in an expeditious and thorough manner. However, NHTSA has recognized the need to enhance the capabilities at VRTC for testing and analyzing emergent safety issues. Providing the capability of testing emergent technologies is necessary to maintain pace with the rapid advances in electronics and the resulting new safety issues. While enhancement of research capability in several areas has been identified, the most near-term critical needs are in cybersecurity, electronics reliability, and automated and connected vehicle technologies and systems. These are critical enhancements to keep pace with technology and to support the agency's Office of Defects Investigation (ODI) when these emerging technologies become unsafe. It is critical that NHTSA's research, testing, and analysis capabilities be upgraded to ensure the safe implementation of new technologies and that potential defects in vehicles already out on U.S. roadways are quickly and comprehensively addressed. Enhancement of capabilities for material composition and failure analysis, particularly of electronic components, is also critical. The FY 2019 request will enable the VRTC to maintain and update the equipment and state-of-the-art facilities necessary to assess and investigate the rapid emergence of advanced automotive electronics technologies to assure the highest level of automotive safety for the American public.

**OPERATIONS AND RESEARCH
VEHICLE SAFETY
PROGRAM AND FINANCING SCHEDULE**

	(\$000)		
Description	FY 2017 Actual	FY 2018 Annualized CR	FY 2019 Request
Obligations by Program Activity			
Rulemaking	23,139	23,203	21,520
Enforcement	39,249	36,769	17,016
Research and Analysis	43,675	40,426	37,805
Administrative Expenses	77,723	78,455	76,085
Total Direct Obligations	183,786	178,852	152,427
Reimbursable Program	-	-	-
Total new obligations	183,786	178,852	152,427
Budgetary Resources			
Unobligated balance brought forward, Oct 1	9,319	5,003	5,003
Resources available from recoveries	-	-	-
Anticip Recov prior year unpaid obligations unexpired	-	-	-
Unobligated balance brought forward, Oct 1 - Expired	-	-	-
Unobligated balance available (total)	9,319	5,003	5,003
Budget Authority			
Appropriation (disc.)	180,075	178,852	152,427
Appropriations transferred from other accts (disc)	-	-	-
Appropriations permanently reduced (disc.)	-	-	-
Appropriation (total)	180,075	178,852	152,427
Spending authority from offsetting collections (disc.)			
Collected	427	-	-
Expired Collections	-	-	-
Spending authority from offsetting collections (disc.) (total)	427	-	-
Total budgetary resources (disc and mand)	189,821	183,855	157,430
Change in Obligated Balance			
Unpaid obligations, brought forward, October 1 (gross)	85,785	131,987	131,987
Obligations incurred (gross) - Unexpired accounts	183,786	178,852	152,427
Obs Bal: Obligations Incurred: Expired Accounts	470	-	-
Obligations incurred (gross) - Outlays (gross)	(135,729)	(178,852)	(152,427)
Recoveries of prior year unpaid obligations, unexpired accts (-)	(117)	-	-
Recoveries of prior year unpaid obligations, expired accts (-)	(2,208)	-	-
Unpaid obligated balance, end of year (gross)	131,987	131,987	131,987
Offsets - Against Gross Budget Authority and Outlays			
Offsetting collections (cash) from: Federal sources	(556)	-	-
Offsetting collections (cash) from: Non-Federal sources	(33)	-	-
Outlays (disc) (gross)			
Outlays from new discretionary authority	79,557	104,000	88,000
Outlays from discretionary balances	56,171	75,000	68,000
Total outlays (gross)	135,140	179,000	156,000

**OPERATIONS AND RESEARCH
VEHICLE SAFETY
OBJECT CLASS SCHEDULE**

	(\$000)			
Description	FY 2017 Actual	FY 2018 Annualized CR	FY 2019 Request	
Direct Obligations				
<u>Personnel Compensation</u>				
Full-time permanent	35,025	42,600	42,750	
Other than full-time permanent	-	-	-	
Other personnel compensation	1,066	2,000	2,100	
Total personnel compensation	36,091	44,600	44,850	
Civilian personnel benefits	11,036	13,700	13,850	
Travel and Transportation of Persons	\$446	500	500	
Transportation of things	-	-	-	
Rental payments to GSA	4,017	4,000	4,000	
Communications, utilities, and miscellaneous charges	-	-	-	
Advisory and assistance services	23,564	24,000	24,000	
Other services from non-Federal sources	87,586	71,052	44,227	
Other goods and services from Federal sources	15,735	16,000	16,000	
Operation and maintenance of equipment	-	-	-	
Supplies and materials	4,224	4,000	4,000	
Equipment	-	-	-	
Grants and subsidies	1,087	1,000	1,000	
Total new obligations	183,786	178,852	152,427	

NHTSA FY 2019 VEHICLE SAFETY ADMINISTRATIVE EXPENSES

	(\$000)		
Program Activity	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Salaries and Benefits	\$50,304	\$59,579	\$59,862
Travel	\$538	\$538	\$592
Transportation of Things	\$70	\$70	\$70
Rent, Communications & Utilities	\$6,809	\$6,758	\$5,703
Printing	\$357	\$357	\$357
Other Services	\$9,542	\$7,117	\$6,346
Supplies	\$5,054	\$3,011	\$2,131
Equipment	\$1,025	\$1,025	\$1,025
Total Administrative Expenses	\$73,700	\$78,455	\$76,085

FTE	311	363	363
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Administrative Expenses

In FY 2019, NHTSA's Vehicle Safety request includes \$76.09 million for administrative expenses. Costs include the salaries and benefits for NHTSA employees who directly work on or indirectly provide support to the Vehicle Safety programs together with other normal business expenses such as personnel operations, facilities management, parking management, printing and graphics, mail operation and dockets management operations, building security, utilities and building maintenance, voice, cable and wireless communications, Disability Resource Center, substance abuse awareness and testing, financial services, and procurement and acquisition services.

The FY 2019 budget request includes baseline changes including an annualization of 1.9 percent pay raise for 2018. NHTSA will continue to distribute administrative expenses using a methodology based primarily on direct FTE allocation for the following categories: salaries and benefits; travel; transportation of things, rent, printing, supplies, equipment; and other services. Additionally, NHTSA payments for centralized administrative and support services for DOT's Working Capital Fund is estimated at \$13.77 million in FY 2019 and the expense is shared between accounts.

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EXHIBIT III-1

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

OPERATIONS AND RESEARCH

HIGHWAY SAFETY RESEARCH & DEVELOPMENT

Summary by Program Activity

Appropriations, Obligation Limitations, and Exempt Obligations

(\$000)

	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Highway Safety Programs	\$ 55,362	\$ 59,761	\$ 61,782
Research and Analysis - NCSA	41,094	38,730	40,290
Administrative Expenses	49,444	46,419	50,028
TOTAL, HIGHWAY SAFETY RESEARCH & DEV. (TF)	\$ 145,900	\$ 144,909	\$ 152,100

FTEs:

Direct Funded	156	175	175
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Note: Totals may not add due to rounding.

HIGHWAY SAFETY RESEARCH AND DEVELOPMENT

Program and Performance Statement

The FY 2019 budget request includes \$152.10 million for research activities to reduce highway fatalities, prevent injuries, and significantly reduce the economic toll of motor vehicle crashes. Requested funding supports data collection and analysis, research into highway safety issues, and the development of effective countermeasures. The data collection, data system development, and analytical work performed by the National Center for Statistics and Analysis support the full range of vehicle, highway and behavioral research, and are extensively utilized by NHTSA and many other safety organizations worldwide. As such, the National Center for Statistics and Analysis is funded from both Highway Safety and Vehicle Safety. Behavioral program research and development covers a comprehensive range of issues affecting roadway users including vehicle occupants, pedestrians, and bicyclists, as well as emergency medical services.

FY 2019 – Highway Safety Research and Development \$152,100,000

(\$000)			
Program	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Highway Safety Programs	\$55,362	\$59,761	\$61,782
National Center for Statistics and Analysis (NCSA)	\$41,094	\$38,730	\$40,290
HSRD Administrative Expenses	\$49,444	\$46,419	50,028
Account Total	\$145,900	\$144,909	\$152,100

Highway Safety Programs
\$61,782,400

NHTSA's highway safety programs support the Department's safety efforts through behavioral research, demonstrations, technical assistance, and national leadership activities emphasizing alcohol and drug countermeasures, occupant protection, distraction, traffic law enforcement, emergency medical and trauma care systems, licensing, State and community evaluations, motorcycle rider safety, pedestrian and bicyclist safety, pupil transportation, and young and older driver safety programs. NHTSA coordinates with numerous Federal partners, State and local governments, the private sector, universities, research units, and safety associations and organizations to leverage resources and enhance the reach of our safety programs and messages. Research and countermeasure development has a direct impact on the effectiveness of programs conducted through the Highway Traffic Safety Grant Program.

National Center for Statistics and Analysis (NCSA)
\$40,289,700

The program activities of the National Center for Statistics and Analysis (NCSA) are funded through the Highway Safety Research and Development and Vehicle Safety accounts to support the Department of Transportation's safety mission. Data collection and analytical work performed by the National Center for Statistics and Analysis support agency rulemaking activities, vehicle safety and behavioral research and countermeasure development. It is also the basis for evaluation of roadway safety and commercial vehicle safety analyses conducted by the Federal Highway Administration (FHWA) and Federal Motor Carrier Safety Administration (FMCSA).

Detailed Justification for Highway Safety Programs

FY 2019 – HIGHWAY SAFETY PROGRAMS - SUB-PROGRAM BUDGET REQUEST

Highway Safety Programs Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Impaired Driving	\$11,280	\$11,609
Drug Impaired Driving	\$1,478	\$1,521
Safety Countermeasures	\$4,564	\$4,697
National Occupant Protection	\$9,461	\$10,350
Enforcement and Justice Services	\$10,312	\$9,692
Emergency Medical Services	\$2,547	\$2,621
Enhanced 9-1-1/ National 9-1-1 Office	\$2,731	\$2,811
National Emergency Medical Services Information System	\$1,490	\$2,033
Driver Licensing	\$992	\$1,021
Highway Safety Research	\$11,411	\$11,748
Behavioral International Program	\$99	\$102
National Driver Register	\$3,395	\$3,577
Highway Safety Programs Total	\$59,761	\$61,782

In FY 2019 NHTSA requests \$61.78 million for Highway Safety Programs. Funding at this level will allow the agency to maintain its core programs and continue key initiatives including:

Impaired Driving

- Provide technical assistance to States to promote enhanced ignition interlock programs.
- Develop and promote advanced training on impaired driving programs for State and community highway safety specialists on topics such as drug-impaired driving, enforcement techniques, ignition interlocks, and no-refusal programs.

Drug-Impaired Driving

- Provide training and education to the law enforcement community on the identification, arrest, and adjudication of drug-impaired drivers.
- Maintain and improve a national database on evaluations of drug use by drivers performed by Drug Recognition Experts (DREs) for evaluating the extent of drugged driving.

Safety Countermeasures

- Continue three demonstration projects in FHWA-designated Pedestrian/Bicyclist Focus Cities and States supporting pedestrian and bicycle safety education and enforcement activities.
- Continue a demonstration project to enhance State driver licensing medical review processes and policies, and other elements recommended in Highway Safety Program Guideline No. 13 Older Driver Safety.
- Expand partnerships with organizations for delivery of continuing education to medical and healthcare providers for counseling patients on fitness for safe driving.
- Continue support for operation of a Driver Licensing and Medical Fitness-to-Drive online training and technical assistance resource for State driver's license administrations and highway safety offices.
- Conduct one or more demonstration programs to prevent and reduce impaired operation of motorcycles, replicating effective strategies identified in previous demonstration programs.
- Continue support for operation of a web-based pedestrian and bicyclist safety resource center in collaboration with FHWA to assist states and communities with planning, implementing, and evaluating evidence-based pedestrian and bicyclist safety programs.

Occupant Protection

- Continue to promote the annual *Click It or Ticket* campaign and develop strategies for law enforcement to address fatalities in States with secondary seat belt laws, States with primary enforcement laws and low belt use rates, and in suburban and rural areas where a significant portion of motor vehicle fatalities are not restrained.
- Develop strategies to promote sustained enforcement of seat belt laws throughout the year.
- Engage the public health, medical, and law enforcement communities to identify and test strategies to persuade residents of low seat belt use States to use seat belts by appealing to common attitudes, experiences, and values.
- Identify populations and communities at increased risk for unrestrained fatalities and injuries and develop strategies for addressing these populations and communities.

Enforcement and Justice Services

- Engage the law enforcement community to promote traffic law enforcement as a core value in planning and deploying resources.
- Support law enforcement efforts to stop and take an enforcement action on drivers who violate motor vehicle laws and remove alcohol- and drug-impaired drivers from the road in an environment of legalized recreational use of marijuana and the Nation's opioid epidemic.
- Continue to build capacity in States for implementing Data-Driven Approaches to Crime and Traffic Safety (DDACTS) and the nationwide network of law enforcement liaisons (LELs).
- Implement the law enforcement focused objectives outlined in the Departmental Speed Program Plan.
- Increase the safety of law enforcement officers working in dangerous environments, through training and education.

- Manage the implementation of the racial profiling grant program as authorized under the FAST Act.

Emergency Medical Services (EMS)

- Initiate implementation plan of *EMS Agenda 2050*.
- Continue administrative support for the Federal Interagency Committee on EMS (FICEMS) and the National EMS Advisory Council (NEMSAC).
- Prioritize and implement high priority recommendations from NEMSAC.
- Continue to implement the 2018 National EMS Scope of Practice Model.
- Continue efforts to improve behavioral health issues for EMS providers
- Initiate implementation of the *National Guidelines for the Field Triage of Injured Patients* to help ensure that trauma patients are taken to the right medical facility in the right amount of time.

National 911 Program

- Maintain and improve www.911.gov as the single portal for information on Federal 911 activities and provide access to resources for State and local 911 agencies to facilitate Next Generation 911 (NG911) implementation.
- Administer a grant program for the benefit of 911 Public Safety Answering Points
- Maintain operation of the 911 Profile Database and continue activities that enable submission of state 911 data to measure national progress toward implementation of Next Generation (NG) 911.
- Execute specific steps identified by the 911 community for a nationally uniform 911 data system, which was developed in FY 2018.

National EMS Information System (NEMSIS)

- Increase to 40 the number of States and territories that contribute Version 3 data to the National EMS Database and generate at least four national reports that provide a descriptive analysis of the national EMS system.
- Publish at least two public information dashboards, updated weekly, visualizing the EMS response to traffic crashes and quality of collected data.
- Publish a NEMSIS annual report providing descriptive national data for providers, policymakers, and the National EMS Advisory Council (NEMSAC).
- Ensure the NEMSIS Technical Assistance Center (TAC) maintains Federal Information Security Management Act (FISMA) compliance.

Driver Licensing

- Provide national leadership and assistance to States in ensuring that drivers are properly trained, evaluated, and have a single valid license.
- Assist States in developing licensing systems for novice drivers that include driver education, meeting minimum national standards, and Graduated Drivers Licensing (GDL) laws.
- Provide States with policy, guidelines, and recommendations for accommodating vehicles with Automated Driving Systems, specifically with regard to driver licensing, driver testing, and vehicle registration.

Highway Safety Research

- Support continued research and deployment of in-vehicle alcohol detection systems through the Driver Alcohol Detection System for Safety (DADSS).
- Complete studies to determine the feasibility of using data from the Strategic Highway Research Program 2 (SHRP-2) Naturalistic Driving Data to better understand a number of questions related to speed-related behavior and drowsy driving.
- Release the results of a nationally representative survey on attitudes and behavior relating to motor vehicle occupant safety, and complete a survey of youth from a number of States regarding a variety of traffic safety issues.
- Release the results of a study of part-time or occasional seat belt use using naturalistic driving data, complete research to identify psychological and psychosocial factors related to seat belt use, and continue an evaluation of the effectiveness of State rear seat belt laws to improve seat belt use on all trips and in all seating positions.
- Release the results of a study of correct and incorrect child restraint system installation and complete research on the awareness and availability of child passenger safety information resources to improve child passenger safety information for parents and caregivers.
- Conduct nationally representative surveys regarding alcohol and drug use while motorcycling and driving.
- Conduct a study that examines the impact of lowering speed limits and speed of travel on pedestrian and bicyclist safety.
- Continue a study to estimate the vehicle miles traveled by motorcyclists based on data from States that collect mileage information during annual inspections.
- Continue a series of critical research investigations to determine the prevalence of drug-impaired driving in a selection of States, the effects of drug-impaired driving on fatal and serious injury crash risk, and a study on the impact of legalizing marijuana on the DUI system.
- Conduct a study to determine the feasibility of developing a field sobriety test for drivers who are impaired by marijuana, including laboratory and field testing of promising strategies.
- Conduct longitudinal research on the development and use of reliable, accurate, and repeatable measures of pedestrian and bicyclist exposure so that NHTSA and others can appropriately evaluate the effectiveness of traffic safety program initiatives. This work will be conducted in collaboration with the FHWA.
- Release results of a study of the extent to which older drivers change their driving habits as their functional skills decline with aging; continue studies of how older adults interact with in-vehicle technologies; and explore the relationship between older adults' physical fitness and their driving performance.
- Continue analysis to identify factors associated with teen crashes to inform driver education and novice license requirements.
- Continue a national survey of drowsy driving knowledge, attitudes, and behaviors and assess the current state and effectiveness of drowsiness detection and alerting systems.
- Continue research into the use of training and scheduling tools for reducing fatigue and the incidence of drowsy driving among EMS personnel.

Cooperative Research and Evaluation Program

- Identify and address new and emerging State safety issues and programs through this cooperative research and evaluation program with the States, using Sec. 402 drawdown, as noted in the Moving Ahead for Progress in the 21st Century Act (MAP-21) (P.L. 112-141), and re-authorized in the FAST Act.

Behavioral International Program

- Implement a new intergovernmental agreement with the Government of India to extend technical assistance for the development of a lead Federal highway safety agency, including facilitating integration of an alcohol breath test device certification laboratory and speed measurement device certification laboratory in national programs and policy.
- Extend technical assistance for road safety among South East Asian nations utilizing a new Center of Excellence for Road Safety located in India.
- Expand global road safety leadership utilizing existing forums including the United Nations Road Safety Collaboration and the United Nations Economic Commission of Europe Global Forum for Road Safety.

HIGHWAY SAFETY PROGRAMS

Impaired Driving

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Impaired Driving	\$11,280	\$11,609

What is this program and what does this funding level support?

The Impaired Driving Program directly supports the Department's efforts to reduce traffic crashes, fatalities, and injuries by developing and demonstrating effective countermeasures to reduce the incidence of alcohol- and drug-impaired driving, which accounts for a significant portion of the death, injury, and property damage costs resulting from traffic crashes. Impaired driving is a complex issue, and NHTSA addresses it by developing a range of countermeasures that:

- Prevent impaired driving among potential offenders.
- Deter recidivism among offenders.
- Closely monitor high risk individuals (e.g., repeat and high Blood Alcohol Concentration (BAC) offenders).

The program also provides training, education, and technical assistance to States in the development of comprehensive impaired driving programs, and to criminal justice and other professionals who play critical roles in preventing impaired driving, reducing recidivism of offenders, and monitoring high risk offenders. This information, as well as research studies, National Impaired Driving Enforcement Mobilization planners, and resource guides are available at: <http://www.nhtsa.gov/Impaired>.

In 2016, 10,497 people died in alcohol-impaired driving crashes, a 1.7 percent increase from 2015.¹² Although alcohol-impaired driving fatalities increased in 2016, the general trend of impaired driving fatalities has declined over the past decade and the percentage of overall traffic fatalities that involved an impaired driver has seen a small decline. The development and demonstration of new approaches is necessary to make further progress in reducing the deaths and injuries that are caused by this crime.

Over one-fourth of traffic fatalities each year occur in crashes that involve an alcohol-impaired driver (in which a driver or motorcycle rider had a BAC of .08 or greater.)¹³ Approximately one-third of impaired driving offenders are subsequently re-arrested for impaired driving. Therefore, appropriate sentencing and supervision are critically important to reducing impaired driving incidents. However, according to Fatality Analysis Reporting System (FARS) data, the majority of impaired drivers involved in fatal crashes had not previously been convicted of impaired driving

¹² FARS 2016. National Highway Traffic Safety Administration.

¹³ FARS 2016. National Highway Traffic Safety Administration.

(during the last five years). Therefore, in addition to addressing recidivism, effective prevention and intervention strategies also are necessary. Since impaired driving is a complex challenge that involves many inter-related elements, States must consider a comprehensive and strategic approach to their countermeasure development and implementation.

In FY 2019 NHTSA requests \$11.61 million to support Impaired Driving programs. Through these resources, the Impaired Driving Program will develop and demonstrate further countermeasures to reduce the incidence of impaired driving, including:

- Complete and disseminate results from the demonstration project measuring the effectiveness of the problem-orientated policing model in reducing impaired driving crashes. This will assist law enforcement agencies in moving towards a sustained enforcement model.
- Implement topic-focused impaired driving technical assistance teams to assist States in strengthening impaired driving programs.
- Expand public information materials about the risks associated with driving while impaired by drugs including illegal, prescription, and those available over the counter.
- Expand the Learning Library of advanced training on impaired driving programs for State and community highway safety specialists on topics related to drug-impaired driving, enforcement techniques, and prosecution and adjudication of impaired driving offenders.
- Work closely with NHTSA's Vehicle Safety Research to increase the driving public's knowledge of DADSS in-vehicle technologies and the capability of passively detecting alcohol-impaired drivers and preventing them from driving.
- Continue to provide technical assistance to States to strengthen and expand their ignition interlock program, including increasing ignition interlocks use and offender monitoring.
- Create new strategies to reach the medical community on the importance of and techniques for counseling patients on the risks associated with alcohol-impaired driving.
- Support Law Enforcement Liaisons, Traffic Safety Resource Prosecutors, and Judicial Outreach Liaisons to actively promote the use of high visibility enforcement, ignition interlocks, DWI courts, and proven sentencing and supervision practices, as part of a comprehensive approach to reducing alcohol- and drug-impaired driving.

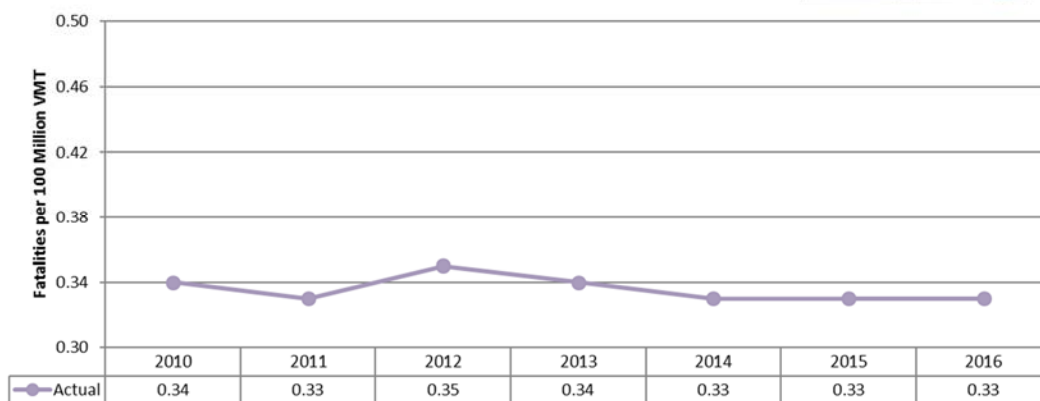
What benefits will be provided to the American public through this request and why is this program necessary?

Over the past 40 years, a large body of evidence has demonstrated the effectiveness of impaired driving programs in reducing associated crashes, injuries, fatalities, and/or recidivism. For example, high visibility enforcement of impaired driving laws has been shown to reduce alcohol-related crashes by as much as 20 percent. Use of ignition interlocks and referral of offenders to Driving While Intoxicated (DWI) courts have been shown to reduce recidivism.

A significant reduction in fatalities associated with alcohol-impaired driving crashes has occurred in the past 30 years. However, the 10,497 people killed in alcohol-impaired driving crashes in 2016 was a 1.7 percent increase from 2015 and reflect the critical need to continue and strengthen the

Department's Impaired Driving Program.¹⁴ The benefit the American public receives through the Impaired Driving Program is a reduction in motor vehicle crashes and associated deaths and injuries.

Alcohol-Impaired Driving Fatalities in .08+ Blood Alcohol Content Crashes per 100 Million Vehicle Miles Traveled



Source: NCSA/VMT (FHWA)

¹⁴ FARS 2016. National Highway Traffic Safety Administration.

HIGHWAY SAFETY PROGRAMS
Drug-Impaired Driving

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Drug-Impaired Driving	\$1,478	\$1,521

What is this program and what does this funding level support?

The Drug-Impaired Driving Program directly supports the Department's efforts to reduce traffic crashes, fatalities, and injuries through research, development, and demonstration of effective countermeasures for reducing the incidence of drug-impaired driving. NHTSA focuses on understanding the relationship between drug use and crash risk and on countermeasures such as stronger laws, training for law enforcement, prosecutors, judges and other criminal justice professionals, and public education.

In FY 2019, NHTSA requests \$1.52 million for the Drug-Impaired Driving program. National surveys show a dramatic increase in the number of drivers who have drugs in their systems. The legalization of marijuana for recreational use in some States and the opioid epidemic may be contributing to possible increasing numbers of drug-impaired drivers. These issues present new challenges for the entire criminal justice community – from the officers who detect impairment, to the toxicologists who confirm the presence of drugs, to the prosecutors and judges who adjudicate these cases in court. The agency's Drug Recognition Expert (DRE) program remains an important resource.

This level of funding supports programs and research to develop, demonstrate and deliver countermeasures to reduce the incidence of drug-impaired driving. These efforts include:

- Delivering training and educational materials designed for law enforcement, other criminal justice professionals, and community stakeholders on drugs and medications that can contribute to impaired driving.
- Delivering updated training to law enforcement in Standardized Field Sobriety Testing (SFST), Advanced Roadside Impaired Driving Enforcement (ARIDE), and Drug Recognition Expert (DRE) training.
- Increasing the number of trained DREs across the Nation to better enable law enforcement to remove drugged drivers from America's roads.
- Increasing the number of Law Enforcement Liaisons (LELs) to bring information about the drug-impaired driving problem to State and local law enforcement agencies.
- Maintaining and improving a national database on DRE-performed evaluations of drug use by drivers that gives an indication of the extent of drugged driving and changes over time.

What benefits will be provided to the American public through this request and why is this program necessary?

Removing impaired drivers from America's roads reduces the risk and incidence of drug-impaired crashes. Crash risk is significantly increased when an impaired driver gets behind the wheel. While specific interventions to reduce the incidence of drugged driving have yet to be thoroughly evaluated, NHTSA has extensive experience in developing and implementing programs to reduce alcohol impairment. This experience helps shape and inform the Drug-Impaired Driving Program while collecting data, conducting field studies and evaluating specific drugged driving initiatives. Key sources of specific evidence include the case control study of the role of drug impairment in crashes and analysis of data collected from drug evaluations conducted by law enforcement officers trained by the Drug Evaluation and Classification Program (DECP) and Advanced Roadside Impaired Driving Enforcement (ARIDE) programs.

The Office of National Drug Control Policy (ONDCP) National Drug Control Strategy currently recommends, among other initiatives, that NHTSA take the lead in expanding training on drugged driving for law enforcement and criminal justice professionals. The Strategy further recommends that NHTSA work with ONDCP and other agencies on public education, data collection, and developing improved drug testing processes.

HIGHWAY SAFETY PROGRAMS
Safety Countermeasures

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Safety Countermeasures	\$4,564	\$4,697

What is this program and what does this funding level support?

The Safety Countermeasures Program addresses a range of behavioral risks associated with pedestrians, bicyclists, motorcyclists, pupil transport, and older driver safety. Together, these populations comprise over 40 percent of traffic fatalities. Given the disparate nature of the populations and safety problems, the program employs a wide range of countermeasures. NHTSA develops and provides research, program materials and guidelines, State law information, and many other resources to assist State and local community coordinators in the following areas:

- Pedestrians: <https://www.nhtsa.gov/road-safety/pedestrian-safety>
- Bicycles: <https://www.nhtsa.gov/road-safety/bicyclists>
- Motorcycles: <https://www.nhtsa.gov/road-safety/motorcycles>
- School Buses (pupil transportation): <https://www.nhtsa.gov/road-safety/school-buses>
- Older drivers: <https://www.nhtsa.gov/road-safety/older-drivers>

In FY 2019 NHTSA requests \$4.70 million for the Safety Countermeasures program. Strong evidence exists confirming the effectiveness of key interventions such as pedestrian safety law enforcement, pedestrian safety zones, and motorcycle helmet use. Driver license screening and programs that encourage referrals of potentially unsafe older drivers for re-examination by physicians and law enforcement have proven effective in reducing older driver risks. Specific evaluations of our Safety Countermeasures Program can be found on the next page:

Program	Title	Link
Pedestrians & Bicyclists	<i>Pedestrian Safety Enforcement Operations: A How-To Guide</i>	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/812059-pedestriansafetyenforceoperahowto-guide.pdf
	<i>Demonstration and Evaluation of the Heed the Speed Program</i>	www.nhtsa.gov/staticfiles/nti/pdf/811515.pdf
	<i>Review of Studies on Pedestrian and Bicyclist Safety, 1991 – 2007</i>	www.nhtsa.gov/staticfiles/nti/pdf/811614.pdf
	<i>High Visibility Enforcement on Driver Compliance With Pedestrian Right of Way Laws</i>	www.nhtsa.gov/staticfiles/nti/pdf/811786.pdf
	<i>Literature Review on Vehicle Travel Speeds and Pedestrian Injuries</i>	www.nhtsa.gov/people/injury/research/pub/HS809012.html
Motorcycles	<i>The Effect of Sight Distance Training on the Visual Scanning of Motorcycle Riders: A Preliminary Look</i>	www.nhtsa.gov/staticfiles/nti/pdf/811689.pdf
	<i>Costs of Injuries Resulting from Motorcycle Crashes: A Literature Review</i>	www.nhtsa.gov/people/injury/pedbimot/motorcycle/Motorcycle_HTML/index.html
	<i>An Examination of Washington State's Vehicle Impoundment Law for Motorcycle Endorsements</i>	www.nhtsa.gov/staticfiles/nti/pdf/811696.pdf

Program	Title	Link
Older Drivers	<i>Process and Outcomes Evaluation of Older Driver Screening Programs: The Assessment of Driving-Related Skills (ADReS) Older-Driver Screening Tool</i>	www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811113.pdf
	<i>A Compendium of Law Enforcement Older Driver Programs</i>	www.nhtsa.gov/people/injury/olddriver/LawEnforcementOlderDriver03/introduction.htm
	<i>Driver Fitness Medical Guidelines</i>	www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811210.pdf
	<i>Older Driver Program Five-Year Strategic Plan 2012-2017</i>	www.nhtsa.gov/staticfiles/nti/pdf/811432.pdf

In FY 2019 the Safety Countermeasures Program will conduct a range of initiatives to reduce traffic fatalities among pedestrians, bicyclists, motorcyclists, and older people. Specific efforts will include:

- Expanding outreach and engaging the medical and healthcare community with online training programs on Older Driver Safety, targeting medical residents and other medical and healthcare professionals to assist in counseling patients on driving fitness.
- Continuing a demonstration project to further identify cost effective methods to enhance State driver licensing medical review processes and policies, and other elements recommended in Highway Safety Program Guideline No. 13 Older Driver Safety.
- Completing a demonstration project to promote motorcycle helmet use among adults and increase observed helmet use in States without all-rider motorcycle helmet use laws.
- Completing a demonstration project to develop basic guidelines for deployment of effective High Visibility Enforcement of impaired motorcycle operation.
- Facilitating State motorcycle safety program technical assessments.
- Facilitating State pedestrian and bicycle safety program technical assessments.
- Conducting a demonstration project to develop a community-based assessment of bicycle and pedestrian safe mobility for use by State Highway Safety Offices and Departments of Transportation.
- Conducting demonstration projects in coordination with FHWA involving FHWA-identified Focus Cities and States for bicyclist and pedestrian safety by supporting implementation of education and law enforcement components of a community's pedestrian safety action plan.
- Developing and updating consumer information for internet access to address safety issues such as distracted pedestrians and alcohol-impaired pedestrians.
- Broadening educational offerings and resources on older driver safety issues to audiences of interest, including nurses, physicians, pharmacists, social service agencies, law enforcement, driver licensing and Area Agencies on Aging, in coordination with FHWA and Road Safety Foundation through the Clearinghouse for Older Road User Safety (ChORUS-<https://www.roadsafeseniors.org>).

- Supporting operation and expansion of a Driver Licensing and Medical Fitness to Drive online resource for State driver's license administrations and highway safety offices.
- Completing a demographic analysis of alcohol-impaired pedestrians killed in motor vehicle crashes to assist in developing appropriate countermeasures.
- Completing an analysis of motorcycle types involved in fatal motorcyclist crashes to augment current information on motorcycle engine displacement and crash involvement.
- Developing, in collaboration with State highway safety offices, technical assistance for States and cities on strategies to provide effective training to law enforcement on pedestrian and bicycle safety enforcement, and the design and deployment of effective pedestrian and bicycle safety education.
- Supporting research on State and local factors influencing the use of seat belts on school buses, and their impacts.
- Conducting analysis of State crash data involving school transportation-related vehicles to obtain more detailed information on school bus crashes, and review current State requirements on reporting of crashes involving a school bus.
- Developing, in coordination with school transportation safety organizations, educational material and related information to support State and local efforts to prevent motor vehicles illegally passing stopped school buses loading and unloading students.
- Conducting an expert panel review and update of the NHTSA School Bus Driver In-Service Safety Series.

What benefits will be provided to the American public through this request and why is this program necessary?

Motor vehicle crashes with pedestrians accounted for 16 percent of the total fatalities in 2016 and pedestrian fatalities have been gradually increasing from a record low of 4,109 in 2009 to 5,987 in 2016. In addition, motor vehicle crashes with bicyclists accounted for an additional 2.2 percent of the total traffic related deaths in 2016, and bicyclist fatalities have been gradually increasing from a record low of 623 in 2010 to 840 deaths in 2016.¹⁵ Pedestrian and bicyclist fatalities can be reduced through behavioral initiatives including education and law enforcement. In FY 2014, NHTSA led a U.S. Department of Transportation effort to coordinate pedestrian and bicyclist safety efforts between the Federal Highway Administration (FHWA), the Federal Transportation Administration (FTA), and NHTSA. This effort provided the foundation for the Department's "Safer People, Safer Streets" initiative launched in early 2015. More about this initiative may be found at www.dot.gov/policy-initiatives/ped-bike-safety/safer-people-safer-streets-pedestrian-and-bicycle-safety.

Motorcyclist fatalities (rider/operator and passenger) accounted for 14 percent of traffic fatalities in 2016, and could be substantially reduced by improving critical safety behaviors such as reducing speeding and impaired riding, and increasing DOT-compliant motorcycle helmet use.¹⁶ Motorcyclist fatalities have increased from a record low of 2,116 in 1997 to 5,286 in 2016.¹⁷ Motorcycle riders had the highest percentage of alcohol impairment (BAC \geq 0.08) of any motor

¹⁵ FARS 2009, 2010, and 2016. National Highway Traffic Safety Administration.

¹⁶ FARS 2016. National Highway Traffic Safety Administration.

¹⁷ FARS 1997 and 2016. National Highway Traffic Safety Administration.

vehicle operator involved in fatal crashes in 2016 (25 percent for riders, 21 percent for passenger car drivers, 20 percent for light-truck drivers, and 2 percent for large-truck drivers). In 2016, 33 percent of all motorcycle riders involved in fatal crashes were speeding, compared to 19 percent for passenger car drivers, 15 percent of light-truck drivers, and 7 percent for large-truck drivers.¹⁸

In 2016, 6,764 people 65 and older were killed in motor vehicle traffic crashes, representing 18 percent of all traffic fatalities.¹⁹ In 2016, about 15 percent of the total U.S. population was 65 and older.²⁰ Older drivers have multiple vulnerabilities affecting safe driving that are amenable to improvement through counseling, family interventions and licensing controls.

Between 2007 and 2016, an average of 128 fatalities occurred in school transportation related crashes annually.²¹ Most of these fatalities (70 percent) were occupants of other vehicles involved in the crash. Non-occupants (pedestrians, bicyclists, etc.) accounted for 20 percent of these fatalities and 9 percent were occupants of a school transportation vehicle. School buses continue to be the safest mode of transportation for getting children back and forth to school.

Continued investment in highway safety programs has proven to reduce motor vehicle crashes and resulting injuries. Reduced crashes and injuries contribute to lives saved and economic vitality by preventing unexpected costs associated with property damage and medical services. Quality of life is also enhanced. Increases in safe non-motorized transportation also contribute to improvement in the environment and individual health.

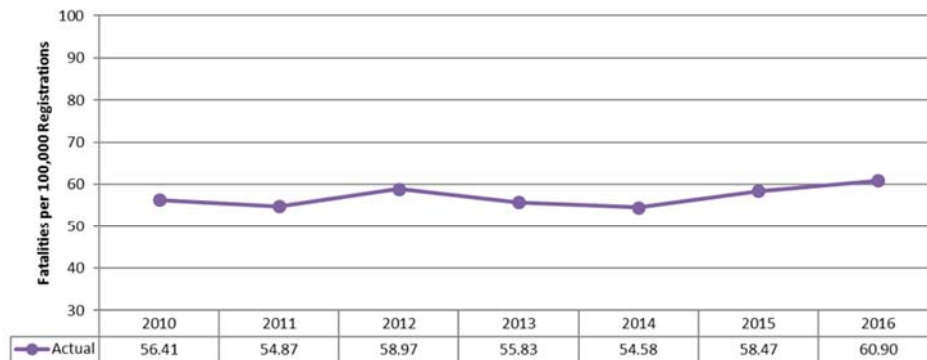
¹⁸ FARS 2016. National Highway Traffic Safety Administration.

¹⁹ FARS 2016. National Highway Traffic Safety Administration.

²⁰ Population and Housing Unit Estimates 2016. Population Estimates Program (PEP). U.S. Census Bureau.

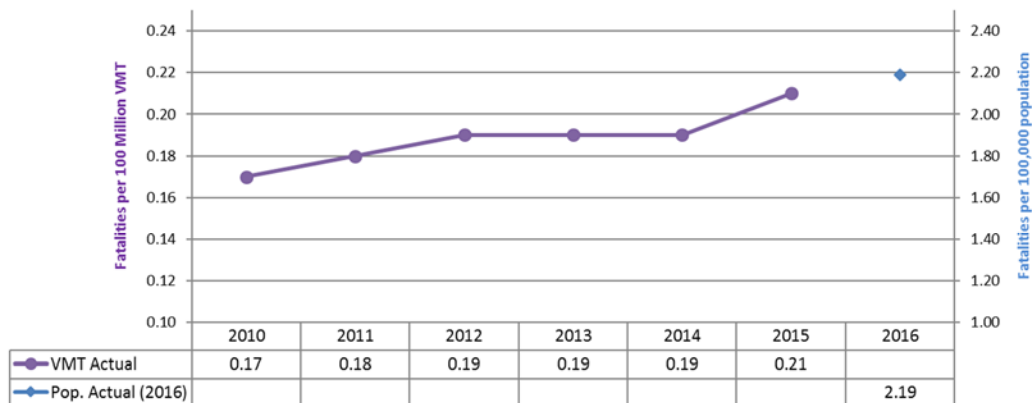
²¹ FARS 2007 and 2016. National Highway Traffic Safety Administration.

Motorcycle Fatalities per 100,000 Motorcycle Registrations



Source: NCSA/Registration (FHWA)

Non-Occupant Fatalities per 100,000 Population



Note: This measure changed in 2016 from a rate based on fatalities per 100 M VMT to fatalities per 100,000 population. There is a gap between 2015 and 2016 because the new measure cannot be compared to the previous years.

Source: NCSA/VMT (FHWA)

HIGHWAY SAFETY PROGRAMS

Occupant Protection

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
National Occupant Protection	\$9,461	\$10,350

What is this program and what does this funding level support?

The Occupant Protection Program directly supports NHTSA's efforts to reduce highway fatalities by increasing use of age-appropriate occupant restraint devices. The agency conducts a range of activities including: supporting the enactment of primary seat belt laws, increasing support for high visibility enforcement, conducting demonstration projects that test strategies to increase seat belt use among high-risk populations, increasing education and awareness of correct restraint use for children, developing media campaigns directed towards increasing the use of occupant protection, and testing the impact on behavior from potential enhanced vehicle technologies to increase seat belt use. The agency provides occupant protection research, program guidelines, National *Click It or Ticket* mobilization planners, and other resources to help State and local communities increase seat belt, child safety seat and booster seat use at <https://one.nhtsa.gov/Driving-Safety/Occupant-Protection>.

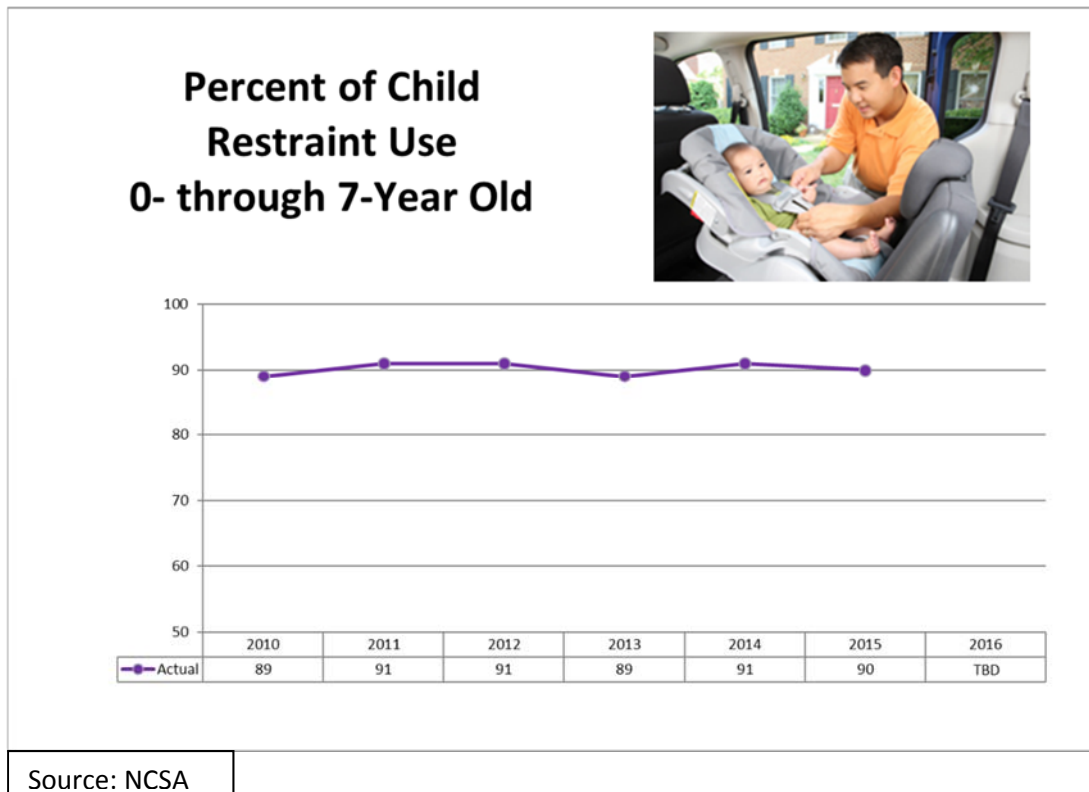
Wearing a seat belt is the single most effective means of saving lives and reducing injuries in crashes. Occupant restraint use has risen gradually for the past several years; however, belt use in serious crashes remains relatively low. In 2016, of the 23,714 passenger vehicle occupants killed in crashes, 10,428 were known to be unrestrained. Considering only occupants where restraint use was known, 48 percent were unrestrained at the time of the fatal crash.²² Seat belts saved 14,668 lives in 2016.²³ An additional 2,456 lives would have been saved in 2016 if all unrestrained passenger vehicle occupants five and older involved in fatal crashes had worn their seat belts. A recent NHTSA analysis of the effectiveness of Federal Motor Vehicle Safety Standards showed that seat belts accounted for about 54 percent of the lives saved from 1960-2012, more than any other Federal Motor Vehicle Safety Standard.

In FY 2019, NHTSA requests \$10.35 million for the Occupant Protection program. Objective evaluations have shown that education, laws, and law enforcement programs have contributed to a steady increase in the national daytime seat belt use rate, reaching 90.1 percent in 2016. These methods have also been effective in improving child restraint use. In 2016, 19 States, the District of Columbia, Puerto Rico, and the U.S. territories of Guam and Northern Mariana Islands had seat belt use rates at 90 percent or higher. The annual *Click It or Ticket* campaign has been evaluated repeatedly for over a decade and determined to be a critical factor behind annual increases in seat

²² FARS 2016. National Highway Traffic Safety Administration.

²³ National Center for Statistics and Analysis (2017, October). Lives saved in 2016 by restraint use and minimum-drinking-age laws (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 454). Washington, DC: National Highway Traffic Safety Administration.

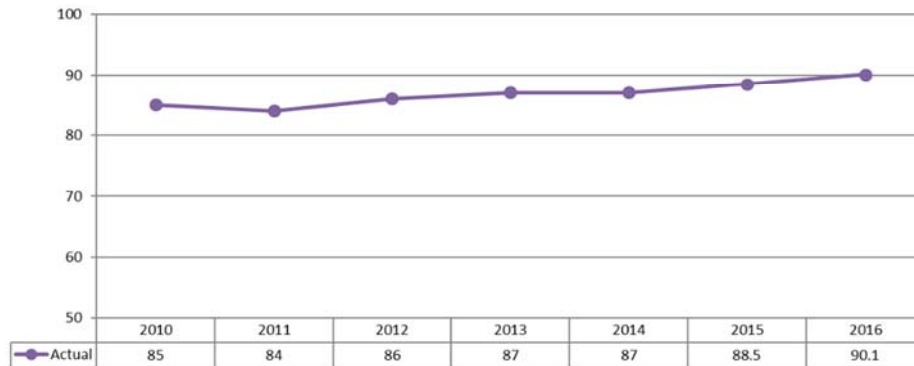
belt use across the country. Additionally, jurisdictions with stronger seat belt laws continue to exhibit higher use rates than those with weaker laws. A review of many scientifically rigorous studies by the Centers for Disease Control and Prevention documented the value of primary seat belt laws, and empirical evidence continues to confirm the benefit. Increased seat belt use is a significant contributor to reductions in overall traffic deaths and to lower fatality rates per vehicle mile travelled. However, challenges remain. In 2016, State seat belt use rates ranged from a high of 97.2 percent to a low of 70.2 percent.²⁴ Moreover, restraint use is lower at night; of those killed in 2016 in passenger vehicles where restraint use was known, 56 percent were not restrained at night compared to 41 percent during the day.²⁵



²⁴ Pickrell, T. (2017, May). Seat belt use in 2016—Use rates in the States and Territories (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 417). Washington, DC: National Highway Traffic Safety Administration.

²⁵ FARS 2016. National Highway Traffic Safety Administration.

Percentage of Front Seat Occupants Using Shoulder Harness Seat Belts



Source: NCSA

The Occupant Protection Program focuses on achieving further increases in overall seat belt and child restraint use and reducing unrestrained fatalities by supporting the enactment of primary seat belt laws and laws covering occupants in all seating positions; facilitating the use of sustained enforcement throughout the year, as well as further adoption of high visibility enforcement mobilizations; and increasing and maintaining proper restraint use for children, and testing the potential of enhanced vehicle technologies to increase seat belt use. Anticipated accomplishments in 2018 include the completion of several enforcement and technical assistance projects designed to increase seat belt use, as well as the development of training and support materials for law enforcement, especially with respect to nighttime seat belt enforcement. Specifically, NHTSA requests funds in 2019 to:

- Continue supporting the annual *Click It or Ticket* (CIOT) campaign emphasizing media and enforcement.
- Promote sustained seat belt and child safety seat enforcement throughout the year and utilize the CIOT campaign to support sustained enforcement efforts. Convene a law enforcement working group to identify the challenges and suggest approaches for making traffic enforcement, especially sustained seat belt enforcement, a law enforcement priority.
- Promote the safety benefits of conducting nighttime seat belt enforcement and further integrate nighttime seatbelt enforcement in the national CIOT campaign.
- Continue a test of using problem and community oriented policing models to increase community acceptance of seat belt enforcement and increase seat belt use.
- Disseminate lessons learned from completed projects on innovative and sustained enforcement strategies for reaching seat belt non-users.

- With partners in the public health, medical, and law enforcement communities, identify and test strategies to persuade residents of low seat belt use States to use seat belts by appealing to common attitudes, experiences and values, especially about the importance of personal responsibility.
- Document and disseminate lessons learned from recently completed technical assistance efforts to increase seat belt use and performance in States and locations with high rates of unrestrained fatalities and low seat belt use
- Continue a demonstration project to test strategies to increase seat belt use and reduce associated injuries in rural areas.
- Initiate a demonstration project to increase seat belt use in rear seats, where seat belt use is generally low.
- Address low seat belt use in secondary law States by working collaboratively with law enforcement to identify strategies to enable enforcement of existing seat belt use laws complemented by a targeted initiative to reinforce the need to use seat belts.
- Initiate a pilot test to provide on-site planning and assistance to lower performing States to improve their occupant protection program and implement recommendations from the occupant protection program assessments.
- Continue to work with NHTSA's Office of Vehicle Safety Research on the development and testing of occupant protection technologies such as seat belt reminder and interlock systems. Such technologies have the potential to be effective in increasing the use of seat belts among non-users and situational users.
- Support data collection and analysis efforts to provide more in-depth understanding of factors associated with seat belt non-use and situational use, and inform approaches to increase use among these groups.
- Analyze existing data, identify and test strategies to address disparities in adult and child passenger safety in minority communities and build capacity and infrastructure to support adult and child passenger safety efforts for economically disadvantaged populations.
- Continue efforts to educate parents and caregivers about the correct choice and use of car seats and booster seats for children and the importance of registering car seats and booster seats. Increase outreach to less advantaged communities.
- Work with the Safe States Alliance to identify protective factors for seat belt use and provide training and technical assistance to highway safety and health offices on programmatic strategies emphasizing protective factors.
- Update occupant protection training curricula for program management and law enforcement, identify new training needs, and initiate training development as needed.
- Complete three projects to increase seat belt use among middle school-aged children, who have poor compliance rates and high proportions of unrestrained fatalities.

What benefits will be provided to the American public through this request and why is this program necessary?

Wearing a seat belt is the single most effective means of saving lives and reducing injuries in vehicle crashes. Seat belt use prevents untold tragedy to American families and saves billions of dollars in medical expenses and lost productivity costs annually. The simple act of fastening a seat belt can improve an occupant's chance of surviving a potentially fatal crash by 44 to 73 percent, depending on the vehicle type and seating position. Lap/shoulder belts reduce the risk of

fatal injury to front-seat passenger vehicle occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent.

Between 1975 and 2016, seat belts have saved the lives of over 359,000 passenger vehicle occupants age 5 and older.²⁶ Over this same period, an estimated 11,274 lives were saved by child restraints. These numbers do not reflect the injuries that have also been prevented or mitigated by the use of seat belts and child restraints. The non-use of seat belts cost the Nation \$10.4 billion in 2010. However, about \$1.2 trillion in economic costs (2010 dollars) have been saved since 1975 due to seat belt use.²⁷ Given the number of lives saved, injuries averted and mitigated, and cost savings achieved in terms of medical expenses and lost productivity, seat belt programs provide, and will continue to provide, a major benefit to the American public.

²⁶ National Center for Statistics and Analysis, National Highway Traffic Safety Administration.

²⁷ Blincoe, L. J., Miller, T. R., Zaloshnja, E., & Lawrence, B. A. (2015, May). *The economic and societal impact of motor vehicle crashes, 2010. (Revised)* (Report No. DOT HS 812 013). Washington, DC: National Highway Traffic Safety Administration.

HIGHWAY SAFETY PROGRAMS
Enforcement and Justice Services

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Enforcement and Justice Service	\$10,312	\$9,692

What is this program and what does this funding level support?

The Enforcement and Justice Services (EJS) Program reduces crashes, injuries, and fatalities by enhancing the effectiveness of the criminal justice system in the detection, apprehension, and punishment of violators of traffic safety laws and regulations. NHTSA collaborates with the Department of Justice (DOJ) and other law enforcement partners to employ a comprehensive approach to improving traffic safety. Key initiatives in this area include National High Visibility Enforcement Mobilizations to increase seat belt use and decrease impaired driving, alcohol- and drug-impaired driving enforcement, speed management, Data-Driven Approaches to Crime and Traffic Safety (DDACTS), and training and technical assistance to law enforcement, prosecutors, and judges. Working jointly with the States, the agency has established a national network of Law Enforcement Liaisons (LELs) to further highway safety initiatives with law enforcement agencies nationwide. NHTSA provides a multitude of resources to improve the effectiveness of traffic safety laws at: <https://one.nhtsa.gov/Driving-Safety/Enforcement-&-Justice-Services>. EJS also works with a multitude of partners, including DOJ, to assist States and law enforcement agencies in avoiding bias in conducting traffic stops, including the 23 CFR § 1300.28 Racial Profiling Data Collection Grant Program.

In FY 2019, NHTSA requests \$9.69 million for the Enforcement and Justice Services program. Funding at the requested level is necessary to sustain and support effective participation of law enforcement, prosecutors, and judges in priority agency behavioral programs. Educating criminal justice professionals requires consistent effort due to emerging traffic safety issues and turnover among criminal justice personnel. This funding will educate law enforcement on the advantages of strong traffic law enforcement programs and the need to include traffic enforcement as a core value in planning and deploying resources. The funding also provides training and information to law enforcement officers to mitigate the dangers associated with the traffic enforcement environment. These efforts include the mobilization of a network of Law Enforcement Liaisons (LELs) to promote NHTSA priority programs and provide ongoing technical assistance at the community level. It will also include a range of new tools designed to facilitate the adoption of best practices by law enforcement and criminal justice professionals, and information sharing systems to efficiently and effectively deliver these tools. Specific examples of law enforcement training tools to be revised include LEL Professional Development; Standardized Field Sobriety Testing (SFST); Advanced Roadside Impaired Driving Enforcement (ARIDE); Drug Recognition Expert (DRE) courses; as well as speed measuring device (Radar/Lidar) operator courses and testing of Radar/Lidar devices for inclusion on the Conforming Products List.

The request also provides the funding to comply with the FAST Act authorized mandate for a continuation of the Section 1906 grant program previously authorized under SAFETEA-LU. This program covers State costs for the collection, maintenance, and evaluation of racial data in traffic stops. Section 4011 of the FAST Act revised the Section 1906 grant program, and States now may qualify for the Section 1906 grant by: (1) maintaining and allowing public inspection of statistical information on the race and ethnicity of the driver for each motor vehicle stop made by a law enforcement officer on a Federal-aid highway, or (2) undertaking relevant data collection and analysis activities during the fiscal year of the grant. Funding will allow NHTSA's partners to seek the prevention and use of racial profiling by law enforcement officers when making traffic law enforcement decisions. It also allows States to maintain and provide public access to statistical information on the race and ethnicity of drivers stopped by law enforcement officers on Federal-aid highways.

What benefits will be provided to the American public through this request and why is this program necessary?

Active participation of criminal justice professionals is crucial to the success of the agency's key programs, including occupant protection, alcohol- and drug-impaired driving, distracted driving, and speeding initiatives. Traffic enforcement and adjudication are critical components of a community public health and safety program. Strategies such as high visibility enforcement (HVE) have been repeatedly evaluated and determined to be effective in modifying driver behavior and improving safety performance.

Research has consistently demonstrated that HVE and integration of traffic enforcement as a core value in law enforcement operations results in reductions of crashes, fatalities, and serious injuries. An HVE effort, coordinated through the LEL network, provides effective and efficient delivery of traffic safety countermeasures. Place-based and data-driven enforcement operations (DDACTS) further enhance law enforcement's ability to focus limited resources where they can have the greatest impact for improving safety outcomes. These enforcement strategies combined with prosecutorial and judicial training and DWI courts, result in improved safety and a reduction in social harm for the community.

HIGHWAY SAFETY PROGRAMS

Emergency Medical Services

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Emergency Medical Services	\$2,547	\$2,621

What is this program and what does this funding level support?

The Office of Emergency Medical Services (EMS) improves the safety of the Nation by helping States and local areas develop data-driven and evidence-based EMS, which improve health outcomes from motor vehicle crashes and other health emergencies.

According to the Fatality Analysis Reporting System (FARS), 43 percent of all motor vehicle crash fatalities in 2016 occurred after the victim arrived at the hospital. After crashes occur, EMS remains the primary opportunity to reduce deaths and serious injuries from motor vehicle crashes in the prehospital setting.



The vision of the Office of EMS is accessible and effective community-based emergency health systems that produce optimal outcomes from motor vehicles crashes and other health emergencies. The Office of EMS advances emergency medical services by collecting and analyzing critical data about State and local EMS systems, and by fostering collaboration among National, State, and local agencies and organizations engaged in guiding, improving, and standardizing EMS nationwide.

The Office of EMS, staffed by EMS and highway safety experts, convenes stakeholders to establish best practices with the ultimate goal of unifying the EMS community to improve patient care. The Office also fosters consensus around strategies to promote more effective and efficient EMS systems and leads projects of national significance to accelerate improvements in our Nation's EMS systems.

NHTSA manages the statutorily created [National EMS Advisory Council \(NEMSAC\)](#) which provides advice to the Department of Transportation and to the [Federal Interagency Committee on Emergency Medical Services](#) (FICEMS). FICEMS is required by law to coordinate Federal EMS

activities. NHTSA is mandated to provide administrative support to both FICEMS and NEMSAC. NHTSA also provides a variety of resources for Federal, State, and local EMS organizations at



www.EMS.gov.

To ensure that Office of EMS programs meaningfully impact local EMS systems through the nation, the office works closely with the NEMSAC, multiple national EMS organizations and our Federal partners to identify strategic initiatives of national significance that will improve the consistency and quality of emergency medical services. The Office of EMS collaboratively develops and implements these strategies in partnership with the Nation's many EMS stakeholders.



Through NHTSA's leadership in developing and implementing the [*National EMS Education Agenda for the Future: A Systems Approach*](#), there has been considerable progress in moving the Nation toward more uniform EMS education, National EMS Certification and accreditation of paramedic education programs which helps to ensure a more consistent level of emergency medical care is available throughout the nation, including to people injured in motor vehicle crashes.

In FY 2019, NHTSA requests \$2.62 million for Emergency Medical Services program activities. The Office of EMS will continue activities to reduce death and disability from motor vehicle crashes and other health emergencies by providing national leadership and coordination to help implement data-driven and evidence-based emergency medical services and 911 systems. The Office of EMS will accomplish this by:

- Continuing to implement and revise, as necessary, the National EMS Model Clinical Guidelines.
- Publishing a Request for Information in the Federal Register on innovations in prehospital trauma care.
- Developing model EMS and 911 dispatch guidelines that use telematic data from Advanced Automatic Crash Notification to help ensure optimal emergency responses to motor vehicle crashes.
- Analyzing NHTSA ambulance crash investigations information to increase safety of patients, providers, and the general public.
- Continuing revision of the *National Guidelines for the Field Triage of - Injured Patients* which helps to ensure that trauma patients are taken to the right medical facility in the right amount of time.
- Providing technical assistance and support to State offices of emergency medical services in more uniform approaches to the development and regulation of EMS.
- Assisting national EMS organizations to develop best practices to unify the EMS community to improve patient care.
- Continuing to support the implementation of the National EMS Culture of Safety Strategy, the National EMS Workforce Agenda for the Future, and the EMS Education Agenda for the Future, including revision of the National EMS Scope of Practice Model– consistent with the recommendations of NEMSAC.
- Supporting the transition of military EMS personnel and veterans into civilian EMS employment in cooperation with the National Association of State EMS Officials by continued implementation of their model procedures to promote more uniform licensing requirements.
- Providing staff and operational support for the FICEMS and the NEMSAC.

- Continuing coordination with Federal and national preparedness partners to strengthen the resilience of EMS and 911 systems at the local, State, and Federal levels and supporting related efforts of the National Security Council staff.
- Promoting the role of EMS as an essential component of systems of trauma care and improving the linkages between EMS and trauma data, as recommended by the National Academies of Science, Engineering, and Medicine.

What benefits will be provided to the American public through this request and why is this program necessary?

EMS systems save lives of people injured in motor vehicle crashes by providing prompt and effective medical care when other safety countermeasures have failed. In addition to improving crash survival rates, early administration of medical treatment has been shown to reduce long-term disability and to reduce health care costs. Providing improved training for our EMS personnel and equipping them with evidence-based treatment protocols will help ensure that Americans living in rural and urban areas all receive high-quality emergency medical care. Finally, community-based EMS systems are integral to building our Nation's resilience by expanding our capacity to respond to emergencies from traffic crashes to natural and man-made disasters.

A well-performing EMS health system is essential to highway traffic safety and to the health of the Nation; it provides the last prehospital opportunity to reduce fatalities and the medical consequences of injuries from motor vehicle crashes. This community-based emergency health system also responds to other traumatic and medical emergencies. Effective systems of emergency trauma care can improve survival from severe injuries by as much as 25 percent. Counties with coordinated systems for trauma care have been shown to have crash fatality rates as much as 50 percent lower than counties without trauma systems.

The Office of EMS leverages its investment by pursuing strategic national initiatives that are recommended by the NEMSAC and supported by national EMS organizations. These investments, combined with the enthusiastic implementation of a dedicated national EMS community, help ensure success in generating sustainable national EMS system improvements.

HIGHWAY SAFETY PROGRAMS
National 911 Program

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Enhanced 9-1-1/National 9-1-1 Office	\$2,731	\$2,811

What is this program and what does this funding level support?

The National 911 program provides national leadership and coordination of comprehensive, data-driven and evidence-based Next Generation (NG911) systems to reduce fatalities and minimize injuries from motor vehicle crashes and other injuries by administering the National 911 Program Office. A nationwide 911 system infrastructure can effectively accept and respond to calls no matter if they are made via landline, cell phone, Voice Over Internet Protocol, or even sent as text messages. The program was created as a Federal point of coordination for activities among 911 stakeholders and to provide information that can be used by State and local 911 authorities to improve the 911 system. The office works toward achieving these goals through collaboration with Federal agencies, national organizations, and 911 authorities at the State and local levels involved in 911 emergency communications. The program develops a variety of resources through active involvement with partner organizations, and the products include tools that can be used to plan and implement NG911. The National 911 program is also responsible for administering a grant program specifically for the benefit of 911 Public Safety Answering Points (PSAPs) authorized by Section 6501 of the Jobs Act of 2012 (P.L. 112-96).

Americans rely on 911 as the single point of entry to call for emergency services. Congress established 911 as the National Emergency Number. It is estimated that there are over 240 million 911 calls each year, with an increasing number made by cellular and Voice over Internet Protocol (VoIP) telephones, as well as text messages.

The current 911 system is outdated and undergoing major transition. Its changing infrastructure will transform over 6,000 independently operated 911 Public Safety Answering Points (PSAPs) into one, interconnected system of over 6,000 components. Without national coordination, the Nation's 911 system is likely to remain fragmented, and in many communities, unable to provide 911 service to citizens using advanced forms of personal communication. While States play a major role in deploying updated 911 technologies, national coordination is essential in achieving a fully integrated 911 system nationwide.

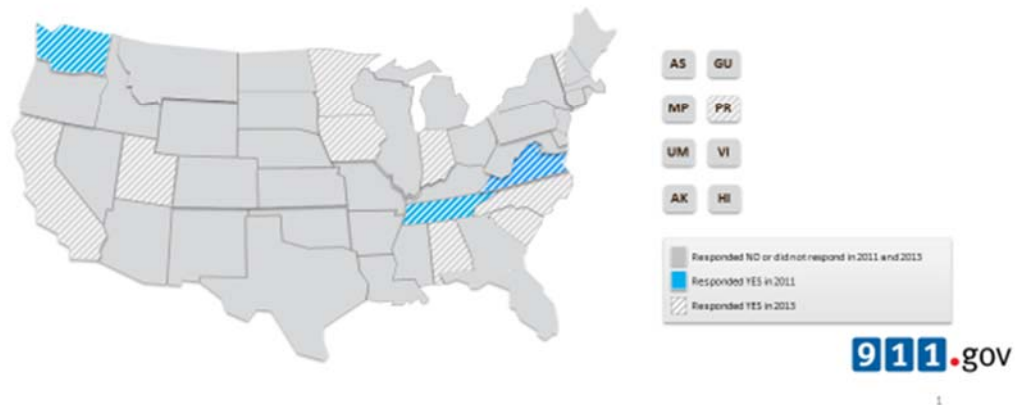
According to data submitted to the National 911 Profile Database by 47 State 911 agencies in 2017:

- 10 of 47 reporting States can receive and process 100 percent of 911 calls, including caller location, using NG911 infrastructure.
- 11 of 46 reporting States have geocoded 100 percent of their addresses.

According to 2016 data, 10 of 45 reporting States had 100 percent of their 911 Public Safety Answering Points connected to an Emergency Services Internet network.

States That Can Process 911 Calls using NG911 Infrastructure

▶ Difference between the percentage of the planned NG911 systems that are operational for NG911 call-taking from 2011 to 2013



In FY 2019, NHTSA requests \$2.81 million for the National 911 program to support the following activities:

- Continuing operation of a National 911 Resource Center to collect and create resources for State and local 911 agencies for their conversion to Next Generation 911 and comprehensive 911 system implementation.
- Maintaining and improving www.911.gov as the single portal for accessing information on Federal 911 activities.
- Sustaining operation of the National 911 Profile Database and activities that enable submission of State 911 data to measure National progress towards full implementation of NG911.
- Continuing to administer an expanding grant program specifically for the benefit of 911 Public Safety Answering Points (PSAP).
- Continuing to implement recommendations made by the Federal Communications Commission's Task Force on Optimal PSAP Architecture.
- Continuing to provide comprehensive resources to State and local 911 Authorities in implementing NG911, based on the content of the cost study that determined and analyzed detailed costs for specific NG911 service requirements and specifications.

What benefits will be provided to the American public through this request and why is this program necessary?

For almost 50 years, the 911 system has provided efficient, effective public access to emergency help for all types of emergencies. Every incident, large or small, starts with a call to the 911 system for help. Citizens also depend on the 911 system to maintain highway safety (e.g., reporting impaired drivers to law enforcement). While the 911 system has been a success, its infrastructure is outdated, and an update to its technologies and operation is necessary if the public is to access 911 using current methods of personal communication.

An updated 911 infrastructure, NG911, will allow citizens to send text messages, video, photographs and other data to 911, and allow 911 to send this information to emergency responders – something that isn't possible now. The integration of 911 and emergency responder communication systems is essential to achieve seamless information transmission.

Additionally, an updated 911 infrastructure will allow 911 PSAPs to transfer 911 calls to other PSAPs – important in cases of call overload or when a natural disaster damages 911 PSAPs – neither of which can be done today.

National coordination will facilitate consistency and uniformity among State and local 911 systems. Without this coordination, the Nation's 911 system is likely to remain fragmented and full implementation of a national NG911 system will be significantly delayed. In addition, people will not be able to use advanced personal communication devices to call 911 in many communities. By fostering coordination and collaboration among Federal, State, and local 911 stakeholders, cost sharing and cost saving is much more likely to occur.

HIGHWAY SAFETY PROGRAMS
National Emergency Medical Services Information System

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
National EMS Info System (NEMSIS)	\$1,490	\$2,033

What is this program and what does this funding level support?

The National EMS Information System (NEMSIS) improves care for motor vehicle crash victims and other patients through the standardization, aggregation, and utilization of point-of-care Emergency Medical Services (EMS) data at a local, State, and National level. The goal is for every Emergency Medical Technician (EMT) and paramedic to collect the same data on every patient encounter and for that record to be compiled with others to analyze and improve quality, conduct research, and describe the Nation's EMS systems.

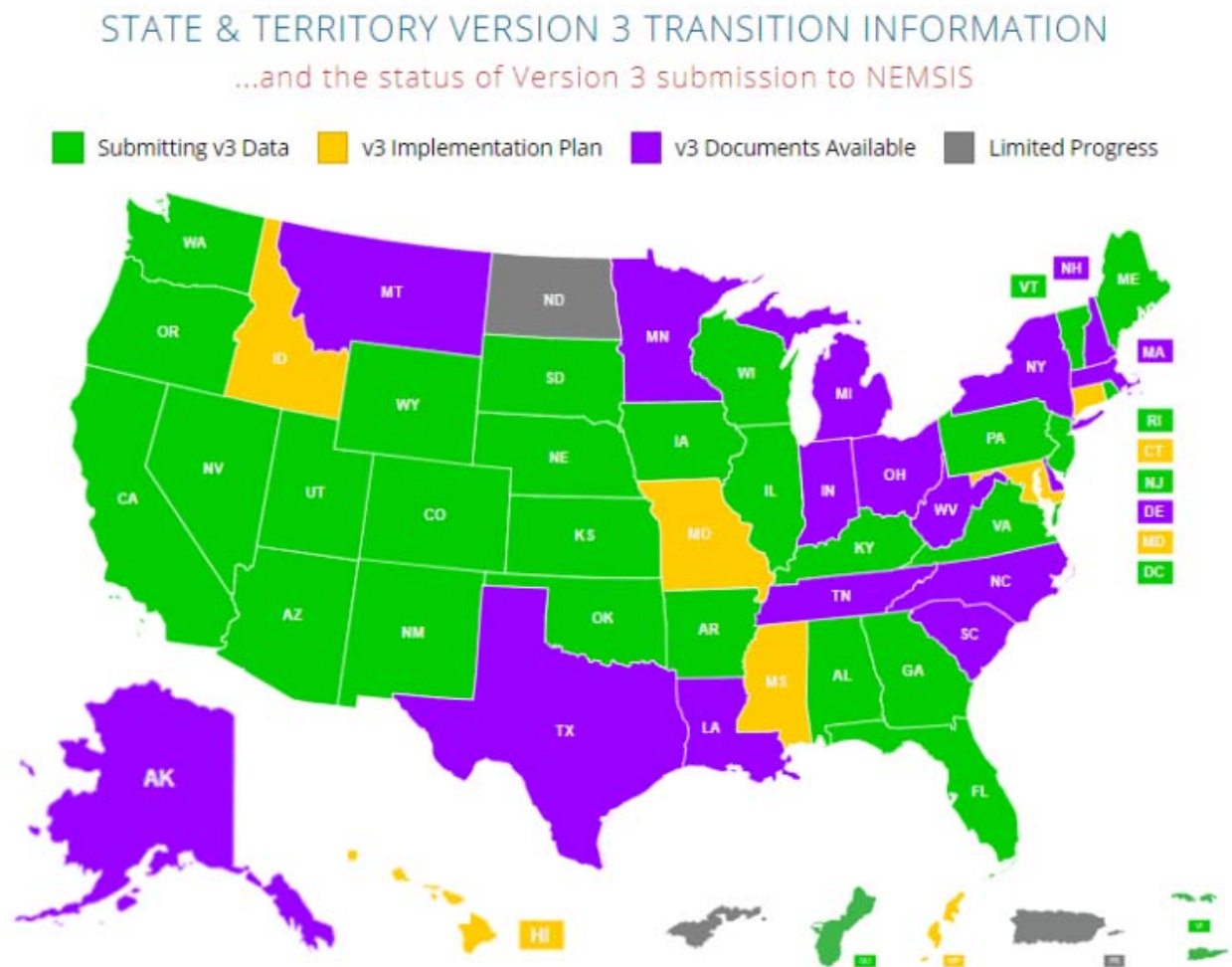
NEMSIS provides a comprehensive, standardized approach to collecting and using EMS patient care data at the local level and reporting portions of that data to the State and National levels. NEMSIS collects standardized prehospital patient care data that can be fully integrated with electronic health records and with traffic records systems to evaluate and document achievements and challenges related to improving safety.

NEMSIS is a joint Federal, State, local, and private venture. NHTSA provides the overall coordination, standards, and technical assistance. Local EMS agencies, both private and governmental, purchase the software and collect the patient-side data. State EMS offices manage State EMS data systems, including the aggregation of data from local EMS agencies, within their jurisdiction, and report a subset of that data to the National EMS Database. NHTSA manages the repository of EMS records that are voluntarily collected by 49 States and territories and includes more than 30 million de-identified EMS records per year, or more than 75 percent of all EMS activations in the nation.

NHTSA funds the NEMSIS Technical Assistance Center (TAC) (<https://nemsis.org/>) to provide assistance to States for submission of data to the National EMS Database and for initial data analysis to assess EMS response and patient care. The TAC will periodically transmit data to NHTSA to increase its use internally.

Researchers currently publish approximately one peer-reviewed paper per month based on data from the National EMS Database. The National EMS Database differs from other NHTSA datasets because it is *person-based* instead of *crash-based* and includes medical information about the response to the crash, patient assessment and demographics, care provided on scene and transportation to a hospital. This information is critical for highway safety professionals to understand the interventions, public policies, and regulatory decisions that are most effective in reducing death and disability on roadways.

NHTSA is currently implementing the NEMSIS Version 3 Data Standard, which incorporates a standard business logic infrastructure that improves data quality. NEMSIS Version 3 has new data elements that allow agencies and States to access EMS provider performance data, and the system includes a standard web services data exchange platform that allows for real time data transfer of patient care information from the scene of an emergency response, through a State repository, and onto the National repository without human intervention. The NEMSIS Version 3 Data Standard was accredited by the American National Standards Institute in July of 2015. States are voluntarily complying with NEMSIS Version 3 and submitting data to the National EMS Database as shown in this map:



In FY 2019, NHTSA requests \$2.03 million for National Emergency Medical Services Information System (NEMSIS) program activities. This funding is necessary to support additional database maintenance and security requirements.

With the requested funding, NHTSA will be better able to support NEMSIS by:

- Maintaining the National EMS Database.
- Supporting and expanding the National EMS Database.
- Continuing to support the NEMSIS Technical Assistance Center, which provides technical assistance and support to States and the national EMS community and assists with the expansion and operation of the NHTSA National EMS Database.
- Increasing to 40 the number of States and territories that contribute NEMSIS Version 3 data to the National EMS Database.
- Integrating local NEMSIS-compliant electronic patient care reports with electronic health records and health information exchanges to provide for better patient care at the time of care and better linkage with patient outcomes.
- Assessing the State's ability to implement NEMSIS Version 3 data repositories.

What benefits will be provided to the American public through this request and why is this program necessary?

The American public will benefit from the implementation and refinement of a National EMS Information System (NEMSIS) because the information will be used:

- By the local medical director and EMS providers to help evaluate and improve the care provided to patients, including those injured in motor vehicle crashes.
- By researchers to help improve the protocols that EMS providers use to guide the care provided to their patients, including those injured in motor vehicle crashes.
- To help define performance measures and benchmarks that will help local and State officials improve EMS system performance, including those for response to motor vehicle crashes.
- To guide new educational opportunities for EMS providers that will improve the care they provide to patients to include persons injured in motor vehicle crashes.
- To improve EMS systems preparation for disasters and major events and to enhance their resiliency.

NEMSIS is the critical link in providing a data-driven, evidence-based EMS system that collects information that is valuable in obtaining improved patient outcomes from traffic injuries. It provides uniform information for EMS medical directors and administrators to improve the provision of emergency medical care to patients. NEMSIS also provides valuable prehospital information that will assist in the development of performance improvement tools and benchmarks for emergency medical services. NEMSIS enhances research that is essential to support comprehensive, data-driven and evidence-based EMS and 911 systems. In the absence of NEMSIS, there would be no uniform method for collecting and analyzing EMS data to improve patient care, improve system performance, and enhance research.

NHTSA supports NEMSIS implementation and upgrades in States through the Section 405 State Traffic Safety Information Grants program, and State Offices of EMS often participate in traffic record coordinating committees.

HIGHWAY SAFETY PROGRAMS

Driver Licensing

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Driver Licensing	\$992	\$1,021

What is this program and what does this funding level support?

The Driver Licensing and Driver Education Programs improve highway safety performance by providing national leadership and assistance to States in ensuring that drivers are properly trained, periodically evaluated, and have a single valid license. As part of this comprehensive program, NHTSA assists States in developing licensing systems for novice drivers that include driver education that meets minimum national standards, and Graduated Drivers Licensing (GDL) laws that lead young, novice drivers through a 3-stage process for full licensure. The resources can be found at <https://www.nhtsa.gov/road-safety/teen-driving>.

This program also provides legislative, programmatic, and administrative guidance to assist States in accommodating automated vehicle operation with regard to driver licensing, driver testing, and vehicle registration.

In FY 2019, NHTSA requests \$1.02 million for the Driver Licensing program. The program will focus resources on several key issues including:

- Working with key stakeholders in the development of standards for online and overall delivery of driver education.
- Assessing State compliance with national standards for driver education programs designed to increase alignment within the States' administrative oversight of driver education.
- Conducting driver education program assessments as requested by the States, and monitoring follow-up actions taken.
- Continuing demonstration projects to develop promising methods to enforce licensing restrictions of GDL and suspended drivers.
- Providing States with policy, guidelines and recommendations to facilitate their accommodation of vehicles with Automated Driving Systems, specifically with regard to driver licensing, driver testing, and vehicle registration.

What benefits will be provided to the American public through this request and why is this program necessary?

Key components of State driver licensing and driver education programs have proven effective, with a number of scientific evaluations showing that GDL laws reduce young driver crashes. Further benefits will be realized by facilitating consistent State-to-State adoption of best practices

for driver training and education and by determining the optimal approach for integrating driver education in an overall teen driver safety program.

Through the adoption of model laws and policies, and administrative procedures to address new vehicle technology, the motoring public will be assured a safe and efficient accommodation of new automated vehicle systems.

Model driver improvement methods, driver education, and well-enforced GDL laws show promise in reducing crash risk for young drivers. States need assistance in weighing alternatives, as well as designing and implementing effective driver programs for high risk populations.

HIGHWAY SAFETY PROGRAMS

Highway Safety Research

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Highway Safety Research (Includes Driver Alcohol Detection System for Safety)	\$11,411	\$11,748

What is this program and what does this funding level support?

Highway Safety Research directly supports the Department's efforts to reduce traffic fatalities and injuries by providing the scientific basis for the development of effective behavioral countermeasures to reduce the occurrence and severity of traffic crashes. Highway Safety Research studies unsafe driving behaviors that contribute significantly to death and injury from crashes on our highways. The research results support the development and refinement of countermeasures to deter unsafe behaviors and promote safe alternatives. Highway Safety Research also evaluates the relative effectiveness of programs to reduce fatalities and injuries on our highways, which is critical to achieving further progress toward meeting national goals and performance targets. Research, analysis, and evaluation program results address existing and emerging highway safety problems and are disseminated to the States to use in identifying effective traffic safety countermeasures for implementation through the highway safety formula grant program (Section 402). NHTSA's highway safety research studies can be found at <https://www.nhtsa.gov/behavioral-research>.

In FY 2019, NHTSA requests \$11.75 million for the Highway Safety Research program. Highway safety research has contributed significantly to the widespread adoption of numerous programs proven to reduce fatalities, injuries, and crashes. Examples include the national *Click It or Ticket* (CIOT) program, Standardized Field Sobriety Tests (SFST) used by law enforcement officers investigating potential impaired driving cases, State primary seat belt and distracted driving laws that allow law enforcement officers to ticket without any other traffic offense taking place, the national 0.08 Blood Alcohol Concentration (BAC) limit, Graduated Driver Licensing (GDL) laws for teen drivers, greater understanding of older driver issues, and effective pedestrian and bicycle safety programs.

Safer behaviors by drivers and other road users are critical to achieving further reductions in motor vehicle fatalities and injuries. Behavioral research provides an evidence-based foundation for the development and refinement of State and community traffic safety programs. Research is needed to identify more effective and efficient countermeasures for existing traffic safety risks such as alcohol-impaired driving, drugged driving, speeding, and non-use of seat belts, and to develop new solutions for emerging and resurgent problems such as pedestrian and bicyclist safety, motorcycle safety, driver fatigue and distracted driving.

During FY 2019, the Highway Safety Research Program will continue to build on the accomplishments of FY 2018. Below are examples of new and underway research activities that will be advanced during FY 2019:

Alcohol-Impaired Driving

- The Driver Alcohol Detection System for Safety (DADSS) research program will continue development and optimization of the next generation of breath-based and touch-based sensors. The program will also continue the pilot field operational trial for both sensors.
- Continue an evaluation of DWI Courts to identify evidence-based and promising practices under the Ten Guiding Principles.²⁸
- Complete an evaluation of a demonstration of a community-oriented enforcement model for alcohol-impaired driving.
- Complete a national survey on attitudes and behavior regarding drinking, drug use, and driving.

Drug-Impaired Driving

- Continue a study to develop a field test to detect drivers impaired by cannabis.
- Continue a large-scale study of the effects of drugs and alcohol on crash risk in serious injury and fatal crashes.
- Continue a series of critical research investigations to determine the prevalence of drug-impaired driving in a selection of States.
- Continue a study on the impact of legalizing marijuana on the DWI system.
- Conduct a study to explore the feasibility of developing devices that can be used at roadside to test for marijuana use and driving, either based on the presence of Tetrahydrocannabinol (THC), other substances, or based on driver impairment.
- Release a State of the Knowledge regarding Drugs and Driving report for use by State highway safety offices and other interested stakeholders.
- Continue a study of the role of marijuana use by drivers involved in crashes in which failures of executive function, cognition and reaction time appeared to play a role.

Occupant Protection

- Release the results of a study of part-time or occasional seat belt use using naturalistic, or real-world, driving data that will examine a variety of factors in determining when and where occasional users wear their seat belts.
- Release the results of a study of the conditions surrounding correct and incorrect child restraint system installation to develop interventions to inform the annual cohort of new parents on the appropriate selection and proper use of restraints for their children.
- Release the results of a nationally representative survey on attitudes and behavior relating to motor vehicle occupant safety.
- Continue a community-oriented enforcement model that could be used for occupant protection.
- Complete research to refine occupant protection programs by identifying psychological and psychosocial factors related to seat belt use behavior.

²⁸ *The Ten Guiding Principles of DWI Courts*. National Center for DWI Courts: Website: https://www.dwicourts.org/wp-content/uploads/Guiding_Principles_of_DWI_Court_0.pdf

- Complete research on the awareness and availability of child passenger safety information resources to define and overcome barriers to use among child caregivers.
- Complete an evaluation of a demonstration of an integrated and sustainable seat belt enforcement program.
- Continue an evaluation of the effectiveness of State rear seat belt laws for increasing belt usage among rear seat occupants.
- Continue an exploratory analysis to determine community factors associated with seat belt use in fatal crashes.

Pedestrian and Bicycle Safety

- Produce a State of the Knowledge regarding Pedestrian and Bicyclist Safety Research report for use by State highway safety offices and other interested stakeholders.
- Conduct a study that examines the impact of lowering speed limits and speed of travel on pedestrian and bicyclist safety.
- In collaboration with the Federal Highway Administration (FHWA), conduct longitudinal research on the development and use of reliable, accurate, and repeatable measures of pedestrian and bicyclist exposure so that NHTSA and others can appropriately evaluate the effectiveness of traffic safety initiatives.

Motorcycle Safety

- Conduct a nationally representative survey regarding attitudes about motorcycling.
- Conduct a study to estimate the vehicle miles traveled by motorcyclists based on data from States that collect mileage information during annual inspections.
- Conduct an analysis of the completed State of the Knowledge report, which examined motorcycle safety research for use by State highway safety offices and other interested stakeholders, to determine gaps in the research and to identify future research needs.

Safe Speeds

- Complete a study using Strategic Highway Research Program 2 (SHRP-2) Naturalistic Driving Data to better understand questions related to speed-related behavior, including the relationship between speeding and crashes, or near crashes.
- Continue a naturalistic study that involves the instrumentation of roadways to identify real-world speed-related problems.
- Conduct a study that examines the impact of lowering speed limits and speed of travel on pedestrian and bicyclist safety.
- Conduct an effort to produce a State of the Knowledge report regarding speed research for use by State highway safety offices and other interested stakeholders.

Older Drivers

- Release results of a study of older drivers' self-regulation and driving exposure focusing on the extent to which older drivers change their driving habits as their functional skills decline with aging.
- Continue studies of how older adults interact with in-vehicle technologies (such as rearview cameras) to determine the degree to which these devices assist older drivers in driving more safely and whether they create a potential distraction.

- Continue a study of the effectiveness of visual scanning training, which was designed to help older adults gather more visual information from the driving environment, for reducing crash risk among older drivers.
- Complete a study to explore the relationship between older adults' physical fitness and their driving performance and to evaluate the effects of fitness training on driving performance.

Young and Novice Drivers

- Complete a survey of youth from a number of States regarding a variety of traffic safety issues.
- Continue analysis to identify factors associated with teen crashes to support driver education.

Driver Fatigue

- Continue a national survey of drowsy driving knowledge, attitudes, and behaviors to inform the development of education and other countermeasures for reducing the incidence of drowsy driving.
- Continue research to understand the current state of drowsiness detection and alerting systems as well as guide the future of such systems by determining what types of alerts are most effective.

Emergency Medical Services (EMS)

- Continue research into the use of training and scheduling tools to reduce the incidence of ambulance crashes and patient treatment errors in which fatigue played a role.
- Complete research to assess the status of emergency vehicle operator training throughout the United States and improve understanding of the potential role operator training could play in reducing crashes involving ambulances.

What benefits will be provided to the American public through this request and why is this program necessary?

Highway safety research provides the basis for designing, testing, and implementing data-driven programs that have been demonstrated to reduce crashes, deaths, and injuries and that save society millions of dollars that would otherwise be lost to the preventable costs of traffic crashes.

HIGHWAY SAFETY PROGRAMS
Behavioral International Program

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Behavioral International Program	\$99	\$102

What is this program and what does this funding level support?

The Behavioral International Program contributes to the Department's overall safety effort through the exchange of information with other nations concerning emerging traffic problems, countermeasure strategies, and program evaluations. The program also extends the Department's international leadership on key issues such as pedestrian and bicyclist safety and driver distraction, and provides critical technical assistance for developing nations to prevent escalating vehicle related fatalities.

The Behavioral International Program establishes cooperative relationships with the agency's traffic safety counterparts from other nations, providing the Department with opportunities to learn from the experience and research of those who address similar issues. With the increasing globalization of markets, emerging problems such as driver distraction and drugged driving have global effects. Through international connections, NHTSA is able to collect information about the nature of traffic safety issues and the effectiveness of countermeasures deployed in other nations in order to utilize these insights in planning U.S. strategies. The Behavioral International Program also provides opportunities for international outreach and leadership.

Results from the Behavioral International Program are seen both in examples of international leadership and in tangible global safety progress. Technical assistance being delivered to road safety leaders in India facilitated the development of a testing and certification laboratory to support the adoption of breath alcohol measurement devices. Top-level officials from the India Ministry of Road Transport and Highways visited NHTSA in 2016 for bi-lateral discussions that will assist in the establishment of a lead Federal highway safety agency in India. The program's leadership was also demonstrated in the support of an international roundtable and two South East Asia Regional workshops on powered two-wheeler safety in developing nations conducted under the auspices of the United Nations Economic Commission for Europe Global Forum for Road Safety (UNECE WP. 1). These workshops – and similar workshops on the safety of vulnerable road users - resulted in the ratification of UNECE Consolidated Resolutions, which serve as global models for road safety. Examples of the Behavioral International Program's institutional achievement include a redirection of UNECE road safety activities that contributed to the establishment of the new Global Forum for Road Safety and to an increased emphasis on providing road safety assistance to developing nations. The Behavioral International Program has also contributed to harmonization of automated vehicle regulation by co-sponsoring workshops with

UNECE to share information with other governments on strategies for governance of the safety of automated vehicles.

In FY 2019, NHTSA requests \$102 thousand for the Behavior International program. During FY 2019, the Behavioral International Program will:

- Expand the Center of Excellence model demonstrated in Southeast Asia to a second UN Region. Identify an emerging road safety institutional leader in a member state with high potential that has measurable safety problems, is receptive to assistance, and has the ability to affect the safety of large numbers of road users. Collaborate on a plan for domestic road safety demonstration activities and for regional leadership.
- Continue support for the Southeast Asia Center for Excellence on Road Safety located in India. Promote adoption of new UN Consolidated Resolutions on the Safety of Powered Two-Wheelers and the Safety of Vulnerable Road Users.
- Expand global road safety leadership by utilizing existing forums including the United Nations Road Safety Collaboration and the United Nations Economic Commission of Europe Global Road Safety Forum.

What benefits will be provided to the American public through this request and why is this program necessary?

International leadership in road safety benefits the American public in several ways. Sharing U.S. experience and technical expertise with developing nations is, first, a humanitarian effort that can improve the quality of life of individuals around the globe, addressing the cause of more than 1.2 million deaths each year and the leading cause of death for young people worldwide. Global road safety leadership is also an effective means for international diplomacy and enhancing global community. In addition, U.S. efforts to improve global road safety contribute to the adoption of common vehicle safety standards, driver licensing processes, and traffic codes, thereby facilitating international trade, travel, and international development. Further, international collaboration provides NHTSA with opportunities to learn about effective programs – such as Vision Zero and the Safe System Approach - that can be modified and adopted in local communities in the United States.

HIGHWAY SAFETY PROGRAMS
National Driver Register

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
National Driver Register - TF (Program funds only)	\$3,395	\$3,577

What is this program and what does this funding level support?

The National Driver Register (NDR) is a nationwide clearinghouse of problem drivers whose privilege to drive has been revoked, suspended, cancelled, or denied for cause, or who have been convicted of a serious driving violation, such as driving under the influence of alcohol. Every individual who applies for a license or a license renewal is vetted through the NDR's Problem Driver Pointer System (PDPS) to determine if they are currently under revocation or suspension actions in another State. The PDPS will "point" the State of Inquiry (SOI) to the State of Record (SOR), where an individual's driver status and history information is maintained. The NDR assists Federal agencies and other transportation sectors in the hiring and certification process. The States and transportation related entities use the information in the NDR to ensure that commercial drivers, locomotive engineers, merchant mariners and airline pilots meet all necessary qualifications for operator license certification.

In FY 2019, NHTSA requests a total of \$5.40 million for the National Driver Register program, including \$3.58 million for program activities and \$1.82 million for administrative expenses including salaries and benefits. With the requested level of funding, NDR will:

- Maintain reliable operations in a cloud environment.
- Begin to develop changes to PDPS based on the recommendations from the NDR Working Group.
- Respond to an increasing number of Federal agencies requesting access to the NDR database (e.g.: Department of Defense (DOD), Marine Corps, Department of the Army, Department of the Navy, and Architect of the Capital).
- Provide timely responses to electronic inquiries from State driver licensing agencies.
- Provide timely responses to inquiries from Federal agencies that certify aircraft pilots, Coast Guardsmen, merchant mariners, and locomotive engineers.
- Provide timely responses to inquiries from employers of motor vehicle operators, including Federal agencies.
- Maintain disaster recovery capability and perform quarterly testing.
- Perform continuous monitoring of cyber system security risk by evaluating one-third of federally-mandated (NIST 800-53) controls each year.
- Keep current with technological advances in system architecture and design.
- Begin designing system enhancements that improve the quality of information provided to States and other users.

- Engage States to identify additional functional upgrades and system enhancements that will further increase the value of the system.
- Develop plans to recertify State compliance with system requirements and procedures.
- Continuously modernize the Problem Driver Pointer System.

What benefits will be provided to the American public through this request and why is this program necessary?

The NDR processes an average of 111 million transactions from State and Federal users in a year and identifies between 8 and 9 million probable problem drivers, many of whom were convicted of driving under the influence of drugs or alcohol. From 2002 to 2016, State and Federal use of the NDR increased 113 percent, as measured by inquiry transactions to the system. In the past five years, the NDR processed 546,000,000 transactions for State and Federal customers. Continued efficient processing of transactions in the State Division of Motor Vehicles (DMV) offices often result in decreased wait times for driver license customers. The PDPS is a mission critical system in NHTSA and currently contains 54 million pointer records in the system.

The National Driver Register assists States and Federal agencies in keeping problem drivers from obtaining driver licenses and operator certifications. The NDR is the only “one stop” central repository of information identifying problem drivers and is used on a daily basis by all 50 States and the District of Columbia. Other authorized users access the NDR to determine if a driver license applicant, locomotive engineer, merchant marine, airline pilot, or commercial driver should be issued an operator’s license.

The NDR works to support other NHTSA countermeasure programs such as impaired driving and driver licensing programs. When an arrest and conviction is made for driving under the influence of drugs or alcohol, the court sends the conviction to the motor vehicle administration. In accordance with Title 49 USC 303, the State must report to NDR within 31 days resulting in a record being added to the PDPS. If the driver attempts to obtain a license in another State or renew their current license, a search of the NDR will result in a “hit” and denial of the applicant’s license.

Continued operation of the NDR enables States to comply with the provisions of the Motor Carrier Safety Improvement Act (MCSIA), which requires States to check the NDR on all driver license renewals as well as new license issuance. Additionally, the Commercial Motor Vehicle Safety Act (CMVSA) requires an NDR file check on all commercial driver applicants. These and other Federal legislative mandates have resulted in dramatic increases in NDR system usage over the past decade.

Detailed Justification for National Center for Statistics and Analysis (NCSA) Programs

FY 2019 - NCSA - SUB-PROGRAM BUDGET REQUEST

National Center for Statistics and Analysis (NCSA)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Traffic Records	\$1,905	\$1,918
Crash Data Collection	\$34,676	\$35,863
Data Analysis	\$1,640	\$2,000
Regulatory Analysis and Evaluation	\$509	\$509
NCSA Total	\$38,730	\$40,290

In FY 2019, NHTSA requests \$40.29 million for National Center for Statistics and Analysis (NCSA) programs. This amount does not include the \$500 thousand in Vehicle Safety funds to supplement Crash Data Collection. Funding at this level will allow NHTSA to maintain its core programs and continue implementation of the new modernized data collection systems. Key initiatives include:

Traffic Records

- Continue to provide in depth, uniform assessments of State traffic safety data systems (crash, driver, vehicle roadway, citation/adjudication, and injury surveillance) that help States identify and prioritize safety data improvement efforts.
- Continue to provide additional technical assistance for traffic records system improvements through GO Teams and the Crash Data Improvement Program (CDIP) that provide an in-depth technical expertise and analysis in support of a particular issue area determined by the State.
- Continue efforts to harmonize data collection and management standards via promotion of the recently updated Model Minimum Uniform Crash Criteria, 5th Edition.

Crash Data Collection

Fatality Analysis Reporting System (FARS)/FastFARS

- Maintain the ability to provide for a census of data on motor vehicle traffic crash fatalities.
- Provide the FastFARS data to publish quarterly and annual projections of motor vehicle traffic fatalities.

Crash Report Sampling System (CRSS)

- Maintain the ability to collect a nationally representative sample of police crash report data.
- Create a file for analysis and make the data available to the public.

State Data Systems (SDS)

- Continue collecting and processing data annually from 34 State data crash files.
- Continue gathering available information about non-traffic crashes and non-crash motor vehicle incidents.

Crash Investigation Sampling System (CISS)

- Continue to maintain and operate CISS sample sites that provide nationally representative, in-depth data on crashes resulting in at least one towed, passenger vehicle.
- Create a file for analysis and make the data available to the public.

Special Crash Investigations (SCI)

- Conduct on-site and remote crash investigations to identify unintended consequences of vehicle-related crashes or incidences, support potential recalls and other agency enforcement efforts and conduct countermeasures research.

Data Modernization

- Increase the use of Electronic Data Transfer (EDT) to improve data timeliness and quality.
- Incorporate data from other sources in NHTSA databases to provide better authoritative sources for vehicle identification.

Data Analysis

- Produce quarterly estimates of fatalities for Calendar Years 2018 and 2019, the Annual Assessment of Motor Vehicle Traffic Crashes, Traffic Safety Facts Annual Report and 16 Traffic Safety Fact Sheets
- Provide metrics used to track performance of NHTSA safety programs and DOT's safety goal, including estimating lives saved by belts, air bags, minimum drinking age laws, child safety seats, and motorcycle helmets.
- Enhance NCSA's data analysis service for all of NHTSA and the general public.

NCSA
Traffic Records

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Traffic Records	\$1,905	\$1,918

What is this program and what does this funding level support?

NHTSA's Traffic Records Program delivers a variety of evaluation and analysis products that help States improve the six core State Highway Safety Information Systems: crash, driver, vehicle, roadway, citation/adjudication, and injury surveillance. State traffic records data are essential to the implementation and evaluation of State highway safety policies and countermeasure programs and support the data systems NHTSA relies on to administer its programs as a data-driven agency. Additional information on our Traffic Records program can be found at <https://www.nhtsa.gov/research-data/traffic-records>.

In FY 2019, NHTSA requests \$1.92 million for the Traffic Records program. This funding will allow NHTSA to continue successes of the State traffic records assessment program, the State technical assistance GO Teams, the Crash Data Improvement Program (CDIP), and to coordinate with federal and State partners on additional safety data improvement efforts. This funding will enable NCSA to help States improve their traffic records data systems—increasing data quality at the State level, and at the National level with information provided to NHTSA's modernized data systems.

Funding at the requested level will enable the Traffic Records Program to accomplish the following in FY 2019:

- Continue State traffic records assessments that benchmark the status of State Highway Safety Information Systems, provide States with recommendations on ways to improve each of the six core systems, and enable States to qualify for Section 405(c) State traffic safety information systems grants.
- Respond to data requests and inquiries from NHTSA, the Department, other Federal agencies, States, and research institutions.
- Coordinate the work of the DOT Traffic Records Coordinating Committee (DOT TRCC), an intermodal traffic safety group that produces original research, coordinates State outreach, and encourages Departmental collaboration on safety data improvement efforts.
- Deliver timely, useful technical assistance to State traffic records personnel seeking to improve their data systems by deploying technical assistance GO Teams.
- Continue the deployment of the CDIP which assists States with improving their crash data quality and aligning their crash data with Model Minimum Uniform Crash Criteria (MMUCC).
- Help States evaluate the consistency of their crash data by providing standard guidance on

mapping their crash data to the data elements and attributes in the MMUCC Guideline.

- Provide support, technical guidance, and content to the Association of Traffic Records Information Professional's (ATSIP) annual International Forum on Traffic Records and Highway Safety Information Systems. This Forum remains the keystone of critical outreach efforts on Federal data systems and programs.

What benefits will be provided to the American public through this request and why is this program necessary?

The quality of State highway safety Information Systems is quite varied and efforts to improve them are often hampered by lack of technical and financial resources. The Traffic Records Program works to fill this gap by deploying traffic records program assessments, on-demand technical assistance and training through the GO Team program, deep analysis of State crash system data quality via the Crash Data Improvement Program (CDIP), online training, and a variety of targeted research and noteworthy practices, including providing workshops to help State Traffic Records coordinating Committees develop strategic plans for the States. The Traffic Records program works to update and promote the adaptation of voluntary national standards for crash data through MMUCC. This includes working with States to develop a standard data element and attributes in anticipation of capturing crash data on autonomous vehicles.

Funding for the Traffic Records program is needed to improve how States collect, manage, and analyze their traffic safety data. States use their traffic records data to develop their highway safety plans, assess performance, and quantify improvements from highway safety countermeasure programs, which benefit the American public by reducing traffic fatalities and serious injuries.

NCSA
Crash Data Collection

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Crash Data Collection (Includes FARS, CRSS, CISS, SDS, SCI)	\$34,676	\$35,863

Note: Crash Data Collection is partially funded from the Vehicle Safety account, but most funding is provided for under the Highway Safety Research & Development account.

What is this program and what does this funding level support?

Quality data underpin NHTSA programs and policies by providing the empirical information necessary for saving lives and reducing economic costs. Data are essential for both our behavioral and vehicle safety efforts. These data are highly valued by other Federal agencies, as well as organizations and governments world-wide. The Crash Data Collection program includes both State crash report-based systems (Fatality Analysis Reporting System, Crash Report Sampling System, and State Data Systems) and crash investigation-based systems (Crash Investigation Sampling System and Special Crash Investigations).

The crash data collection systems are comprised of both police-reported motor vehicle crash data reports collected by States, and NHTSA-directed investigations of crashes that are representative of all traffic crashes. Police-reported crashes from State record-based systems are recoded into a uniform format to provide counts and trends. NHTSA-directed crash investigations provide the detailed data required for countermeasure development and evaluation. A sample based approach provides nationally representative data at a small fraction of the cost it would take to investigate or to collect and manually recode the millions of police-reported crashes into a uniform format. Each data collection system is briefly described below:



Fatality Analysis Reporting System (FARS)

The Fatality Analysis Reporting System is the sole source for standardized, State-documented information on a national census of police-reported traffic crashes with at least one fatality. The FARS is the most referenced motor vehicle crash data system in the world. FARS provides a detailed data collection of over 30,000 fatal crash cases from all 50 States, the District of Columbia, and Puerto Rico annually. FastFARS is a data collection and reporting program built

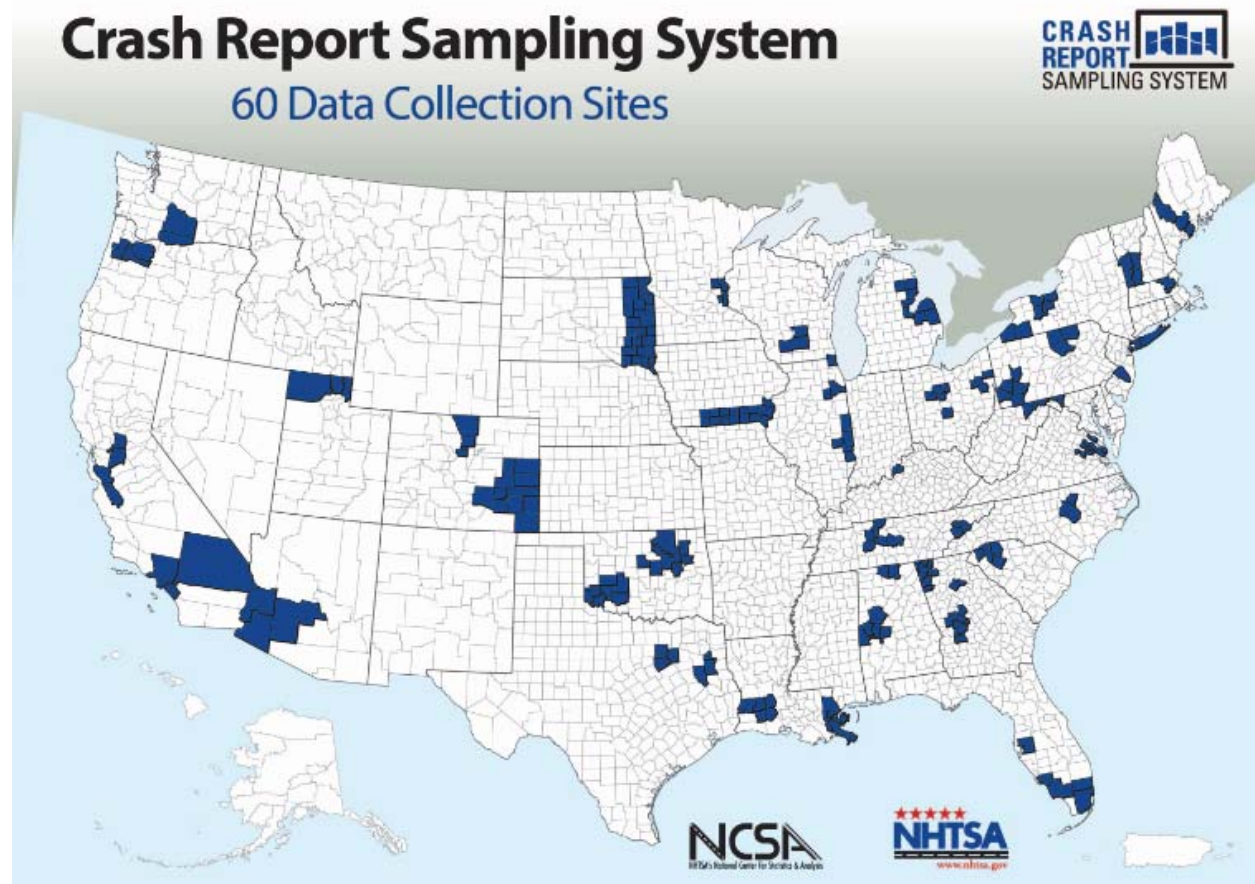
into the FARS infrastructure that provides near real-time counts of the number of fatalities resulting from motor vehicle crashes. FARS is the principal source of nationwide data on motor vehicle fatalities that supports the development of policies and programs to reduce fatalities on the Nation's highways. FARS data are vital not only for NHTSA, but also for the States, Congress, other Federal agencies, national and international researchers and the general public. FARS data are utilized to identify vehicle crash avoidance technology needs and research countermeasures,

inform defects investigations, evaluate State grant programs, assess the effectiveness of regulations, and measure performance against identified goals.



Crash Report Sampling System (CRSS)

The Crash Report Sampling System (CRSS) is the sole source for standardized information on a national sample of police-reported traffic crashes of all severities involving all types of motor vehicles. Currently, CRSS samples crash data from 60 geographic regions across the nation. The CRSS annual file contains uniformly-coded crash report information on over 40,000 crashes that can be weighted to create national estimates. CRSS data are used to assess the overall State of highway safety, identify existing and emerging trends, estimate the number of people injured in motor vehicle traffic crashes and assess the effectiveness of highway safety programs.



State Data Systems

State Data Systems include the State Data Crash file program and the Non-Traffic Surveillance program. The State Data Crash files program consists of over 10 million records collected from 34 individual State data systems and processed into standard formats to complement the crash data collected in NHTSA's other systems. These files are used in regulatory analyses and research, because they often contain data that other NHTSA crash data files do not have. The Non-Traffic

Surveillance program collects non-traffic data in response to provisions in SAFETEA-LU and the Cameron Gulbransen Kids Transportation Safety Act of 2007 (KT) Safety Act. This program provides data critical to understanding deaths and injuries in motor vehicle non-impact incidents and crashes that occur on non-public roads, driveways, parking lots, and other private areas.



Crash Investigation Sampling System (CISS)

The Crash Investigation Sampling System (CISS) is the sole source for nationally representative, in-depth data on crashes resulting in at least one towed, passenger vehicle. The CISS replaced the National Automotive Sampling System Crashworthiness Data System that ended with the 2015 data collection year. In FY 2019, CISS will collect detailed crash data from 32 geographic regions across the nation. The CISS annual file contains uniformly coded crash investigation information on nearly 5,000 crash cases. CISS uses highly trained technicians to perform detailed crash investigations that include comprehensive documentation of scene evidence, vehicle damage, crash avoidance technologies, and thorough coding of all crash-related injuries from medical records. NHTSA and stakeholders, such as the automotive industry and safety researchers, use the CISS data to quantify the relationship between occupants and vehicles in the real-world crash environment, as well as the effect of crash avoidance technologies. These data provide the foundation for a comprehensive understanding of the relationship between vehicle crash severity and occupant injury, which are then utilized to initiate, develop, and evaluate effective countermeasures.



Special Crash Investigations

The Special Crash Investigations (SCI) program employs highly trained crash reconstructionists to perform in-depth investigations on specific motor vehicle crashes. Currently, the program employs three investigative teams based at locations across the nation, with additional investigators based at DOT Headquarters in Washington, DC. These teams conduct approximately 100 investigations annually. The program is flexible so that the focus of these investigations can change as needed to provide the most up-to-date data on current and emerging issues of special interest to the agency. These real-world crash investigations enable NHTSA to examine and assess the safety performance of new technology such as automated vehicles (AV) systems and provide early detection of alleged or potential vehicle issues. No other NHTSA data collection effort provides this detail on very specific crashes of interest.



Data Modernization

NHTSA's data collection, through the National Center for Statistics and Analysis is funded under Highway Safety Research and Development, as well as the Vehicle Safety account. In FY 2012, a one-time allocation of \$25 million was provided under Highway Safety Grants to support the Data Modernization Project. The goal of Data Modernization was to ensure that NHTSA's data collection systems continued to be the preeminent source of traffic safety data by collecting quality data to keep pace with emerging technology and policy needs. Data Modernization resulted in an improved information technology infrastructure for FARS as well as two new, independent crash sampling systems, CISS and CRSS. Although NHTSA anticipates expending all Data Modernization funds by the end of FY 2018, improvements to NCSA's data collection programs are made on a continuous basis. These continuous improvements are considered the next phase of Data Modernization. Several modernization efforts will continue into FY 2019 and beyond including increasing the use of Electronic Data Transfer (EDT) to improve data timeliness and quality, incorporating data from other sources in NHTSA databases to provide better authoritative sources for vehicle identification, and collecting additional cases in CISS.

In FY 2019, NHTSA requests \$35.86 million for crash data collection from Highway Safety Research and Development (and an additional \$500 thousand from the Vehicle Safety program). The budget request reflects NHTSA's need to sustain its crash data collection efforts to include the following:

The FARS program will allow NHTSA to:

- Perform a census of all fatal motor vehicle traffic crashes occurring in the 50 States, the District of Columbia, and Puerto Rico.
- Create a 2017 final file and a 2018 preliminary file.
- Provide the FastFARS data for quarterly and annual projections of motor vehicle traffic fatalities.
- Continue to improve data collection methods, data quality, and timeliness for dissemination to decision-makers.

The CRSS program will enable NHTSA to:

- Collect data in the 60 nationally representative sites.
- Create a file for analysis and make the data in the 2018 annual file available to the public.

The State Data Systems program will:

- Continue collecting and processing data annually from up to 34 State data crash files.
- Continue gathering available information about non-traffic crashes and non-crash motor vehicle incidents.

The CISS support will:

- Create a weighted file for analysis and make the data in the 2018 annual file available to the public.

- Continue to maintain and operate 32 CISS sample sites including maintaining cooperation with local officials, updating as necessary crash notification procedures, piloting new collection procedures for implementation, and training the new crash technicians.

The SCI program will allow NHTSA to:

- Perform in-depth investigations on approximately 100 cases across the country through three investigation teams.
- Continue to support to the Office of Defects Investigation's early detection of alleged or potential vehicle defects.
- Continue to support the review of new and rapidly changing technologies in crash avoidance technologies and other high profile crash areas.

What benefits will be provided to the American public through this request and why is this program necessary?

NHTSA's data collection systems are the preeminent source of traffic safety information at the Federal, State, and local levels. Accurate, accessible, timely, and standardized data allow decision makers to identify the primary factors related to the source of crashes and their outcomes, develop and evaluate effective safety countermeasures, support traffic safety operations, measure progress in reducing crashes and their severity, design effective vehicle safety regulations, and target safety funding.

With relevant and timely data, NHTSA can make informed policy, program, and regulatory decisions that will lead to improved motor vehicle safety. With quality data in usable formats, resources will not be wasted compiling information that may identify emerging trends and serious safety problems. With good data, the effectiveness of programs standards and progress in meeting safety targets can be accurately measured. Better data leads to safer roads and safer vehicles.

NCSA
Data Analysis

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Data Analysis Program	\$1,640	\$2,000

What is this program and what does this funding level support?

The Data Analysis program is the foundation that provides critical information and analytical and statistical services to all NHTSA program areas and to the overall traffic safety community. Given recently modernized data systems, analysis must keep pace with the changing data environment. Additionally, this program disseminates traffic safety data to the public through a broad spectrum of media. The program's published reports are used by government agencies (Federal, State, local, and international), research institutions, motor vehicle manufacturers, safety groups, international highway safety advocates, and the general public to improve traffic safety. The program provides data and analysis in the development of the Department's and NHTSA's strategic plans and promotes cross-modal data-driven approaches to resolving roadway safety issues. The program provides much needed expertise to all the data users by sharing their in-depth technical knowledge. Data and analytical support are also provided to the States in tracking their highway safety performance targets and for applying to NHTSA grant programs.

In FY 2019, NHTSA requests \$2.00 million for the Data Analysis program. The requested funding will enable the program to accomplish the following:

- Provide quarterly estimates of fatalities for calendar year (CY) 2018 and CY 2019.
- Provide expert statistical analysis to internal and external customers in a broad range of statistical and traffic safety areas, such as alcohol-impaired driving, occupant protection, drugged driving, motorcycle safety, pedestrian/bicyclist safety, and other areas of interest.
- Continue to provide analytical and data support in the Department's distracted driving and pedestrian/bicyclist safety initiatives.
- Produce the Annual Assessment of Motor Vehicle Traffic Crashes including the Traffic Safety Facts Annual Report and the 16 annual Traffic Safety Fact Sheets that focus on high-interest program areas.
- Provide the metrics that are used to track performance of NHTSA's activities and contribution to Departmental safety targets.
- Provide data and analytical support in Department and NHTSA strategic plans.
- Conduct statistical and data analysis to support emerging issues within NHTSA's vehicle and behavioral safety programs, including defects investigations.
- Utilize innovative technologies to enhance data dissemination procedures to improve the distribution of timely traffic safety information for program reviews and State grants by NHTSA and Federal Highway Administration (FHWA).

- Provide estimates of benefits in terms of lives saved by belts, air bags, minimum drinking age laws, child safety seats, and motorcycle helmets.
- Provide statistical and survey data expertise towards NHTSA's Data Modernization effort and other data collection initiatives.
- Conduct sample designs for special studies to expand the new modernized Crash Data systems.
- Update and maintain the State and Traffic Safety Information (STSI) portal.
- Conduct Geo-spatial analysis to support location-based analyses.
- Evaluate and prototype innovative web-based reporting technologies and methods to provide timely and easier access to NCSA's vast crash resources.
- Support NHTSA's data modernization efforts by enhancing NCSA's data analysis service for internal and external customers.
- Acquire resources to design and deploy data dissemination protocols to enhance the quality and timeliness of data and analytic products, especially data from the modernized data collection system.
- Support and respond to an increasing number of internal and external requests for data and analysis based on specific interest areas.

What benefits will be provided to the American public through this request and why is this program necessary?

NHTSA relies on data to build, develop, and improve its vehicle and behavioral safety programs and to measure their performance. The Data Analysis program produces critical annual traffic safety publications, conducts research on specific highway safety topics, and reports on those investigations. The program provides data and statistical analysis to external customers and internal programs. The Data Analysis program also provides the analytical support in the agency for its strategic planning, rulemaking and defects investigation efforts and will expand its supporting activities in vehicle electronics analysis. The program provides data to the public by making it available, accessible and transparent through NHTSA's website and www.data.gov.

Another important aspect of this program is to provide data for evaluating the effectiveness of vehicle and behavioral safety programs. The Data Analysis program provides the annual performance targets for the Department and NHTSA, based on historical data analysis. Data and analytical expertise required for the States to develop new performance targets is also provided. Through the Data Analysis program, NHTSA, the Department, States, and the larger highway safety community are able to effectively carry out and modify their current programs, which helps to achieve declines in fatalities, injuries, and the economic toll from motor vehicle crashes.

NCSA
Regulatory Analysis and Evaluation

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Regulatory Analysis and Evaluation	\$509	\$509

What is this program and what does this funding level support?

The Regulatory Analysis and Evaluation program conducts regulatory impact analyses and evaluations of proposed NHTSA safety regulations or existing safety regulations, in support of Executive Orders 12866 and 13563. Executive Order 12866 requires Federal agencies to evaluate the costs and benefits of proposed and final rules in Regulatory Impact Analyses. Executive Order 13563 requires agencies to periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed.

NHTSA requests \$509 thousand for the Regulatory Analysis and Evaluation program. Funding provided in FY 2019 will allow the division to conduct:

- Cost and weight analyses (based on physical “tear-down”) of regulated, proposed, or emerging vehicle technology. Topics vary by need each year. Current examples include vehicle-to-vehicle technology, blind spot detection systems, roof crush resistance, and heavy-duty vehicle automatic emergency braking systems.
- Engineering assessments in review of existing regulations. Topics rotate each year. Recent examples include engineering assessments of FMVSS No. 138, tire pressure monitoring systems; FMVSS 213, child restraint systems; and FMVSS 108, lamps/reflective devices/associated equipment.
- Special data collections in support of safety rulemakings and evaluations. A current example is a survey of Tire Pressure Monitoring System malfunction and miscalibration to help evaluate and plan for possible changes to FMVSS 138.
- Analytical support in cost studies and regulatory evaluations of NHTSA safety regulations. Recent examples include an analysis of the cost and weight impacts of safety technologies related to FMVSS, and an evaluation of fatality reduction effectiveness by rear center three-point seat belts as mandated by FMVSS 208.

What benefits will be provided to the American public through this request and why is this program necessary?

These funds provide cost estimates for many of NHTSA’s new rules, provide support for evaluations of established rules, and help keep NHTSA standards current with ever-changing technology. This program enables NHTSA to comply with the regulatory analysis and evaluation provisions of Executive Orders 12866 and 13563. Such functions benefit the American public by

ensuring that NHTSA safety regulations are cost-efficient and effective. NHTSA safety regulations have saved over 600,000 lives since 1960.

**OPERATIONS AND RESEARCH
HIGHWAY SAFETY RESEARCH AND DEVELOPMENT
PROGRAM AND FINANCING SCHEDULE**

	(\$000)		
Description	FY 2017 Actual	FY 2018 Annualized CR	FY 2019 Request
Obligations by Program Activity			
Highway Safety Programs	39,899	56,366	58,205
Research and Analysis	41,816	38,730	40,290
National Driver Register	5,164	5,165	5,400
Highway Safety Administrative Expenses	62,886	44,649	48,205
Direct program activities, subtotal	149,764	144,909	152,100
Reimbursable Program	15,319	15,000	15,000
Total new obligations	165,083	159,909	167,100
Budgetary Resources Available for Obligation			
Unobligated balance available, start of year	35,209	24,000	28,000
Adjustment of unobligated balance brought forward, Oct 1		-	-
Recoveries of prior year unpaid obligations	1,082	-	-
Unobligated balance (total)	36,291	24,000	28,000
Contract authority	145,900	149,000	152,100
Unobligated balance of contract authority permanently reduced	-	-	-
Contract authority - mandatory (total)	145,900	149,000	152,100
Collected	9,912	15,000	15,000
Change in uncollected payments, Federal sources	(3,328)	-	-
Spending authority from offsetting collections, mandatory total	6,584	15,000	15,000
Total Budgetary Resources Available	188,775	188,000	195,100
Change in Unpaid Obligations			
Unpaid obligations, brought forward, October 1	139,805	153,202	156,202
Obligations incurred, unexpired accounts	165,083	159,909	167,100
Outlays (gross) (-)	(150,619)	(159,909)	(167,100)
Recoveries of unpaid prior year obligations, unexpired accounts (-)	(1,067)	-	-
Unpaid obligations, end of year (gross)	153,202	153,202	156,202
Outlays (gross), detail			
Outlays from new discretionary authority	59,181	93,000	97,000
Outlays from discretionary balances	91,438	75,000	74,000
Total outlays (gross)	150,619	168,000	171,000
Offsets - Against Gross Budget Authority and Outlays			
Offsetting collections (cash) from: Federal sources	(9,050)	(15,000)	(15,000)
Offsetting collections (cash) from: Non-Federal sources	(877)		
Net Budget Authority and Outlays			
Budget authority (net)	145,900	149,000	152,100
Outlays (net)	140,692	153,000	156,000

**OPERATIONS AND RESEARCH
HIGHWAY SAFETY RESEARCH AND DEVELOPMENT
OBJECT CLASS SCHEDULE**

	(\$000)			
Description		FY 2017 Actual	FY 2018 Annualized CR	FY 2019 Request
Direct Obligations				
<u>Personnel Compensation</u>				
Full-time permanent		19,065	22,000	22,000
Other personnel compensation		1,016	1,000	1,000
Total personnel compensation		20,081	23,000	23,000
Civilian personnel benefits		6,011	7,000	7,000
Travel and Transportation of Persons		500	500	600
Rental payments to GSA		5,142	5,000	5,000
Communications, utilities, and miscellaneous charges		1,001	1,000	1,000
Advisory and assistance services		56,163	49,409	55,500
Other services from non-Federal sources		17,504	16,000	17,000
Other goods and services from Federal sources		9,115	9,000	9,000
Research and development contracts		3,168	3,000	3,000
Supplies and materials				
Equipment				
Grants and subsidies		31,078	31,000	31,000
Subtotal, Direct Obligations		149,763	144,909	152,100
<u>Reimbursable Obligations</u>				
Other services from non-federal sources		15,319	15,000	15,000
Total new obligations		165,083	159,909	167,100

NHTSA
FY 2019 HIGHWAY SAFETY ADMINISTRATIVE EXPENSES

	(\$000)		
Program Activity	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Salaries and Benefits	\$27,649	\$29,698	\$29,839
Travel	\$506	\$506	\$557
Transportation of Things	-	-	-
Rent, Communications & Utilities	\$11,806	\$7,306	\$7,777
Printing	-	-	-
Other Services	\$7,403	\$6,829	\$9,726
Supplies	\$2,080	\$2,080	\$2,130
Equipment	-	-	-
Total Administrative Expenses	\$49,444	\$46,419	\$50,028
FTE	156	175	175

Administrative Expenses

In FY 2019, NHTSA's Highway Safety Research and Development request includes \$50.03 million for the administrative expenses category. Costs associated with this category include the salaries and benefits for NHTSA employees who directly work on or indirectly provide support to the Highway Safety Research and Development programs together with other normal business expenses such as personnel operations; facilities management; parking management; printing and graphics; mail operation and dockets management operations; building security; utilities and building maintenance; voice, cable and wireless communications; Disability Resource Center;; substance abuse awareness and testing; financial services; and procurement and acquisition services.

The FY 2019 budget request includes baseline changes including an annualization of 1.9 percent pay raise for 2018. NHTSA will continue to distribute administrative expenses using a methodology based primarily on direct FTE allocation for the following categories: salaries and benefits, travel, transportation of things, rent, printing, supplies, equipment, and other services. Additionally, NHTSA payments for centralized administrative and support services for DOT's Working Capital Fund is estimated at \$13.77 million in FY 2019 and the expense is shared between accounts.

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EXHIBIT III-1

**NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
HIGHWAY TRAFFIC SAFETY GRANTS**

**Summary by Program Activity
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)**

	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Section 402 Formula Grant Program	\$ 252,300	\$ 250,587	\$ 270,400
Section 2009 High Visibility Enforcement	29,500	29,300	30,200
Section 405 National Priority Safety Programs*	277,500	275,615	283,000
<i>Section 405 Occupant Protection Grants</i>	36,075	35,830	36,790
<i>Section 405 State Traffic Safety Information System Grants</i>	40,238	39,964	41,035
<i>Section 405 Impaired Driving Countermeasures Grants</i>	145,688	144,698	148,575
<i>Section 405 Distracted Driving Grants</i>	23,588	23,427	24,055
<i>Section 405 Motorcyclist Safety Grants</i>	4,163	4,134	4,245
<i>Section 405 State Graduated Driver Licensing Laws</i>	13,875	13,781	14,150
<i>Section 405 Non-Motorized Safety Ped/Bikes</i>	13,875	13,781	14,150
Grant Administrative Expenses	26,072	25,895	26,608
TOTAL HIGHWAY TRAFFIC SAFETY GRANTS (TF)	\$ 585,372	\$ 581,397	\$ 610,208
<u>FTEs:</u>			
Direct Funded	74	88	88

Note: Totals may not add due to rounding.

HIGHWAY TRAFFIC SAFETY GRANTS

Program and performance Statement

The NHTSA Highway Traffic Safety Grant programs are the foundation for NHTSA's national priority safety programs implemented in the States, District of Columbia, the Indian Nations and the U.S. Territories. Using national and State data, States identify highway safety problems and direct programs and resources to the most promising safety countermeasures to save lives and prevent injuries. States annually set targets to direct resources to improve highway safety and provide an annual report outlining their safety achievements. With the signing of the FAST Act, several of the grant programs have been restructured to provide States with flexible and aligned resources to improve highway traffic safety for all road users. As of 2016, pedestrian fatalities have increased for the last three consecutive years, while bicyclist fatalities increased for the second consecutive year. To address these alarming safety trends, the FAST Act includes an additional grant program targeting non-motorized road users. It is imperative that NHTSA continue to fund cornerstone safety programs such as occupant protection and impaired driving, while also having the flexibility of funding new and emerging highway safety issues. Any funds available before the last day of any fiscal year must be reallocated from Section 405 subsections to Section 402. A total of \$583,600,000 is requested for NHTSA's Highway Traffic Safety Grant programs in FY 2019.

FY 2019 – Highway Safety Research and Development \$610,208,000

(\$000)			
Program	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Section 402 State and Community Formula Grants	\$252,300	\$250,587	\$270,400
Section 2009 High Visibility Enforcement	\$29,500	\$29,300	\$30,200
Section 405 - National Priority Safety Programs	\$277,500	\$275,615	\$283,000
Grants Administrative Expenses	\$26,072	\$25,895	\$26,608
Account Total	\$585,372	\$581,397	\$610,208

Section 402 State and Community Formula Grants
\$270,400,000

The State and Community Highway Safety formula grant program is the backbone of NHTSA's highway safety programs. These grants directly support the Department's efforts to promote safety by providing flexibility to States to address specific highway safety problems. States can use these grants for the following activities: alcohol and other impaired (drugged, distracted and drowsy) driving countermeasures; police traffic services; occupant protection (including child passenger safety and the dangers of heatstroke); traffic records; emergency medical services; motorcycle safety; pedestrian and bicyclist safety; speed management; and other innovative countermeasures to address emerging safety issues on America's roads.

Section 405 National Priority Safety Programs
\$283,000,000 (Total)

The Section 405 National Priority Safety Programs include mission critical traffic safety grants, as outlined in the subsections below. NHTSA requests funding to assist States to implement new strategies to address high-risk populations including persons who still do not buckle up and/or continue to drink and drive. These grants will also fund vital State traffic safety information system improvements that enable States to pinpoint unique problems as well as support NHTSA's data modernization program.

Section 405 Occupant Protection Grants
\$36,790,000 (13% of Sec. 405 Total)

The Occupant Protection grant program is based on a number of eligibility criteria, including the development of comprehensive Statewide occupant protection strategic plans and use of countermeasures focusing on areas such as rural and nighttime seat belt use, both being persistent occupant protection challenges. The program supports enactment and enforcement of primary enforcement seat belt laws. Seat belt use continues to be higher in States where vehicle occupants can be pulled over solely for not using a seat belt as compared with States with weaker or absent enforcement laws. These performance-based programs provide States that have achieved high belt use rates with flexibility on how to expend grant funds. With observed national seat belt usage now at 90.1 percent, States are turning to countermeasures focused on high-risk populations. In FY 2019, States will continue focusing on persons most at risk of being killed or injured in a crash due to non-belt use, as well as participation in the national *Click It or Ticket* high visibility enforcement campaign.

Section 405 State Traffic Safety Information System Grants
\$41,035,000 (14.5% of Sec. 405 Total)

The State Traffic Safety Information System Grant program provides funds to States to improve the timeliness, accuracy, completeness, uniformity, integration and accessibility of State highway safety data to identify priorities for State and local highway safety programs. This program directly supports efforts to improve State highway safety data through needed traffic record systems improvements, including mission critical data systems such as Fatality Analysis Reporting System.

Section 405 Impaired Driving Countermeasures, Ignition Interlock, and
24/7 Sobriety Grants
\$148,575,000 (52.5% of Sec. 405 Total)

The Impaired Driving Countermeasures Grant program provides incentives to States to enact laws and implement programs to reduce impaired driving-related fatalities and injuries, which continue to account for approximately one-third of all traffic deaths in the United States each year. The amended safety grant program builds on the success of the existing program, establishes qualifying criteria for States based on their performance on certain benchmarks, and provides dedicated funding for adoption of ignition interlock and 24/7 sobriety program laws for all offenders. All States are eligible for grants, but the conditions that would be applied to the administration and expenditure of these grants would differ for each State based on its safety performance. The grant program establishes three State categories: 1) Low-Range States; 2) Mid-Range States; and 3) High-Range States calculated from impaired driving fatality rates. In FY 2019, States will continue to increase the deployment of ignition interlock and 24/7 programs, establish DWI courts, expand the use of Traffic Safety Resource Prosecutor networks, and expand Advanced Roadside Interdiction and Detection (ARIDE) and Drug Recognition Expert (DRE) training programs for the law enforcement community. The FAST Act continues a separate grant program, under 405d, encouraging States to adopt and enforce mandatory alcohol-ignition interlock laws requiring all individuals convicted of a DUI offense to use an ignition interlock for not less than six months. The FAST Act created a new and separate 24-7 sobriety grant program. To qualify States must have a law requiring that all individuals convicted of driving while intoxicated receive restricted driving privileges for at least 30-days. States have flexibility in meeting the restriction requirement as the definition covers any type of State-imposed limitation, e.g., including license revocations or suspensions, location restrictions, alcohol-ignition interlock device requirements or alcohol use prohibitions.

Section 405 Distracted Driving Grants
\$24,055,000 (8.5% of Sec. 405 Total)

The Distracted Driving Grant program provides incentives to States to enact and enforce complying laws to prevent distracted driving. The FAST Act amends program criteria and includes separate baseline grants to give States more flexibility and incentives for meeting requirements, enacting and enforcing more rigorous laws. It also offers increased flexibility, allowing States to spend funds on safety education and awareness. States can spend funds on activities for enforcement of these laws and other behavioral highway safety activities. NHTSA will use up to \$5 million to develop and place broadcast digital, and print media to support enforcement activities of State distracted driving laws. Media messaging will focus on reaching those population groups most likely to engage in risky distracted driving behaviors.

Section 405 Motorcyclist Safety Grants
\$4,245,000 (1.5% of Sec. 405 Total)

The Motorcyclist Safety Grant program encourages the 50 States, District of Columbia and Puerto Rico to adopt effective motorcyclist safety programs, providing States additional flexibility to address emerging motorcycle safety issues. This program emphasizes State programs that include promoting rider education, improved motorist awareness, initiatives to reduce impaired driving and riding, and reducing the number of improperly licensed motorcyclists.

Section 405 State Graduated Driver Licensing Laws
\$14,150,000 (5% of Sec. 405 Total)

The State Graduated Driver Licensing (GDL) laws program promotes State adoption and implementation of effective GDL laws. The program requires that novice drivers under the age of 21 years comply with a 2-stage licensing process, and outlines minimum standards a State GDL program must implement. The FAST Act adjusts age and learner permit criteria and allows for more flexible use of funds for States receiving GDL funds.

Section 405 Non-Motorized Safety
\$14,150,000 (5% of Sec. 405 Total)

The FAST Act introduces a new safety grant program to reduce pedestrian and bicyclist injuries and fatalities. States with annual combined pedestrian and bicyclist fatalities totaling more than 15 percent of the State's total annual crash fatalities are eligible to receive funding. Funds can be used for law enforcement training, enforcement mobilization campaigns, and public education programs applicable to pedestrian and bicyclist safety.

High Visibility Enforcement
\$30,200,000

The High Visibility Enforcement (HVE) program provides funding for NHTSA media campaigns to increase seat belt use (*Click It or Ticket*) and decrease impaired driving (*Drive Sober or Get Pulled Over*). These HVE funds pay for broadcast and digital media to support State and local law enforcement efforts. Paid media will include advertisements in both English and Spanish, targeting those most at risk (18 to 34-year-old males) for traffic fatalities. Funding in FY 2019 will support the *Click It or Ticket* campaign in May and the *Drive Sober or Get Pulled Over* campaigns in August and December.

Detailed Justification for Highway Traffic Safety Grants

FY 2019 – HIGHWAY TRAFFIC SAFETY GRANTS – SUB-PROGRAM BUDGET REQUEST

(\$000)		
Highway Traffic Safety Grants Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Section 402 State and Community Formula Grants	\$250,587	\$270,400
Section 2009 High Visibility Enforcement	\$29,300	\$30,200
Section 405 - National Priority Safety Programs	\$275,615	\$283,000
<i>Sec 405 - Occupant Protection Grants</i>	<i>\$35,830</i>	<i>\$36,790</i>
<i>Sec 405 - State Traffic Safety Information System Grants</i>	<i>\$39,964</i>	<i>\$41,035</i>
<i>Sec 405 - Impaired Driving Countermeasures Grants</i>	<i>\$144,698</i>	<i>\$148,575</i>
<i>Sec 405 - Distracted Driving Grants</i>	<i>\$23,427</i>	<i>\$24,055</i>
<i>Sec 405 - Motorcyclist Safety Grants</i>	<i>\$4,134</i>	<i>\$4,245</i>
<i>Sec 405 - State Graduated Driver Licensing Laws</i>	<i>\$13,781</i>	<i>\$14,150</i>
<i>Sec 405 - Non-Motorized Safety Ped/Bikes</i>	<i>\$13,781</i>	<i>\$14,150</i>
Program Activity Total	\$555,502	\$583,600

In FY 2019, NHTSA requests \$610.21 million for the Highway Traffic Safety Grants program, of which \$583.60 million is for direct program activities. Funding at the requested level will allow NHTSA and its partners to implement programs effectively aimed at increasing safety and reducing roadway fatalities. The FY 2019 budget request highlights:

- Mission critical areas that address the Nation’s major behavioral highway safety issues including, but not limited to, impaired drivers, unbelted motor vehicle occupants, distracted drivers, and unhelmeted motorcycle fatalities. Sections 402 and 405 grants will provide States and local communities a means of maintaining and expanding traffic enforcement, and implementing data-driven countermeasures, to reduce crashes, injuries, and fatalities, and reduce the economic burden caused by motor vehicle crashes.
- Reduced grant application burden, including the use of a single application process for all the grant programs with one annual deadline, coupled with the development of an enhanced IT system for application submission, administration, and reconciliation. This IT modernization effort will support State safety performance measurement activities and streamline State and Federal processes.
- Maximum flexibility by allowing States to meet additional performance-based requirements for occupant protection, distracted driving, Graduated Driver Licensing laws, and motorcycle safety.

- Grant eligibility criteria that are performance-based and more objective for easier compliance and administration.
- Full accountability through problem identification and analysis to allocate resources and measure outcomes using safety performance measures.
- Emphasis placed on building highway safety program partnerships and program capacity.
- States with high seat belt use rates may elect to use up to 100 percent of their occupant protection funds awarded for any eligible project or activity under Section 402.
- States qualifying for the Comprehensive Distracted Driving grants may use up to 50 percent of awarded funds for any Section 402 eligible project.
- States conforming to Model Minimum Uniform Crash Criteria (MMUCC) requirements may use up to 75 percent for any Section 402 eligible project requirement if distracted driving data conform to the MMUCC requirements.
- States may use up to 75 percent of GDL grant award funds for any eligible Section 402 project or activity.
- Low fatality States, as determined by NHTSA, may elect to use up to 100 percent of grant funds awarded for any eligible Section 402 project. A low fatality State is one that is in the lowest 25 percent of all States for the number of drivers under 18 years involved in fatal crashes in the State as a percentage of the total number of drivers under 18 in the State.
- Non-motorized grant funds may be used only for training of law enforcement on State laws applicable to pedestrians and bicyclist safety; enforcement campaigns for State traffic laws applicable to pedestrians and bicyclist safety, and public education and awareness programs on State pedestrian and bicyclist safety laws.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 402 State and Community Formula Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.402 Formula Grants	\$250,587	\$270,400

What is this program and what does this funding level support?

The State and Community Highway Safety formula grant program is the backbone of NHTSA's highway safety programs. These grants directly support the Department's safety efforts by providing flexibility to States to address highway safety problems. States can use these grants for the following activities: alcohol and other impaired (drugged, distracted, and drowsy) driving countermeasures; police traffic services; occupant protection (including child passenger safety, and the dangers of heatstroke); traffic records; emergency medical services; motorcycle safety; pedestrian and bicyclist safety; speed management; and other safety countermeasures to address emerging issues on America's roads. In 2016, 37,461 people died as a result of motor vehicle crashes.²⁹ In addition to the human suffering and injuries caused by the tragedy of highway crashes, the total economic cost of motor vehicle crashes in the United States is estimated to be \$242 billion annually.

The FAST Act maintains key components of the existing law, including:

- All States, territories, the District of Columbia, Puerto Rico, and the Bureau of Indian Affairs, that submit approved highway safety plans will receive safety grant funding based on the current formula which factors in road miles and population.
- States have the option of applying for supplemental funds for specialized NHTSA research and demonstration programs in the States that receive funds from the Research and Demonstration program.
- States are afforded flexibility that will result in more efficient use of State funds and could advance the completion of safety research projects of interest to the States.
- States are provided resources to implement a comprehensive, Statewide traffic safety enforcement program that helps ensure minimum levels of traffic enforcement in each jurisdiction.
- This core safety grant program will also allow States to pool money to fund regional programs and activities that span across State lines (e.g., combine alcohol or speed enforcement initiatives between bordering States).
- A portion of these grant funds will support a cooperative research and evaluation program of highway safety countermeasures to be jointly managed by NHTSA and the States.

²⁹ FARS 2016. National Highway Traffic Safety Administration.

In FY 2019, NHTSA requests \$270.40 million for Section 402 State and Community Formula Grants. Funding at this level will allow NHTSA safety partners to use proven and effective countermeasures to identify and address critical highway safety problems. The proven countermeasures were developed through NHTSA's research and demonstration program and documented in *Countermeasures That Work*, a highway safety countermeasure guide that is updated periodically by NHTSA for State highway safety offices. Of importance, NHTSA is implementing a new, modernized information system that will significantly advance safety performance measurement and reporting by States. The grant program directly supports the Department's safety efforts by providing flexibility to States to address highway safety problems.

What benefits will be provided to the American public through this request and why is this program necessary?

The Section 402 grant program is critical for States and Territories to address specific State and local highway safety problems that may be better solved through regional and local strategies. This program has become even more critical as highway-related fatalities continue to rise, along with the economic costs associated with those crashes. States are an integral part of the solution but their role is extremely limited without the Federal funds. In addition to funding critical highway safety initiatives in the States, the request will support the implementation of a comprehensive Statewide traffic safety enforcement program to ensure continued traffic enforcement in resource-challenged States and communities, pool funding across jurisdictions for joint highway safety programs, and fund the cooperative research and evaluation program of highway safety countermeasures (to be jointly managed by NHTSA and the States). See the Highway Safety Programs section for more information.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 405 Occupant Protection Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.405B National Priority Safety Program - Occupant Protection Grants	\$35,830	\$36,790

What is this program and what does this funding level support?

The Occupant Protection grant program is based on a number of eligibility criteria, including development of comprehensive Statewide occupant protection strategic plans and countermeasures focusing on rural and nighttime belt use, both of which are persistent occupant protection risks. Eligible States can qualify for grant funds as either a high seat belt use rate State or as a lower seat belt use rate State. All States participate in the nationwide *Click It or Ticket* campaign, have an active network of child restraint inspection stations, and have a plan to recruit, train and maintain a sufficient number of child passenger safety technicians. States with lower seat belt use rates must meet three of six additional criteria to qualify for an occupant protection grant.

When used properly, occupant protection devices, including seat belts and child safety seats, can be 45 to 60 percent effective in reducing the risk of fatal injury in a crash. NHTSA estimates that among vehicle occupants age five years and older in 2016, seat belts saved an estimated 14,668 lives.³⁰ If all unrestrained passenger vehicle occupants age five years and older had worn seat belts in 2016, an estimated 2,456 additional lives could have been saved.

According to NHTSA's *Countermeasures That Work*, studies indicate that correctly using a child restraint for a young child, or wearing a seat belt by older children and adults, is the single most effective way to save lives and reduce injuries in crashes. Since 1999, the Occupant Protection Grants program has worked effectively to help States establish Statewide occupant protection programs for children and adults. States have strengthened their occupant protection laws by providing stronger enforcement (from secondary to primary enforcement), and requiring that children ride properly secured in an age appropriate child restraint or booster seat (until they reach a certain weight and height limit).

In FY 2019, NHTSA requests \$36.79 million for Occupant Protection Grants. Funding at this level will allow NHTSA's partners to support enactment and enforcement of primary enforcement seat belt laws. Belt use continues to be higher in States where vehicle occupants can be stopped solely for not using a seat belt, as compared with States with weaker or absent enforcement laws. These performance-based safety programs provide States that have achieved high belt use rates

³⁰ National Center for Statistics and Analysis (2017, October). Lives saved in 2016 by restraint use and minimum-drinking-age laws (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 454). Washington, DC: National Highway Traffic Safety Administration.

with flexibility on how to spend grant funds. With observed national seat belt usage now at 90.1 percent, States are focusing on countermeasures focused on high-risk populations.

In FY 2019, States will continue identifying individuals at risk of being killed or injured in a crash due to non-belt use and participation in the national *Click It or Ticket* high visibility enforcement campaign. Grant funds could be used for a variety of occupant protection programs and activities, including support for high visibility enforcement campaigns, training, education, safety equipment, information systems, and child passenger safety programs.

What benefits will be provided to the American public through this request and why is this program necessary?

Increasing seat belt and child safety seat usage saves lives and mitigates injuries. These grant funds support increased enforcement of the State occupant protection laws. States are working to use countermeasures focused on high-risk populations such as nighttime drivers, young drivers, pickup truck drivers, and minority and hard-to-reach population groups. National seat belt use is at 90.1 percent from 60 percent in 1995, when the first *Click It or Ticket* enforcement campaign was held. Thirty-four States, DC, Puerto Rico, and 4 Territories have primary seat belt laws; and all 50 States have child restraint laws.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 405 State Traffic Safety Information System Improvement Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.405C National Priority Safety Program - State Traffic Safety Information System	\$39,964	\$41,035

What is this program and what does this funding level support?

The State Traffic Safety Information System Grants program supports improvements in highway and traffic safety records information systems, allowing States to identify, document and evaluate the most pressing safety problems. The program brings together different stakeholders – such as law enforcement, injury surveillance personnel and courts – to ‘communicate’ and link files in disparate data systems. Key areas can include crash, driver licensing, vehicle registration, emergency medical services, injury surveillance systems, citation and adjudication, and roadway data. Improved data is critical for States to determine crash trends that include serious injury trends, identification of traffic safety issues, and determination of effectiveness of traffic safety programs. In addition, improved State data will enhance NHTSA’s ability to observe and analyze national trends such as crash occurrences, rates of injury, contributing casual factors, and emerging safety issues.

In FY 2019, NHTSA requests \$41.04 million for State Traffic Safety Information System Improvements. Funding at this level will allow NHTSA safety partners to improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of State traffic records for identifying priorities for State and local highway safety programs. States require data to assess accurately whether their countermeasure programs are effective in achieving project goals. Since the program began in FY 2005, States have implemented improvements such as transition from paper police crash reports to electronic reports, allowing timelier dissemination and analyses of data. The reports are more accurate, timely, uniform, and complete.

What benefits will be provided to the American public through this request and why is this program necessary?

The program has provided better accessibility to stakeholders in need of safety data. The result - States can examine what countermeasures should be developed to improve safety on the Nation’s highways, while improving efficiency and effectiveness of data systems. Without accurate and timely data, States and the Federal government cannot properly identify safety trends and emerging safety problems.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 405 Impaired Driving Countermeasures Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.405D National Priority Safety Program - Impaired Driving Countermeasures	\$144,698	\$148,575

What is this program and what does this funding level support?

The Impaired Driving Countermeasures Grants program provides financial incentives to States to enact laws and implement programs to reduce alcohol and drug-impaired driving related fatalities and injuries. The amended grant program builds on the success of the existing program while establishing qualifying criteria for States based on their performance on certain benchmarks such as alcohol-impaired fatality rate. All States, DC and PR will be eligible for grants, but the conditions that would be applied to the administration and expenditure of these grants would differ for each State based on its safety performance. The grant program establishes three State categories: 1) Low-Range States; 2) Mid-Range States; and 3) High-Range States. These categories are based on their impaired driving fatality rates. In addition, the program provides additional incentive funds to States that adopt a mandatory ignition interlock and/or a 24/7 program for offenders.

In FY 2019, NHTSA requests \$148.58 million for Impaired Driving Countermeasure Grants. Funding at this level will allow NHTSA's partners to support programs that address driving under the influence of alcohol and/or drugs, as well as focus on State performance in addressing impaired driving. Grant funds may be used to support a wide range of impaired driving countermeasures. All grant recipients are required to participate in the national impaired driving crackdowns and comply with enforcement reporting requirements. Enforcement of strong impaired driving laws has proven to reduce impaired driving and the resultant fatalities and injuries caused by impaired driving crashes.

What benefits will be provided to the American public through this request and why is this program necessary?

Funding will allow States to increase the deployment of ignition interlocks, establish Driving While Intoxicated (DWI) courts, expand the use of Traffic Safety Resource Prosecutors (TSRPs), and to expand Advanced Roadside Interdiction and Detection (ARIDE) and Drug Recognition Expert (DRE) training programs for law enforcement. In recent years, nearly 30 percent of fatal crashes involved an alcohol-impaired driver (BAC of .08 or higher), and 10,497 people were killed in these crashes during 2016.³¹ Progress in addressing impaired driving crashes has been mixed. Some States and communities have demonstrated a commitment to address impaired driving issues

³¹ FARS 2016. National Highway Traffic Safety Administration.

and have achieved considerable success, while others have achieved limited or no progress. Additional incentives to work on life-saving countermeasures in all States are needed. Strategies States are encouraged to promote with Section 405(d) funds may include checkpoints, DWI courts, Administrative License Revocation (ALR) legislation, and use of interlocks to decrease recidivism and keep drunk drivers off the road. Evaluation results can be found in *Countermeasures That Work* and other NHTSA publications. The percentage of alcohol-impaired driving fatalities has declined from 48 percent in 1982 to 28 percent in 2016.³²

³² FARS 1982 and 2016. National Highway Traffic Safety Administration.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 405 Distracted Driving Prevention Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.405E National Priority Safety Program - Distracted Driving	\$23,427	\$24,055

What is this program and what does this funding level support?

The Distracted Driving Prevention Grant program provides incentives to States to enact and enforce complying laws to prevent distracted driving. The FAST Act eased certain requirements for the Comprehensive Distracted Driving grant and affords States flexibilities on how grant funds may be spent. The basis for the Comprehensive grant is a requirement that the State tests for distracted driving issues on the driver's license exam and that the State have a conforming law with a minimum fine. States would be able to spend grant funds on activities related to the enforcement of these laws or other behavioral highway safety activities. NHTSA funds up to \$5 million to develop and place broadcast, digital, and other media to support State and local high visibility enforcement activities during National Distracted Driving month in April. Media strategies will focus on reaching those segments of the population most likely to engage in distracted driving behavior.

In 2016, 3,450 people died in crashes involving a distracted driver.³³ Surveys indicate that most drivers are aware of the dangers of driving while talking on a cell phone or while texting. However, one survey found that two-thirds of drivers admitted to talking on their cell phone while driving last year, and 21 percent indicated that they had sent or read a text message while driving. The youngest Americans are most at risk, but they are not alone. At any given moment during the daylight hours, approximately 542,000 vehicles are being driven by someone using a hand-held cellular phone. People of all ages are using a variety of hand-held devices when they are behind the wheel, such as cell phones, mp3 players, and navigation devices. The request is intended to spur States to enact safety laws to prevent distraction, and provide funds for enforcement of these laws.

In FY 2019, NHTSA requests \$24.06 million for the Distracted Driving Prevention Grant program. Funding at this level will allow NHTSA and the States to work toward reducing crashes, injuries, and fatalities related to distracted driving. NHTSA will work with States to encourage law enforcement agencies nationwide to enforce current distracted driving laws through high visibility enforcement. These activities will be supported by appropriate broadcast, digital, and social media messaging. The funding will support development of policies and activities to strengthen efforts to end distracted driving.

³³ FARS 2016. National Highway Traffic Safety Administration.

What benefits will be provided to the American public through this request and why is this program necessary?

Ownership and use of cell phones, geographic information systems, and other potentially distracting devices in motor vehicles has increased dramatically over the last few years and is expected to continue to grow. Unless our Nation acts soon to strongly discourage use of these devices while driving, more people will be killed or injured by distracted drivers. This funding level should provide adequate incentives to encourage States to pass and enforce laws to prevent distracted driving.

NHTSA's experience in programs to increase seat belt usage has demonstrated the effectiveness of strong laws coupled with high visibility enforcement. NHTSA completed a demonstration project with New York and Connecticut that showed a decline in both handheld cell phone use and texting while driving as the result of high visibility enforcement of laws banning handheld cellular phone use and texting while driving. According to *Countermeasures That Work*, an evaluation of one District of Columbia law banning handheld cell phone use while driving showed a 50 percent reduction in handheld use after one year; largely attributed to strong enforcement. More recently, NHTSA partnered with Delaware and California to demonstrate the effectiveness of high visibility enforcement of Statewide laws banning handheld cell phone use and texting while driving.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 405 Motorcyclist Safety Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.405F National Priority Safety Program - Motorcyclist Safety	\$4,134	\$4,245

What is this program and what does this funding level support?

The Motorcyclist Safety Grant program encourages States to adopt effective motorcyclist safety programs. The grant program would allow States to expend funds on training and education activities to increase motorist awareness of motorcyclists and to train motorcycle operators.

In FY 2019, NHTSA requests \$4.25 million for Motorcyclist Safety Grants. Funding at this level will allow NHTSA safety partners to continue and expand efforts to reduce motorcycle crashes and address emerging safety issues at the State and local levels. In 2016, there were 5,286 motorcyclists killed in traffic crashes.³⁴ Motorcyclists accounted for 14 percent of all traffic fatalities.³⁵ The increase in fatalities has occurred among all age groups and in all regions of the country and has offset safety improvements in other areas, such as motor vehicle occupant safety.

What benefits will be provided to the American public through this request and why is this program necessary?

NHTSA estimates that helmets saved the lives of 1,859 motorcyclists in 2016. If all motorcyclists had worn helmets, an additional 802 lives could have been saved.³⁶ Helmets are estimated to be 37 percent effective in preventing fatal injuries to motorcycle riders and 41 percent for motorcycle passengers. In other words, for every 100 motorcycle riders killed in crashes while not wearing helmets, 37 of them could have been saved had they all worn helmets. Motorcyclist safety training and public awareness and outreach programs targeting both motorcyclists and motorists are countermeasures that are prominently featured in most State motorcyclist safety programs. This program will provide States more flexibility in using grant funds. Funds could be spent on a variety of activities, with an emphasis on enforcement and the promotion of helmet use laws, rather than solely motorcyclist awareness and training.

³⁴ FARS 2016. National Highway Traffic Safety Administration.

³⁵ FARS 2016. National Highway Traffic Safety Administration.

³⁶ National Center for Statistics and Analysis (2017, October). Lives saved in 2016 by restraint use and minimum-drinking-age laws (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 454). Washington, DC: National Highway Traffic Safety Administration.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 405 State Graduated Driver Licensing Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.405G National Priority Safety Program - State Graduated Driver Licensing Laws	\$13,781	\$14,150

What is this program and what does this funding level support?

The State Graduated Driver Licensing (GDL) program encourage States to adopt and implement effective GDL laws. The program establishes minimum standards for novice teen driver licensing programs including a 2-stage licensing process with a learner's permit stage and an intermediate stage. According to NHTSA's *Countermeasures That Work*, studies indicate that a 2-stage driver licensing program decreases novice teen driver death and injury. Motor vehicles crashes are the leading cause of death for those ages 15 to 20 years old. In 2016, there were 1,908 young drivers 15 to 20 years old who died in motor vehicle crashes.³⁷

In FY 2019, NHTSA requests \$14.15 million for the State GDL program. Funding at this level will allow NHTSA safety partners to spend funds on enforcing a 2-stage licensing program, training law enforcement personnel, developing educational materials, and administrative activities. Generally, 75 percent of funds may be used for any traffic safety eligible project or activity under the Section 402 State and Community Formula Grant Program. The number of young drivers involved in fatal crashes has decreased by 36 percent from 2007 to 2016.³⁸

What benefits will be provided to the American public through this request and why is this program necessary?

Novice driver licensing programs vary across States. This program will fund States to adopt and expand efforts to reduce young driver deaths by implementing standardized and comprehensive multi-stage GDL programs. This dedicated funding will promote State adoption and implementation of standardized GDL programs.

³⁷ FARS 2016. National Highway Traffic Safety Administration.

³⁸ FARS 2007 and 2016. National Highway Traffic Safety Administration.

HIGHWAY TRAFFIC SAFETY GRANTS
Section 405 Non-Motorized Safety Grants

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Sec.405H National Priority Safety Program - Non-Motorized Safety	\$13,781	\$14,150

What is this program and what does this funding level support?

The newly established Non-Motorized Safety Grants encourage States to implement programs to address pedestrian and bicyclist safety. More Americans are walking and biking, and consequently, more pedestrians and bicyclists are killed in motor vehicle crashes. NHTSA conducted the National Survey of Bicyclist and Pedestrian Attitudes and Behaviors in 2002, and again in 2012, to understand attitudes and self-reported behavior of bicyclists and pedestrians. In 2002 fewer than 30 percent of participants reported cycling more often than they had a year earlier, and in 2012 nearly 40 percent of respondents reported cycling more often than they had a year earlier. By 2012, there was a 14 percent increase among respondents who said they had walked in the past 30 days, and also walked more often than they had a year earlier. Local bicyclist and pedestrian data corroborate this finding of recent increases in bicycling and walking.

In FY 2019, NHTSA requests \$14.15 million for Non-Motorized Safety Grants. Funding at this level will allow NHTSA safety partners to spend funds for law enforcement training, to implement effective law enforcement initiatives, and to educate the public on State traffic safety laws. The 5-year trend for bicyclist fatalities rose to a high of 840 fatalities in 2016, an increase of 1.3 percent from 2015. The 5-year trend for pedestrian fatalities rose to a high of 5,987 in 2016, an increase of 9 percent from 2015. As a percentage of the total motor vehicle-related deaths in 2016, pedestrian fatalities represented 16 percent and bicyclist fatalities represented 2.2 percent, for a total of 18.2 percent of total fatalities.³⁹ With increasing fatalities, it is imperative to enforce, implement and enhance pedestrian and bicyclist safety.

What benefits will be provided to the American public through this request and why is this program necessary?

This grant program will support States with significant annual combined pedestrian and bicyclist fatalities, exceeding 15 percent of their total annual crash fatalities in the State, to conduct enforcement and education countermeasures sufficiently to address unique problems with pedestrian and bicyclist safety.

³⁹ FARS 2015 and 2016. National Highway Traffic Safety Administration.

HIGHWAY TRAFFIC SAFETY GRANTS
High Visibility Enforcement

(\$000)		
Program Activity	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
High Visibility Enforcement	\$29,300	\$30,200

What is this program and what does this funding level support?

This program provides funding for NHTSA media campaigns. The national occupant protection campaign (*Click It or Ticket*) occurs during the Memorial Day period and consists of two weeks of high visibility enforcement (HVE) to increase the use of seat belts. This enforcement effort is supported by two weeks of paid national media and earned media activities. NHTSA follows the same model for the impaired driving campaigns to reduce alcohol-impaired operation of motor vehicles. The impaired driving campaigns occur during the Labor Day and December holiday seasons. Using the “*Drive Sober or Get Pulled Over*” message, HVE resources are used for broadcast, digital, and other media to support State and local law enforcement efforts.

Paid media will include advertisements in both English and Spanish languages and will continue to focus on at risk 18 to 34-year-old males. Paid media will focus on media venues that deliver programming particularly suited to this audience for both impaired driving (21 to- 34-year-old males) and occupant protection (18 to 34-year-old males), including late night TV, sports programming, and alternative media consumed by the target audiences. The impaired driving advertising effort in August will also include impaired motorcyclists, as motorcyclists continue to be overrepresented in alcohol-related crashes. Additionally, NHTSA will include other at risk populations overrepresented in alcohol-related crashes, such as newly-arrived Hispanics.



In FY 2019 NHTSA requests \$30.20 million for the Section 2009 High Visibility Enforcement program. Funding at this level will provide NHTSA the resources necessary to develop and conduct media campaigns that will support law enforcement efforts to deter impaired driving and to increase seat belt use. By providing national media coverage, the States can leverage their resources to place advertising buys in very specific markets and concentrate efforts on engaging law enforcement. Funding will allow NHTSA to purchase media with very targeted messaging on enforcement activities and increase the driving public’s awareness of zero tolerance for drunk and unbuckled drivers.

The funds will provide for the production of advertisements and purchase of appropriate media in support of HVE seat belt mobilizations and impaired driving crackdowns. Funding in support of communications initiatives works in conjunction with law enforcement activities to modify community behavior by presenting the risks of both serious injury and/or a citation for violating occupant protection and impaired driving laws.

What benefits will be provided to the American public through this request and why is this program necessary?

The request will support continued National and State efforts to increase safety belt use and decrease drunk driving through media buys. The FY 2019 budget requests funding for three media buys; one occupant protection mobilization for Memorial Day and two impaired driving crackdowns during the Labor Day and December holiday seasons. These activities have proven effective in reducing fatalities and injuries on our highways.

**HIGHWAY TRAFFIC SAFETY GRANTS
PROGRAM AND FINANCING SCHEDULE**

	(\$000)		
Description	FY 2017 Actual	FY 2018 Annualized CR	FY 2019 Request
Obligations by Program Activity			
Section 402 Formula Grants	271,780	250,587	270,400
Section 406 Safety Belt Performance NASS Modernization (no-year)	1,092	-	-
Section 2009 High Visibility Enforcement Program	29,500	29,300	30,200
Section 405b Occupant Protection Grants	36,075	35,830	36,790
Section 405c State Traffic Safety Information Systems Grants	40,238	39,964	41,035
Section 405d Impaired Driving Countermeasures Grants	145,687	144,698	148,575
Section 405e Distracted Driving Grants	17,973	23,427	24,055
Section 405f Motorcyclist Safety Grants	4,163	4,134	4,245
Section 405g State Graduated Driver Licensing Laws	-	13,781	14,150
Section 405h National Priority Safety Program - Non-Motorized Safety Ped/Bikes	13,875	13,781	14,150
Administrative Expenses - Chapter 4 of Title 23	24,235	25,895	26,608
NHTSA Sec 154/164 Penalties to 402 Program - Flex Transfers	101,241	99,262	
Total Direct Obligations	685,858	680,658	610,208
Reimbursable Program	-	-	-
Total New Obligations	685,858	680,658	610,208
Budgetary Resources			
Unobligated balance available, start of year	142,499	142,776	160,000
Adjustments to unobligated bal			
Adjustments to unobligated balance, October 1			
Recoveries of prior year unpaid obligations	278	-	-
Anticipated Recoveries of prior-year unpaid obligations (unobligated balances) (+ or -)	-	-	-
Unobligated balance available (total)	142,776	142,776	160,000
Budget Authority			
Appropriations (disc):			
Appropriation (trust fund)(disc.)	585,372	581,397	610,208
Adjustments to appropriations (disc.)			
Transferred from other accounts (appropriations) (+)	101,241	99,262	
Portion applied to liquidate contract authority (-)	(686,613)	(680,658)	(610,208)
Appropriation (disc.) (total)	-	-	-
Contract Authority (mand.)			
Contract Authority (mand.)	585,372	597,629	610,208
Transferred to other accounts	-	-	-
Transferred from other accounts	101,241	99,262	-
Unobligated balances permanently reduced	-	-	-
Collected (disc) (cash) (unexpired only)			
Contract authority (mand.) total	686,613	696,891	610,208
Total budgetary resources available	829,389	839,667	770,208
Change in Obligated Balance			
Obligated balance, brought forward, Oct 1: (gross)	897,361	904,222	895,222
Adjustment to unpaid obligations, brought forward Oct 1			
Obligations incurred, unexpired accounts	685,858	680,000	610,000
Outlays (gross)	(678,720)	(688,000)	(694,000)
Recoveries of prior year unpaid obligations, unexpired	(278)	(1,000)	(1,000)
Unpaid obligated balance, end of year (gross)	904,222	895,222	810,222
Outlays (gross), detail			
Outlays from new discretionary authority	137,568	238,000	250,000
Outlays from discretionary balances	541,152	450,000	444,000
Federal sources			
Total outlays (gross)	678,720	688,000	694,000

**HIGHWAY TRAFFIC SAFETY GRANTS
OBJECT CLASS SCHEDULE**

	(\$000)			
Description		FY 2017 Actual	FY 2018 Annualized CR	FY 2019 Request
Direct Obligations				
<u>Personnel Compensation</u>				
Full-time permanent		9,356	10,000	10,000
Total personnel compensation		9,356	10,000	10,000
Civilian personnel benefits		2,125	3,000	3,000
Communications, utilities, and miscellaneous charges		952	1,000	1,000
Advisory and assistance services		37,653	38,300	38,000
Other services from non-Federal sources		7,663	8,000	8,000
Other goods and services from Federal sources		3,747	4,000	4,000
Grants and subsidies		624,363	616,358	546,208
Total new obligations		685,858	680,658	610,208

NHTSA

FY 2019 SAFETY GRANTS ADMINISTRATIVE EXPENSES

	(\$000)		
Program Activity	FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST
Salaries and Benefits	\$12,371	\$13,212	\$13,275
Travel	\$377	\$377	\$415
Transportation of Things	-	-	-
Rent, Communications & Utilities	\$428	\$428	\$502
Printing	-	-	-
Other Services	\$12,896	\$11,878	\$12,416
Supplies	-	-	-
Equipment	-	-	-
Total Administrative Expenses	\$26,072	\$25,895	\$26,608

FTE (includes indirect FTE)	74	88	88
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Administrative Expenses

In FY 2019, NHTSA's Highway Traffic Safety Grants request includes \$26.61 million for administrative expenses. Costs associated with this category include the salaries and benefits for employees in NHTSA's headquarters Office of Grants Management Operations and ten regional office teams who directly support and guide NHTSA State partners. Administrative funding also supports other business expenses such as personnel operations, facilities management, parking management, printing and graphics, mail operation and dockets management operations, building security, utilities and building maintenance, voice, cable and wireless communications, Disability Resource Center, substance abuse awareness and testing, and procurement, acquisition, and support services.

The FY 2019 budget request includes baseline changes including an annualization of 1.9 percent pay raise for 2018. NHTSA will continue to distribute administrative expenses using a methodology based primarily on direct FTE allocation for the following categories: salaries and benefits; travel; transportation of things, rent, printing, supplies, equipment; and other services.

Funding also supports enhancements to the grants information management system to provide improved and more transparent distribution and monitoring of grant allocations to the States; more effective oversight over highway safety fund distributions; and improved capabilities to evaluate the thousands of highway safety projects at the State, local, and territorial level being considered for grant funding. System improvements will range from mission critical safety performance measurement and reporting capabilities to improved tracking of grant activities.

Included in the FY 2019 request is \$1.86 million for the National Occupant Protection Use Surveys (NOPUS). This funding supports the distraction initiative by reporting driver use rates of cell phone and other electronic devices. This funding will also allow the agency to conduct a 2019 NOPUS survey and report overall seat belt use and motorcycle helmet use, and allow NHTSA to report on the results of child restraint use and belt use among rear-seat occupants from the 2018 NOPUS. Additionally, NHTSA payments for centralized administrative and support services for DOT's Working Capital Fund is estimated at \$13.77 million in FY 2019 and the expense is shared between accounts.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

APPROPRIATIONS HISTORY

OPERATIONS AND RESEARCH VEHICLE SAFETY PROGRAMS GENERAL FUND - APPROPRIATIONS

<u>Fiscal Year</u>	<u>Request</u>	<u>Fiscal Year</u>	<u>Enacted</u>
2010	\$129,774,000	2010	\$140,427,000
2011	\$132,837,000	2011	\$140,146,146
2012	\$170,708,723	2012	\$140,146,000
2013 ^{1/}	\$188,000,000	2013 ^{2/}	\$140,146,000
2014	\$148,343,000	2014	\$134,000,000
2015 ^{3/}	\$152,000,000	2015	\$130,000,000
2016 ^{4/}	\$179,000,000	2016	\$152,800,000
2017 ^{5/}	\$249,800,000	2017	\$180,075,000
2018	\$152,509,527	2018	-
2019	\$152,427,000	2019	-

^{1/} In FY 2013, the Budget proposed to move a number of current General Fund programs into the Transportation Trust Fund. Vehicle Safety Research was to be funded from the Trust Fund in 2013 and re-based from the General Fund in 2011 and 2012.

^{2/} FY 2013 Levels were reduced to reflect a .02% A-T-B rescission to all funds. In addition, Vehicle Safety General Fund were reduced by an additional .05% for sequestration.

^{3/} In FY 2015, the Budget proposed to move a number of current General Fund programs into the Transportation Trust Fund. Vehicle Safety Research was to be funded from the Trust Fund in 2015 and re-based from the General Fund in 2013 and 2014.

^{4/} In FY 2016, the Budget proposed to move a number of current General Fund programs into the Transportation Trust Fund. Vehicle Safety Research was to be funded from the Trust Fund in 2016 and re-based from the General Fund in 2014 and 2015.

^{5/} In FY 2017, the Budget proposed to move a number of current General Fund programs into the Transportation Trust Fund. Vehicle Safety Research was to be funded from the Trust Fund in 2017 and re-based from the General Fund in 2015 and 2016.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

APPROPRIATIONS HISTORY

OPERATIONS AND RESEARCH HIGHWAY SAFETY RESEARCH AND DEVELOPMENT TRUST FUND - CONTRACT AUTHORITY

Limitation on Obligations & Liquidation of Contract Authority

<u>Fiscal Year</u>	<u>Request</u>	<u>Fiscal Year</u>	<u>Enacted</u>
2010	\$107,329,000	2010	\$105,500,000
2011	\$117,376,000	2011	\$105,500,000
2012 ^{1/}	\$133,191,276	2012 ^{1/}	\$109,500,000
2013 ^{1/}	\$150,000,000	2013 ^{2/}	\$115,500,000
2014 ^{1/}	\$118,500,000	2014 ^{1/}	\$123,500,000
2015 ^{1/}	\$122,000,000	2015 ^{1/}	\$138,500,000
2016 ^{1/}	\$152,000,000	2016 ^{1/}	\$142,900,000
2017 ^{1/}	\$145,900,000	2017 ^{1/}	\$145,900,000
2018 ^{1/}	\$149,000,000	2018 ^{1/}	-
2019 ^{1/}	\$152,100,000	2019 ^{1/}	-

^{1/} For FY's 2012-2019, National Driver Register is eliminated as a separate account and combined with the Highway Safety Research and Development fund.

^{2/} FY 2013 Levels were reduced to reflect a .02% A-T-B rescission to all funds. In addition, Vehicle Safety General Fund were reduced by an additional .05% for sequestration.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

APPROPRIATIONS HISTORY

HIGHWAY TRAFFIC SAFETY GRANTS TRUST FUND - CONTRACT AUTHORITY

Limitation on Obligations & Liquidation of Contract Authority			
<u>Fiscal Year</u>	<u>Request</u>	<u>Fiscal Year</u>	<u>Enacted</u>
2010	\$626,047,000	2010	\$619,500,000
2011	\$620,697,000	2011	\$619,500,000
2012	\$556,100,000	2012	\$550,328,000
2013	\$643,000,000	2013 ^{1/}	\$554,500,000
2014	\$561,500,000	2014	\$561,500,000
2015	\$577,000,000	2015	\$561,500,000
2016	\$577,000,000	2016	\$573,332,000
2017	\$585,372,000	2017	\$585,372,000
2018	\$597,629,000	2018	-
2019	\$610,208,000	2019	-

^{1/} FY 2013 Levels were reduced to reflect a .02% A-T-B rescission to all funds. In addition, Vehicle Safety General Fund were reduced by an additional .05% for sequestration.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

APPROPRIATIONS HISTORY

NATIONAL DRIVER REGISTER TRUST FUND - CONTRACT AUTHORITY

Limitation on Obligations & Liquidation of Contract Authority			
<u>Fiscal Year</u>	<u>Request</u>	<u>Fiscal Year</u>	<u>Enacted</u>
2010	\$4,078,000	2010	\$4,000,000
2011	\$4,170,000	2011	\$4,000,000
2012 ^{1/}	\$0	2012 ^{1/}	\$0
2013 ^{1/}	\$0	2013 ^{1/}	\$0
2014 ^{1/}	\$0	2014 ^{1/}	\$0
2015 ^{1/}	\$0	2015 ^{1/}	\$0
2016 ^{1/}	\$0	2016 ^{1/}	\$0
2017 ^{1/}	\$0	2017 ^{1/}	\$0
2018 ^{1/}	\$0	2018 ^{1/}	-
2019 ^{1/}	\$0	2019 ^{1/}	-

^{1/} For FY's 2012-2019, National Driver Register is eliminated as a separate account and combined with the Highway Safety Research and Development fund.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

APPROPRIATIONS HISTORY MODERNIZATION INITIATIVE NATIONAL DRIVER REGISTER

GENERAL FUND - APPROPRIATIONS

<u>Fiscal Year</u>	<u>Request</u>	<u>Fiscal Year</u>	<u>Enacted</u>
2010	\$0	2010	\$3,350,000
2011	\$2,530,000	2011	\$3,350,000
2012	\$0	2012	\$0
2013	\$0	2013	\$0
2014	\$0	2014	\$0
2015	\$0	2015	\$0
2016	\$0	2016	\$0
2017	\$0	2017	\$0
2018	\$0	2018	-
2019	\$0	2019	-

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EXHIBIT IV-1
RESEARCH, DEVELOPMENT & TECHNOLOGY
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
BUDGET AUTHORITY
(In thousands of dollars)

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION		FY 2017 ENACTED	FY 2018 ANNUALIZED CR	FY 2019 REQUEST	FY 2019 Applied
A.	Research and Analysis	41,100	39,926	37,306	37,306
	Vehicle Safety (VS)	41,100	39,926	37,306	37,306
	1. Crashworthiness	16,800	16,576	13,447	13,447
VS	a. Safety Systems	7,400	7,350	5,210	5,210
VS	b. Biomechanics	9,400	9,226	8,237	8,237
VS	2. Crash Avoidance	12,300	12,106	9,216	9,216
VS	a. Crash Avoidance	10,400	10,219	8,301	8,301
VS	b. Heavy Vehicles	1,900	1,887	915	915
VS	3. Alternative Fuels Vehicle Safety	1,400	1,390	674	674
VS	4. Vehicle Electronics and Emerging Technology	10,100	9,357	3,469	3,469
VS	5. Automated Driving Systems	-	-	10,000	10,000
VS	6. Vehicle Test Center - Ohio	500	497	500	500
B.	Highway Safety Research	11,628	11,411	11,748	11,748
	Subtotal	52,728	51,337	49,054	49,054
C.	Administrative Expenses*	16,249	14,737	14,692	-
	Vehicle Safety (VS)	11,895	11,023	10,690	-
	Highway Safety (HS)	4,354	3,714	4,002	-
Total R&D = VS+HS Research and Analysis, VS+ HS Admin		68,977	66,074	63,746	49,054
Memo: Percentage Administrative to Total		23.6%	22.3%	23.0%	0.0%

Note: Totals may not add due to rounding.

*Pro-rated share based on percentage of R&D program amounts shown above to Administrative Expenses for Vehicle Research and Behavioral Research.

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