



**U.S. Department of  
Transportation**

# **BUDGET ESTIMATES**

**FISCAL YEAR 2010**

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**RESEARCH AND  
INNOVATIVE TECHNOLOGY  
ADMINISTRATION**

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

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**SECTION: 1**

**ADMINISTRATOR'S**

**OVERVIEW**

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION (RITA)  
FY 2010 Congressional Budget Submission**

**Administrator's Overview**

The FY 2010 budget request reflects the Research and Innovative Technology Administration's (RITA) mission of:

- coordinating, facilitating and reviewing the Department of Transportation's (DOT) research, development and technology (RD&T) activities;
- advancing innovative technologies, including intelligent transportation systems;
- providing comprehensive transportation statistics research, analysis, and reporting; and
- furthering education and training in transportation and transportation-related fields.

RITA works with the Department's Operating Administrations and with transportation partners from other federal agencies, state and local governments, universities, stakeholder organizations, transportation professionals and system operators to advance the Department's strategic goals by serving as the Department's research and innovation focal point. From carrying out advanced research to providing funding to test and evaluate new approaches across modes, collecting and analyzing data and training transportation professionals, RITA enables and expedites transportation innovation.

A number of Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU; P.L. 109-59) requirements are delegated to RITA:

- Sec. 1801(e) – National Ferry Database.
- Sec. 5201(m) – Biobased Transportation Research.
- Sec. 5208 – Transportation Research and Development Strategic Planning.
- Sec. 5209 – National Cooperative Freight Research Program.
- Subtitle C – Intelligent Transportation System Research (Secs. 5301-5310).
- Secs. 5401/5402/3036(d) – University Transportation Centers (UTC).
- Sec. 5506 – Commercial Remote Sensing Products and Spatial Information Technologies.
- Sec. 5513 – Research Grants.
- Subtitle F/Sec. 5601 – Bureau of Transportation Statistics.

FY 2010 Budget Request Summary:

RITA's FY 2010 Budget Request is \$41 million. This request aligns with RITA's efforts to achieve the objectives outlined in the Norman Y. Mineta Research and Special Programs Improvement Act (P.L. 108-426), the *DOT Strategic Plan FY 2006-2011* and the *RITA Strategic Plan FY 2008-2012*. RITA's budget includes over \$300 million in reimbursable funding for multimodal transportation-related research, analysis, technology transfer, education and training activities performed at the John A. Volpe National Transportation Systems Center (Volpe Center; Cambridge, MA) and the Transportation Safety Institute (Oklahoma City, OK).

## Highlights of the Request

Research and Development Account (General Fund): The budget request is \$13.179 million, which includes \$7.143 million for salaries and administrative expenses and \$6.036 million for Research, Development and Technology programs.

- Salaries and Administrative Expenses: The budget request is \$7.143 million and provides funding for direct staff for the Office of Research, Development and Technology (RD&T) and associated overhead staff to support RITA's administrative infrastructure. The funding also provides for administrative expenses, including travel, training, rent, working capital, IT support and E-Government initiatives.
- Research, Development and Technology: The program budget request is \$6.036 million. RITA manages and carries out the Department's strategic planning, coordination, facilitation and review for the Department's research programs; and manages DOT's responsibilities for coordinating and developing Positioning, Navigation and Timing (PNT) technology, PNT policy coordination, and spectrum management. The following initiatives are included in this request. :
  - RD&T Coordination (\$.536 million);
  - Hydrogen Fuels R&D ( \$.5 million);
  - Nationwide Differential Global Positioning System (NDGPS) (\$4.6 million);  
and
  - Positioning, Navigation and Timing (PNT) (\$.4 million)

## Bureau of Transportation Statistics Account (BTS) (Highway Trust Fund):

The budget request for the BTS account is \$28 million. Program is funded as an allocation under the Federal-aid Highways account. BTS is responsible for developing and disseminating timely, relevant and high quality transportation data and information for all modes to public and private transportation decision makers through programs that address:

- Freight and Travel Statistics (National and International);
- Transportation Economics;
- Geospatial Information Systems;
- Statistical Methods and Standards Performance Measurement and
- Airline Transportation Statistics (Reimbursable from FAA).

BTS also administers RITA's National Transportation Library. The mission of the National Transportation Library (NTL) is to maintain and facilitate access to statistical and other information needed for transportation decision-making at the Federal, State, and local levels and to coordinate with public and private transportation libraries and information providers to improve information sharing among the transportation community.

Other RITA-Managed Programs: Intelligent Transportation Systems (ITS) Research Program:

The ITS Research Program is currently funded through the Federal Highway Administration (FHWA) under SAFETEA-LU (Subtitle c) for \$110,000,000. The ITS program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing, technology transfer, training and technical guidance. The Secretary has assigned RITA management responsibility for all programmatic elements related to the ITS program.

Reimbursable/Other Programs: In FY 2010, RITA staff will continue to carry out the multi-dimensional activities described above and will continue to conduct, coordinate, facilitate, and review over \$300 million in transportation-related research, analysis, technology transfer, deployment, education and training activities associated with:

- *John A. Volpe National Transportation Systems Center* (Volpe Center, Cambridge, MA) which provides research, analysis, technology deployment, and other technical knowledge and expertise to DOT and non-DOT customers on specific transportation systems projects or issues, on a fee-for-service basis.
- *Transportation Safety Institute* (Oklahoma City, OK) which provides training to more than 30,000 DOT and non-DOT transportation professionals annually in transportation safety and security, on a fee-for-service and tuition basis.
- *University Transportation Centers (UTC) Program* which advances U.S. technology and expertise in many transportation-related disciplines, and advances DOT RD&T priorities, through grants for transportation education, research and technology transfer at university-based centers of excellence.

RITA's Support for the Strategic Objectives of the *DOT Strategic Plan*

While pursuing its Mineta Act mandate and the broader RD&T coordination mission for DOT, RITA uses the *DOT Strategic Plan* to guide programmatic and administrative decisions, and to formulate and manage resource requirements.

The FY 2010 budget request supports all of the Department's strategic objectives. Examples of the linkage between these objectives and RITA's FY 2010 programs include (*Reimbursable activities not include*):

Safety [\$0]

- Undertaking hydrogen safety R&D, and accelerating the hydrogen safety education and training initiative with the National Association of State Fire Marshals.
- Providing multimodal safety training at the Transportation Safety Institute, as part of RITA's reimbursable programs.

#### Reduced Congestion [\$7,171,000]

- Enhancing transportation planning and operations by distributing transportation data through the National Transportation Atlas Database (NTAD), and supporting the transportation component of the National Spatial Data Infrastructure (NSDI).
- Maintaining the Nationwide Differential Global Positioning System (NDGPS).
- Performing system engineering and assessment toward developing a Civil Positioning, Navigation and Timing (PNT) Architecture.

#### Global Connectivity [\$21,182,000]

- Conducting and analyzing the Commodity Flow Survey (CFS), the only national snapshot of freight commodity movement in the U.S.
- Routinely collecting, analyzing and publishing information on transborder surface freight data for U.S. exports to and imports from Canada and Mexico.
- Providing monthly incoming border crossing/entry data for vehicles, containers, passengers, and pedestrians on the U.S.-Canadian and U.S.-Mexican borders.
- Supplying technical support for the International Trade Data System (ITDS) and developing and managing the information portal for DOT users.

#### Environmental Stewardship [\$852,000]

- Leading the Department's participation in the President's Hydrogen Fuel Initiative, the Hydrogen R&D Interagency Task Force, and the International Partnership for a Hydrogen Economy (IPHE).
- Conducting research projects in hydrogen fuels technology, including a hydrogen infrastructure analysis study and hydrogen materials compatibility research.

#### Security, Preparedness and Response [\$0]

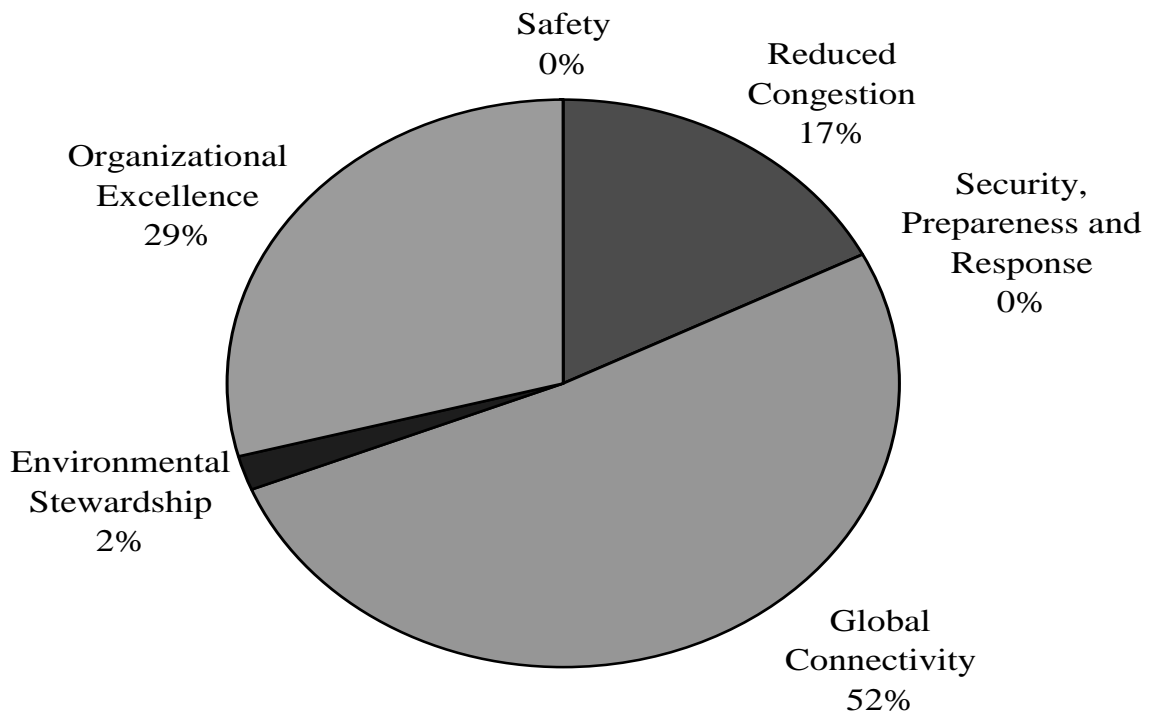
- Providing sophisticated mapping support to the DOT Crisis Management Center (CMC).
- Providing significant technical and training support to DOT and non-DOT transportation security activities through the Volpe National Transportation Systems Center and the Transportation Safety Institute, as part of RITA's reimbursable programs.

#### Organizational Excellence [\$11,974,000]

- Completing, and tracking and reporting status and results against, the *Transportation Research, Development and Technology Strategic Plan 2006-2010*.
- Leveraging the resources of the National Transportation Library to develop an accessible transportation knowledge network.
- Increasing the relevance to DOT and national RD&T priorities of the transportation research activities undertaken by the university centers funded through the University Transportation Centers (UTC) Program.



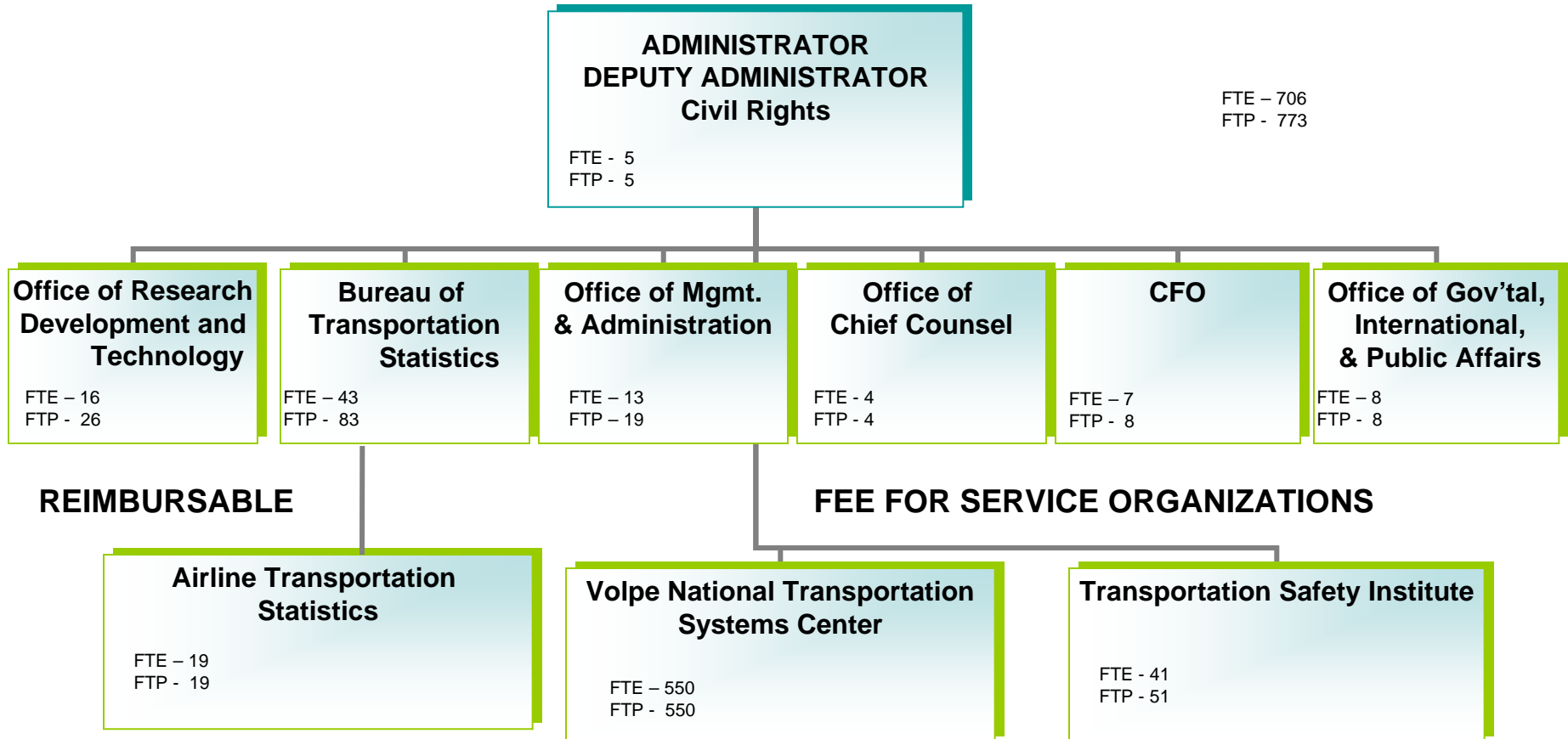
## RITA Support to DOT Strategic Objectives



**ORGANIZATIONAL  
CHARTS**

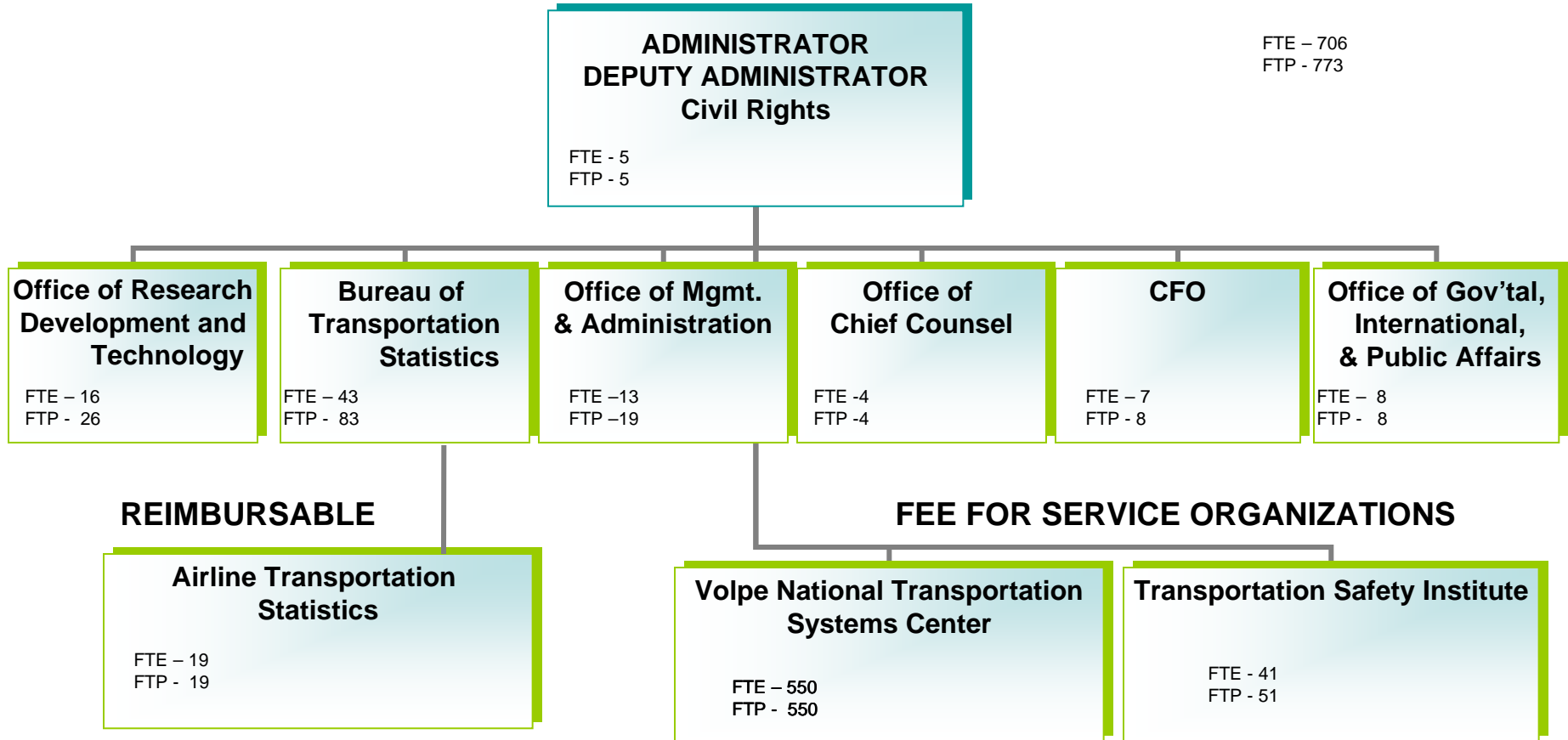
# RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

FY 2009



# RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION

FY 2010



**SECTION 2**

**BUDGET SUMMARY**

**TABLES**

**EXHIBIT II-1**

**COMPARATIVE STATEMENT OF NEW BUDGET AUTHORITY  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Appropriations, Obligation Limitations and Exempt Obligations  
(\$000)**

<b><u>Account Name</u></b>	<b><u>FY 2008 ACTUAL</u></b>	<b><u>FY 2009 ENACTED</u></b>	<b><u>FY 2010 REQUEST</u></b>
Research and Development	12,000	12,900	13,179
Bureau of Transportation Statistics (HTF)	<u>[27,000]</u>	<u>[27,000]</u>	<u>[28,000]</u>
<b>TOTAL: [Discretionary]</b>	<b>12,000</b>	<b>12,900</b>	<b>13,179</b>

<sup>1</sup> Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highways program.

**EXHIBIT II-2**

**FY 2010 BUDGET REQUEST BY APPROPRIATION ACCOUNT  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Research and Development  
Appropriations, Obligation Limitations and Exempt Obligations  
(\$000)**

	<u>FY 2008 ACTUAL</u>	<u>FY 2009 ENACTED</u>	<u>FY 2010 REQUEST</u>
<u>Research and Development:</u>			
Salaries and Administrative Expenses	5,964	5,964	7,143
Hydrogen Fuels Safety Research and Development	500	1,400	500
RD&T Coordination	536	536	536
Nationwide Differential Global Positioning System	4,600	5,000	4,600
Positioning, Navigation and Timing (PNT)	<u>400</u>	<u>0</u>	<u>400</u>
<b>TOTAL: [Discretionary]</b>	<b>12,000</b>	<b>12,900</b>	<b>13,179</b>
<u>Reimbursable Programs/Other:</u>			
University Transportation Centers <sup>1/</sup>	[76,700]	[76,700]	[76,700]
Transportation Safety Institute	[20,000]	[20,000]	[20,000]
VOLPE National Transportation Systems Center	[250,000]	[250,000]	[250,000]
Intelligent Transportation Systems	[110,000]	[110,000]	[110,000]
<b>TOTAL: [Reimbursable/Other]</b>	<b>[456,700]</b>	<b>[456,700]</b>	<b>[456,700]</b>

<sup>1</sup> Beginning in FY 2009, FHWA allocation, \$69,100,000; FTA reimbursable, \$7,600,000.

**EXHIBIT II-2**

**FY 2010 BUDGET REQUEST BY APPROPRIATION ACCOUNT  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Bureau of Transportation Statistics (Allocation Account under FHWA's Federal-Aid Highways)  
Appropriations, Obligations Limitations and Exempt Obligations  
(\$000)**

	<b>FY 2008 ACTUAL</b>	<b>FY 2009 ENACTED</b>	<b>FY 2010 REQUEST</b>
<b><u>Bureau of Transportation Statistics</u></b>			
Travel Statistics	2,947	2,947	3,056
Freight Statistics	10,723	10,723	11,120
Transportation Economics	1,811	1,811	1,878
Geospatial Information	1,758	1,758	1,823
Compilations, Methods and Standards	7,416	7,416	7,691
National Transportation Library	<u>2,345</u>	<u>2,345</u>	<u>2,432</u>
<b>TOTAL: [Discretionary]</b> <sup>1/</sup>	<b>[27,000]</b>	<b>[27,000]</b>	<b>[28,000]</b>
<b><u>Reimbursable Programs:</u></b>			
Air Transportation Statistics	[4,000]	[4,000]	[4,000]

<sup>1/</sup> Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highway program.



**Exhibit II-3**

**FY 2010 BUDGET REQUEST BY APPROPRIATION ACCOUNT AND STRATEGIC GOAL  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
RESEARCH AND DEVELOPMENT  
Appropriations, Obligation Limitations, & Exempt Obligations  
(\$000)**

	REDUCED	GLOBAL	ENVIRON.		ORG.		
<b>Appropriation/Program Activity</b>	<b><u>SAFETY</u></b>	<b><u>CONGEST</u></b>	<b><u>CONNECT.</u></b>	<b><u>STEWARD.</u></b>	<b><u>SECURITY</u></b>	<b><u>EXCEL</u></b>	<b><u>TOTAL</u></b>
<u>Research and Development</u>							
Hydrogen Fuels Safety Research and Development	0	0	0	852	0	0	852
Research, Development & Technology Coordination	0	0	0	0	0	6,979	6,979
Nationwide Differential Global Positioning System	0	4,948	0	0	0	0	4,948
Positioning, Navigation and Timing (PNT)	<u>0</u>	<u>400</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>400</u>
<b>Total</b>	<b>0</b>	<b>5,348</b>	<b>0</b>	<b>852</b>	<b>0</b>	<b>6,979</b>	<b>13,179</b>
<b>Total Direct FTE</b>	0	1	0	1	0	24	26

Exhibit II-3

FY 2010 BUDGET REQUEST BY APPROPRIATION ACCOUNT AND STRATEGIC GOAL  
 RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
 BUREAU OF TRANSPORTATION STATISTICS (HTF Allocation)  
 Appropriations, Obligation Limitations, & Exempt Obligations  
 (\$000)

Appropriation/Program Activity	REDUCED	GLOBAL	ENVIRON.	ORG.		TOTAL
	<u>SAFETY</u>	<u>CONGEST</u>	<u>CONNECT.</u>	<u>STEWARD.</u>	<u>SECURITY</u>	
Travel Statistics	0	0	3,056	0	0	3,056
Freight Statistics	0	0	11,120	0	0	11,120
Transportation Economics	0	0	1,878	0	0	1,878
Geospatial Information	0	1,823	0	0	0	1,823
Compilations, Methods and Standards	0	0	5,128	0	2,563	7,691
National Transportation Library	<u>0</u>	<u>0</u>		<u>0</u>	<u>2,432</u>	<u>2,432</u>
<b>TOTAL</b>	<b>0</b>	<b>[1,823]</b>	<b>[21,182]</b>	<b>0</b>	<b>0</b>	<b>[4,995] [28,000]</b>
<b>TOTAL Direct FTE</b>		<b>6</b>	<b>53</b>		<b>11</b>	<b>70</b>

**Exhibit II-3A**

**FY 2010 BUDGET REQUEST BY APPROPRIATION ACCOUNT AND STRATEGIC OBJECTIVE  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Appropriations, Obligation Limitations, & Exempt Obligations  
FY2010 IT Budget Request by Investment and Strategic Objective**

(\$000)

	SAFETY	REDUCED CONGESTION	GLOBAL CONNECTIVITY	ENVIRONMENTAL STEWARDSHIP	SECURITY	ORGANIZATIONAL EXCELLENCE	TOTAL
<b><u>Decision Unit: BTS</u></b>							
<b>DOTXX098: DOT Interfaces to International Trade Data System(ITDS)</b>							<b>617</b>
Increase reliability		43					
Reduce barriers to trade			463				
Achieve PMA						111	
<b>RITAX005: RITA Web</b>							<b>2,238</b>
Increase reliability		157					
Reduce barriers to trade			1,679				
Achieve PMA						403	
<b>RITAX006: RITA Mission Support</b>							<b>1,576</b>
Increase reliability		110					
Reduce barriers to trade			1,182				
Achieve PMA						284	
<b>RITAX024: Transportation Research Collaboration Website</b>							<b>659</b>
Increase reliability		46					
Reduce barriers to trade			494				
Achieve PMA						119	
<b>RITAX777: Common IT Services</b>							<b>1,523</b>
Increase reliability		107					
Reduce barriers to trade			1,142				
Achieve PMA						274	
<b><u>Decision Unit: RD&amp;T</u></b>							
<b>DOTXX098: DOT Interfaces to International Trade Data System(ITDS)</b>							<b>200</b>
Increase reliability		82					
Reduce barriers to trade				12			
Achieve PMA						106	
<b>RITAX022: Transportation Research Database</b>							<b>12</b>
Increase reliability		5					
Reduce barriers to trade				1			
Achieve PMA						6	
<b>RITAX777: Common IT Services</b>							<b>566</b>
Increase reliability		232					
Reduce barriers to trade				34			
Achieve PMA						300	
Total		<b>782</b>	<b>4,960</b>	<b>47</b>	<b>0</b>	<b>1,602</b>	<b>7,191</b>
FTEs		0.6	2.3	0.2	0	1.5	4.6

**EXHIBIT II-4**

**FY 2010 BUDGET REQUEST RECAP BY ACCOUNT  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Appropriations, Obligation Limitations, and Exempt Obligations  
\$(000)**

<u>Accounts</u>	<b>FY 2008 <u>ACTUAL</u></b>	<b>FY 2009 <u>ENACTED</u></b>	<b>FY 2010 <u>REQUEST</u></b>
<b>Research and Development</b>	12,000	12,900	13,179
<b>Bureau of Transportation Statistics</b>			
Travel Statistics	2,947	2,947	3,056
Freight Statistics	10,723	10,723	11,120
Transportation Economics	1,811	1,811	1,878
Geospatial Information	1,758	1,758	1,823
Compilations, Methods and Standards	7,416	7,416	7,691
National Transportation Library	<u>2,345</u>	<u>2,345</u>	<u>2,432</u>
<b>Total - Bureau of Transportation Statistics <sup>1/</sup></b>	<b>[27,000]</b>	<b>[27,000]</b>	<b>[28,000]</b>
<b>TOTAL</b>	<b>12,000</b>	<b>12,900</b>	<b>13,179</b>

<sup>1/</sup> Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highway program.

**EXHIBIT II-5**

**FY 2010 BUDGET REQUEST BY ACCOUNT  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**

**Outlays  
(\$000)**

<b><u>Accounts</u></b>	<b><u>FY 2008 ACTUAL</u></b>	<b><u>FY 2009 ENACTED</u></b>	<b><u>FY 2010 REQUEST</u></b>
Research and Development	-113,000	212,000	13,000
VOLPE National Transportation Systems Center	<u>-79,000</u>	<u>0</u>	<u>0</u>
<b>TOTAL</b>	<b>-192,000</b>	<b>212,000</b>	<b>13,000</b>

**EXHIBIT II-6**

**SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Appropriations, Obligation Limitations, and Exempt Obligations  
(\$000)  
RESEARCH AND DEVELOPMENT**

**Baseline Changes**

	2009 ENACTED	2009 PC&B BY PROGRAM	2009 # FTE PER PROGRAM	2009 CONTRACT EXPENSES	ANNUALIZATION OF 2009 PAY RAISE	2010 PAY RAISES	WCF INC/DEC	INFLATION/ DEFLATION	FY 2009 ADJUSTED BASE	Program INCREASES/ DECREASES	2010 PC&B PROGRAM INCREASE	2010 # FTE PER PROGRAM INCREASE	2010 CONTRACT EXPENSE PROGRAM INCREASES	FY 2010 REQUEST
<b>OPERATIONS</b>			Note Non-Add									Note Non-Add		
PERSONNEL RESOURCES (FTE)	26													
Direct FTE	26								26					26
<b>FINANCIAL RESOURCES</b>														
<b>ADMINISTRATIVE EXPENSES</b>														
Salaries and Benefits	3,573		26		43	54			3,670	320				3,990
Travel	134							1	135					135
Training	53							0	53					53
GSA Rent	563								563					563
Other Services:														-
-WCF	960						68		1,028					1,028
-Common Services	567							3	570	690				1,260
Equipment	73							0	73					73
Supplies	41							0	41					41
<b>Admin Subtotal</b>	<b>5,964</b>		<b>26</b>		<b>43</b>	<b>54</b>	<b>68</b>	<b>4</b>	<b>6,133</b>	<b>1,010</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,143</b>
<b>PROGRAMS</b>														
<b>Research and Development Program</b>														
Hydrogen Fuels Safety R&D	1,400							0	1,400	-900				500
RD&T Coordination	536							0	536					536
NDGPS	5,000							0	5,000	-400				4,600
PNT	0							0	0	400				400
<b>Programs Subtotal</b>	<b>6,936</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,936</b>	<b>-900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,036</b>
<b>TOTAL</b>	<b>12,900</b>		<b>26</b>		<b>43</b>	<b>54</b>	<b>68</b>	<b>4</b>	<b>13,069</b>	<b>110</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13,179</b>

**EXHIBIT II-6**  
**SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE**  
**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
**Appropriations, Obligation Limitations, and Exempt Obligations**  
**(\$000)**

**BUREAU OF TRANSPORTATION STATISTICS (Highway Trust Fund Allocation)**

	Baseline Changes											FY 2010 REQUEST		
	2009 ENACTED	2009 PC&B PROGRAM	2009 # FTE PER PROGRAM	2009 CONTRACT EXPENSES	2009 ANNUALIZATION OF 2009 PAY RAISE	2010 PAY RAISES	GSA RENT	WCF INC/DEC	INFLATION/ DEFLATION	FY 2009 Adjusted Base	Program INCREASES/ DECREASES		2010 PC&B PROGRAM INCREASE	2010 # FTE PER PROGRAM INCREASE
<b>OPERATIONS</b>			Note Non-Add										Note Non-Add	
<b>PERSONNEL RESOURCES (FTE)</b>	70													
Direct FTE	70								70					70
<b>FINANCIAL RESOURCES</b>														
<b>ADMINISTRATIVE EXPENSES</b>														
Salaries and Benefits	14,448		70		173	217			14,837					14,837
Travel	115								116					116
Training	66								66					66
GSA Rent	1,414						107		1,521					1,521
Other Services:														
-WCF	3,022							212	3,234					3,234
- Common Services	2,815								2,829	251				3,080
Supplies	20								20					20
Equipment	355								357					357
<b>Admin Subtotal</b>	<b>22,255</b>		<b>70</b>		<b>173</b>	<b>217</b>	<b>107</b>	<b>212</b>	<b>22,980</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,231</b>
<b>PROGRAMS</b>														
Travel Statistics	0								0	0				0
Freight Statistics	2,995								3,010					3,010
Transportation Economics	0								0	0				0
Geospatial Information	200								201					201
Compilations, Methods and Standards	1,100								1,106					1,106
National Transportation Library	450								452					452
<b>Programs Subtotal</b>	<b>4,745</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,769</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,769</b>
<b>GRAND TOTAL</b>	<b>27,000</b>		<b>70</b>		<b>173</b>	<b>217</b>	<b>107</b>	<b>212</b>	<b>27,749</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,000</b>

**EXHIBIT II-6A**

**WORKING CAPITAL FUND  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Appropriations, Obligation Limitations, Exempt Obligations and Reimbursable Obligations  
(\$000)**

	<b><u>FY 2009</u></b> <b><u>ENACTED</u></b>	<b><u>FY 2010</u></b> <b><u>REQUEST</u></b>	<b><u>CHANGE</u></b>
<b><u>Direct Account:</u></b>			
Research and Development	960	1,028	68
<b><u>Allocation Account:</u></b>			
Bureau of Transportation Statistics	3,022	3,257	235
<b><u>Reimbursable Account:</u></b>			
Airline Transportation Statistics	815	873	58
VOLPE National Transportation Systems Center	<u>3,545</u>	<u>236</u>	<u>-3,309</u>
<b>SUBTOTAL:</b>	4,360	1,109	-3,251
<b>TOTAL</b>	<b>8,342</b>	<b>5,394</b>	<b>-2,948</b>



**EXHIBIT II-7**

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
PERSONNEL RESOURCE - SUMMARY  
Total Full-time Equivalents**

	<u>FY 2008 ACTUAL</u>	<u>FY 2009 ENACTED</u>	<u>FY 2010 REQUEST</u>
<b>DIRECT FUNDED BY APPROPRIATION</b>			
Research and Development	<u>22</u>	<u>26</u>	<u>26</u>
<b>SUBTOTAL, DIRECT FUNDED:</b>	<b>22</b>	<b>26</b>	<b>26</b>
<b>REIMBURSEABLE/ALLOCATION/OTHER:</b>			
<b><u>Allocation Account:</u></b>			
Bureau of Transportation Statistics	71 <sup>1</sup>	70 <sup>1</sup>	70 <sup>1</sup>
<b><u>Reimbursable:</u></b>			
Air Transportation Statistics	14	19	19
Transportation Safety Institute	38	41	41
Volpe National Transportation Systems Center	505	550	550
<b><u>Other:</u></b>			
Intelligent Transportation Systems [non-add]	<u>[17]</u>	<u>[17]</u>	<u>[17]</u>
<b>SUBTOTAL, REIMBURSE./ALLOC./OTHER</b>	<b><u>628</u></b>	<b><u>680</u></b>	<b><u>680</u></b>
<b>TOTAL FTEs</b>	<b>650</b>	<b>706</b>	<b>706</b>

<sup>1</sup>Funding supports approximately 27 overhead FTE.

**EXHIBIT II-8**

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
RESOURCE SUMMARY - STAFFING  
Full-Time Permanent Positions**

	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>
	<b><u>ACTUAL</u></b>	<b><u>ENACTED</u></b>	<b><u>REQUEST</u></b>
<b>DIRECT FUNDED BY APPROPRIATION</b>			
Research and Development	<u>22</u>	<u>36</u>	<u>36</u>
<b>SUBTOTAL, DIRECT FUNDED:</b>	<b>22</b>	<b>36</b>	<b>36</b>
<b>REIMBURSEABLE/ALLOCATION/OTHER:</b>			
<b><u>Allocation Account:</u></b>			
Bureau of Transportation Statistics	71 <sup>1</sup>	117 <sup>1</sup>	117 <sup>1</sup>
<b><u>Reimbursable:</u></b>			
Air Transportation Statistics	14	19	19
Transportation Safety Institute	38	51	51
Volpe National Transportation Systems Center	505	550	550
<b><u>Other:</u></b>			
Intelligent Transportation Systems [non-add]	<u>[17]</u>	<u>[17]</u>	<u>[17]</u>
<b>SUBTOTAL, REIMBURSE./ALLOC./OTHER</b>	<b><u>628</u></b>	<b><u>737</u></b>	<b><u>737</u></b>
<b>TOTAL FTEs</b>	<b>650</b>	<b>773</b>	<b>773</b>

<sup>1</sup>Funding supports approximately 27 overhead FTE.

**SECTION 3**

**BUDGET REQUEST BY**

**APPROPRIATION ACCOUNT**

**RESEARCH  
AND  
DEVELOPMENT**

## **RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**

### **RESEARCH AND DEVELOPMENT**

For necessary expenses of the Research and Innovative Technology Administration, [\$12,900,000] \$13,179,000, of which [\$6,936,000] \$6,036,000 shall remain available until September 30, [2011]2012 : *Provided* , That there may be credited to this appropriation, to be available until expended, funds received from States, counties, municipalities, other public authorities, and private sources for expenses incurred for training. (*Department of Transportation Appropriations Act, 2009.*)

**EXHIBIT III-1**  
**Research and Development**  
**Appropriations Summary by Program Activity**  
**Appropriations, Obligation Limitations, and Exempt Obligations**  
**(\$000)**

	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>CHANGE</b>
	<b><u>ACTUAL</u></b>	<b><u>ENACTED</u></b>	<b><u>REQUEST</u></b>	<b><u>FY 2009-2010</u></b>
<b><u>Research and Development</u></b>				
Salaries and Administrative Expenses	5,964	5,964	7,143	1,179
Hydrogen Fuels Safety Research & Development	500	1,400	500	-900
RD&T Coordination	536	536	536	0
Nationwide Differential Global Positioning System	4,600	5,000	4,600	-400
Positioning, Navigation and Timing (PNT)	<u>400</u>	<u>0</u>	<u>400</u>	<u>400</u>
<b>TOTAL</b>	<b>12,000</b>	<b>12,900</b>	<b>13,179</b>	<b>279</b>
<b><u>FTEs</u></b>				
<b>Direct Funded:</b>	22	26	26	0
<b>Reimbursable, allocation, other:</b>				
Transportation Safety Institute	38	41	41	0
Volpe National Transportation Systems Center	505	550	550	0
Intelligent Transportation Systems [non-add]	[17]	[17]	[17]	0

**EXHIBIT III-2**

**RESEARCH AND DEVELOPMENT  
SUMMARY ANALYSIS OF CHANGE FROM FY 2009 TO FY 2010  
Appropriations, Obligations, Limitations and Exempt Obligations  
(\$000)**

<b>Item</b>	<b>Change from FY 2009 to FY 2010</b>	<b>FY 2010 PC&amp;B by Program</b>	<b>FY 2010 FTEs by Program</b>	<b>FY 2010 Contract Expenses</b>	<b>Total</b>
<b>FY 2009 ENACTED</b>	<b>12,900</b>	<b>Note: Columns are Non-Add</b>			<b>12,900</b>
<b>RESEARCH AND DEVELOPMENT</b>					
<b>Adjustments to Base</b>					
2009 Pay Raise Annualization (3.9%)	43				
2010 Pay Raise (2.0%)	54				
Working Capital Fund Increase	68				
Inflation	4				
<b>Subtotal, Adjustments to Base</b>	<b>169</b>				
<b>New or Expanded Programs</b>					
Salaries & Admin Expenses	1,010	7,143	26	0	7,143
Hydrogen Fuels Safety R&D	-900			500	500
RD&T Coordination		0	0	536	536
Positioning System (NDGPS)	-400	0	0	4,600	4,600
(PNT)	400	0	0	400	400
<b>Subtotal, New or Expanded Program Increases/Decreases</b>	<b>110</b>	<b>7,143</b>	<b>26</b>	<b>6,036</b>	<b>13,179</b>
<b>Total FY 2010 Request</b>	<b>13,179</b>	<b>7,143</b>	<b>26</b>	<b>6,036</b>	<b>13,179</b>

## **RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**

### **RESEARCH AND DEVELOPMENT**

#### **Program and Performance**

The Research and Innovative Technology Administration (RITA) is responsible for coordinating, facilitating, and reviewing the Department's research and development programs and activities. Coordination and advancement of research and technology activities is led by the RITA Office of Research, Development and Technology and is funded through the General Fund. RITA also manages DOT's responsibilities for coordinating and developing Positioning, Navigation and Timing (PNT) technology, PNT policy coordination, and spectrum management. RITA is also the program manager for the Nationwide Differential Global Positioning System.

RITA also oversees and provides direction to the following programs and activities.

The Bureau of Transportation Statistics (BTS) manages and shares statistical knowledge and information on the Nation's transportation systems, including statistics on freight movement, geospatial transportation information, and transportation economics. BTS is funded by an allocation from the Federal Highway Administration's Federal-Aid Highways account.

The Intelligent Transportation Systems (ITS) Joint Program Office (JPO) facilitates the deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational field testing, technology transfer, training and technical guidance. The ITS Research Program is currently funded through the Federal Highway Administration (FHWA) under SAFETEA-LU (Subtitle C).

The University Transportation Centers (UTC) advance U.S. technology and expertise in many transportation-related disciplines through grants for transportation education, research, and technology transfer at university-based centers of excellence. Funding has been transferred to RITA through interagency agreements; beginning in 2009, UTCs will be funded from an allocation from the Federal Highway Administration's Federal-Aid Highways account.

The John A. Volpe National Transportation Systems (Cambridge, MA) provides expertise in research, analysis, technology deployment, and other technical knowledge to DOT and non-DOT customers on specific transportation systems projects or issues, on a fee-for-service basis.

The Transportation Safety Institute develops and conducts safety, security, and environmental training, products, and services for both the public and private sector on a fee-for-service and tuition basis.



**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
**RESEARCH AND DEVELOPMENT**  
**PROGRAM AND FINANCING**  
(in thousands of dollars)

Identification code 69-1730-0

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
<b>Obligations by Program Activity:</b>			
0001	5,978	6,055	7,143
0003	1,039	536	536
0004	1,057	1,400	500
0005	4,600	5,000	4,600
0006	400	0	400
0100	<u>13,073</u>	<u>12,991</u>	<u>13,179</u>
0901	52,000	7,600	7,600
0902	16,000	20,000	20,000
0903	14,438	10,000	15,000
0909	<u>82,438</u>	<u>37,600</u>	<u>42,600</u>
1000	95,511	50,591	55,779
<b>Budgetary resources available for obligation:</b>			
2140	1,228	91	0
2200	94,438	50,500	55,779
2210	Resources available from recoveries of prior year obligations	<u>2</u>	<u>0</u>
2390	95,668	50,591	55,779
2395	-95,511	-50,591	-55,779
2398	-66	0	0
2440	91	0	0
<b>New Budget Authority (gross), detail:</b>			
<b>Discretionary:</b>			
4000	<u>12,000</u>	<u>12,900</u>	<u>13,179</u>
4300	12,000	12,900	13,179
<b>Spending auth from offsetting collections:</b>			
5800	187,688	37,600	42,600
5810	<u>-105,250</u>	<u>0</u>	<u>0</u>
5890	82,438	37,600	42,600
7000	94,438	50,500	55,779
<b>Change in obligated balances:</b>			
7240	92,607	218,735	19,915
7310	95,511	50,591	55,779
7320	-87,249	-249,410	-55,751
7340	-2,666	0	0
7400	105,250	0	0
7410	<u>15,282</u>	<u>0</u>	<u>0</u>
7440	218,735	19,915	19,943
<b>Outlays (gross), detail:</b>			
8690	17,160	49,210	54,461
8693	<u>70,089</u>	<u>200,200</u>	<u>1,290</u>
8700	87,249	249,410	55,751
<b>Offsets:</b>			
8800	200,663	37,600	42,600
8895	-105,250	0	0
8896	-12,975	0	0
<b>Net budget authority and outlays:</b>			
8900	12,000	12,900	13,179
9000	-113,415	211,810	13,151
9502	199,374		

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
**RESEARCH AND DEVELOPMENT**  
**OBJECT CLASSIFICATION**  
(In thousands of dollars)

	<u>FY 2008</u> <u>ACTUAL</u>	<u>FY 2009</u> <u>ENACTED</u>	<u>FY 2010</u> <u>REQUEST</u>
<b><u>Direct Obligations:</u></b>			
<b>Personnel compensation:</b>			
1111 Personnel compensation, full-time permanent	2,819	2,761	2,865
1115 Other personnel compensation	65	200	275
Total personnel compensation	2,884	2,961	3,140
1121 Civilian personnel benefits	859	800	850
1210 Travel and transportation of persons	148	135	135
1220 Transportation of things	14	-	-
1231 Rent to GSA	439	563	563
1240 Printing and reproduction	-	30	5
1251 Advisory and assistance services	188	200	200
1252 Other services	46	50	50
1253 Other purchases of goods and services	8,384	8,138	8,122
1260 Office supplies	22	41	41
1310 Equipment	89	73	73
1990 Subtotal, direct obligations	13,073	12,991	13,179
2990 Reimbursable obligations	82,438	37,600	42,600
9999 Total obligations	95,511	50,591	55,779

**Employment Summary:**

<b>Direct:</b>			
1001 Civilian Full-time Equivalent Employment	22	26	26
<b>Reimbursable:</b>			
2001 Civilian Full-time Equivalent Employment	38	60	60
<b>Allocation account:</b>			
3001 Civilian Full-time Equivalent Employment	85	70	70

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
RESEARCH AND DEVELOPMENT**

**Funding History**

(In thousands of dollars)

<u>YEAR</u>	<u>REQUESTED</u>	<u>ENACTED</u>
2005	0	4,213 <sup>1/</sup>
2006	6,274	5,716 <sup>2/</sup>
2007	8,217	7,736 <sup>3/</sup>
2008	12,000	12,000 <sup>4/</sup>
2009	12,000	12,900 <sup>5/</sup>
2010	13,179	-

1/ Total FY 2005 enacted level for R&D was \$5,967,369; \$4,310,000 reflects the amount transferred to RITA. Previous funding for R&D appeared in the Research and Special Programs budget.

2/ FY 2006 reflects a 1% across the board rescission of \$58,000 as stated in P.L. 109-148, section 3801.

3/ FY 2007 reflects Continuing Resolution (H.J. Resolution 20) at the FY 2006 budget level of \$5,736,000 and funds to support the Air Transportation Statistics program.

4/ FY 2008 reflects funding provided in P.L. 110-161.

5/ FY 2009 reflects funding provided in P.L. 111-8.

## **Detailed Justification for Salaries and Administrative Expenses**

**FY 2010 Request: \$7,143,000**

**FTE: 26**

### **Overview:**

The Research and Innovative Technology Administration (RITA) was established by the Norman Y. Mineta Research and Special Programs Improvement Act, November 2004. The component functions transferred into RITA were the following: the Bureau of Transportation Statistics, the Transportation Safety Institute, the Volpe Center, the Office of Innovation, Research and Education (formerly in RSPA) and staff from the Office of Intermodalism (formerly in OST Policy).

### **FY 2009 Base:**

Base funding for salaries and administrative expenses provides for 26 FTE. The FTE consists of overhead staff supporting the RITA administrative functions, as well as direct program staff supporting the Office of Research, Development and Technology (RD&T). In addition, funding provides for administrative expenses, including travel, training, rent, working capital, IT support and E-government initiatives.

RITA anticipates the FY 2009 Working Capital Fund (WCF) estimate to be \$4,796,930, of which the R&D account share is \$1,028,000 or 21.4%. The WCF estimate also includes cross-servicing agreements to provide for procurement operations (\$573,849), human capital administration (\$518,492) and Information Technology (\$2,412,463).

RITA supports the E-Government initiatives through a Department-wide distribution based on a specified algorithm. The RITA contribution to E-Government is estimated to be \$42,635 in FY 2009. This benefit allows RITA's business process improvements to be more efficient. The E-Government initiatives serve citizens, businesses, and federal employees by delivering high quality services more efficiently and at a lower price. Instead of expensive "stove-piped" operations, agencies work together to develop common solutions which achieve mission requirements at a reduced cost, thereby making resources available for higher priority needs.

### **Anticipated FY 2009 Accomplishments:**

In FY 2009 RITA developed the agency's first Strategic Plan. This plan is aligned to the Department's Strategic Goals. The plan is also designed to lay out a clear vision for how RITA will operate over the next five years, in order to achieve the mission and ensure that research management and activities are directed to achieving measurable improvements toward the strategic goals.

### **FY 2010 Budget Request:**

The funding level for RITA salaries and administrative expenses is \$7,143,000.

**Explanation of Funding Changes for Salaries and Administrative Expenses:**

Amount:\$ +1,179,000

Funding provides for 26 FTEs for the Research and Development account. This increase also provides for the FY 2009 pay raise annualization (3.9%; \$43,000); FY 2010 pay raise (2%; \$54,000); WCF program increase (\$68,000); inflation (.05%; \$4,000); staff support for the National Coordination Office (\$320,000) and other cost increases associated with common services (\$690,000).

## **Detailed Justification for Hydrogen Fuels Safety Research and Development**

**FY 2010 Request: \$500,000**

### **Overview:**

RITA was created by Congress with the primary objective of serving as the Department's focal point for coordination of crosscutting research and clearing the pathway to technology deployment. To fulfill its role as Department of Transportation's lead agency in support of the Hydrogen Fuels, RITA will continue to coordinate, manage and execute key components of the Department's hydrogen activities. Many of these activities will be conducted in collaboration with DOT, Federal, State, academic, and industry partners.

### **FY 2009 Base:**

The enacted level for RITA's Hydrogen program was \$1,400,000. This was an increase of \$900,000 over the budget request level. Funding provides for increased hydrogen safety standards development, coordination and outreach activities.

### **Anticipated FY 2009 Accomplishments:**

- Develop a report to Congress on the challenges of building a hydrogen infrastructure.
- Continue to conduct multi-modal research to further RITA's mission and respond to direct stakeholder and industry needs in advancing hydrogen as part of the Administration's goal of a greener, more secure and sustainable economy.
- Continue to conduct targeted research aimed at addressing near-term gaps identified in the independent DOT safety gap analysis study completed in FY 2006. The gaps relate to technology development and validation of hydrogen transport and storage.
- Continue involvement in hydrogen transportation system safety through domestic and international partnerships. Monitor and develop safety codes, standards, and regulations.
- Continue partnership with public and private sector representatives to continue to educate and train state and local public safety officials and first responders.
- Continue research to develop, evaluate, and validate under real world conditions non-destructive testing and other safety and inspection technologies that will facilitate the reliable and safe operation of components of the hydrogen transportation system.

- Continue collaborative demonstration efforts for hydrogen stations, vehicles, and infrastructure with federal, state, local, industry, and academia partners. These demonstrations will focus on evaluating real world real use operational scenarios.
- Continue to maintain national and DOT hydrogen websites and conduct other outreach on hydrogen issues.
- Continue to execute individual projects and participate in collaborative efforts that analyze or advance the hydrogen initiative and facilitate an effective transition to the use of hydrogen fuels and fuel cells.
- Continue to manage and serve as a technical partner with RITA hydrogen grantees under SAFTEA-LU. Facilitate coordination between the RITA grantees and contractors, and disseminate information to the DOT modes.

**FY 2010 Budget Request:**

- This funding will enable RITA to continue the progress made in FY 2008 and to date in FY 2009. The programs enumerated in the proposal are directly in line with RITA's mission and objectives to coordinate and lead multi-modal research. Each program has broad reaching benefit to multiple operating administrations within DOT. The proposal also responds to direct stakeholder and industry needs in advancing the hydrogen as part of the Administration's goal of a greener, more secure and sustainable economy.
- Work with NHTSA, FMCSA, and other DOT modes to execute accelerated life testing and operational validation of materials and components.
- Conduct validation experiments for the composite cylinder thermal/mechanical failure model in conjunction with other modes.
- Identify opportunities for cross cutting and multi-modal research within DOT.

**Explanation of Funding Changes for Hydrogen Fuels Safety R&D**

**Amount: \$-900,000**

Funding reflects a reduction to hydrogen safety standards development, coordination and outreach activities.

## **Detailed Justification for Research, Development and Technology Coordination**

**FY 2010 Request: \$536,000**

### **Overview:**

RITA was created by Congress with the primary objective of serving as the Department's focal point for coordinating, facilitating and reviewing crosscutting and cross-modal research, and for enabling new technology deployment across all modes. To fulfill this role, RITA provides strategic direction and coordinates the Department's research programs through annual program reviews, budget and performance planning and prioritization, and performance tracking and reporting.

In response to the Government Accountability Office's (GAO) 2006 recommendations, RITA will improve Departmental RD&T coordination in FY 2009 by:

- Continuing the implementation of the Research Planning and Investment Coordination (RPIC) process across all Operating Administrations to foster collaborative RD&T portfolio management;
- Ensuring that DOT research is evaluated according to established best practices;
- Preparing and reporting on a schedule of research program evaluations; and
- Developing common performance measures and selection criteria for DOT RD&T activities at an enterprise level.

### **FY 2009 Base:**

The base funding in FY 2009 for the RD&T Coordination program is \$536,000. RITA will continue to lead the RD&T Planning Council and Team to identify research priorities and opportunities for collaboration on crosscutting RD&T. It will identify innovative approaches to coordinating, facilitating, and reviewing DOT's \$1 billion research investment.

### **Anticipated FY 2009 Accomplishments:**

In direct support of the DOT Organizational Excellence strategic objective, RITA managed RD&T coordination through the RD&T Planning Council and Team (per DOT Order 1120.39A) to promote the efficient use of DOT RD&T funds, prevent duplication, overlap, and encourage joint RD&T efforts. In FY 2009, the following accomplishments are planned:

1. Continue to enhance and refine (using results from the RPIC pilot) the implementation of a Web-based data tracking system for research coordination in accordance to requirements as specified in the Functional Requirements Document and the System Design Document created in FY 2007.



2. Conduct one stakeholder workshop on cross modal research priorities or emerging technologies as part of a strategic update to the current RD&T Strategic Plan.
3. Continue to implement and enhance within RITA a Research Planning and Investment Coordination (RPIC) process to ensure a systematic way of selecting the right mix of investments to meet goals and then manage those investments to ensure success.
4. Continue to support and facilitate the RPIC initiative department wide coordination to ensure collaborative RD&T portfolio management.
5. Continue cost-benefit analysis and return-on-investment analysis pertaining to key segments of DOT's research agenda and targeted technologies.
6. Continue to perform assessments to determine DOT's most promising technologies.
7. Continue to provide staff support to the RD&T Planning Council and RD&T Planning Team and other cross modal working groups.
8. Continue RD&T coordination and reviews, including:
  - Define and refine RPIC selection criteria at enterprise level.
  - Providing recommendations to the Secretary on strategic RD&T priorities.
  - Preparing the FY 2011 RD&T budget priorities for inclusion in the Department's FY 2011 budget guidance.
  - Reviewing FY 2011 RD&T budget requests to ensure alignment with DOT strategic objectives and priorities.
  - Preparing the annual RD&T Funding Report to Congress (SAFETEA-LU, sec. 5208).
  - Preparing the DOT portion of the annual Federal Laboratory Technology Transfer Summary Report to Congress as required in 15 USC Sec 3710(g)(2).

**FY 2010 Budget Request:**

The proposed FY 2010 activities will enhance Department-wide coordination by focusing DOT's efforts to increase evaluation and measurement activity and engage internal and external stakeholders. These activities will enable RITA to recognize unnecessary duplication and help identify the Department's best opportunities for concentrating research efforts to gain the best investment. In addition to ongoing planning and coordination activities, such as the Annual Report to Congress, Federal Laboratory Technology Transfer Annual Summary Report to Congress, staff support to the Planning Council, updates to the strategic plan, budget guidance, budget reviews, and program reviews, RITA will initiate or enhance the following in FY 2010:

1. Operate and maintain in a production environment the Web-based data tracking system for research coordination started in FY 2007.

2. Conduct multiple stakeholder workshops supporting at least ten (10) cross modal research priorities identified by RD&T Planning Team and on emerging technologies as part of a strategic update to the current RD&T Strategic Plan.
3. Develop a Technology Transfer support program with the capability to support all research areas.
4. Establish communications guidelines to strengthen collaboration/coordination across DOT and to support efforts to share information with University Transportation Centers (UTCs), Centers of Excellence and other entities such as hydrogen and other alternative fuels' grantees.
5. Provide staff support to the RD&T Planning Council RD&T Planning Team and other cross modal working groups.
6. Implement RPIC departmental-wide to foster collaborative RD&T portfolio management and advise Secretary on budgetary implications of R&D investment decisions.
7. Develop common performance measures related to DOT's RD&T activities in consultation with the Operating Administrations.

**Explanation of Funding Changes for RD&T Coordination      Amount: \$0**

## **Detailed Justification for Nationwide Differential Global Positioning System (NDGPS) Program**

**FY 2010 Request: \$4,600,000**

### **Overview:**

The Nationwide Differential Global Positioning System (NDGPS) is an enabling positioning and navigation technology for civil, commercial and scientific applications, through local broadcast of accurate GPS position corrections. Inland NDGPS is a robust, fully-redundant terrestrial expansion of the U.S. Coast Guard Maritime DGPS. With inland waterway sites (Corps of Engineers), combined NDGPS provides a national PNT utility on which there is significant public and private sector reliance for transportation, agricultural, environmental, natural resource management, surveying, weather forecasting and other applications. NDGPS provides support infrastructure for several USDOT research projects, and bears opportunities for future cross-modal transportation safety, security, efficiency and emergency response applications

Return on investment on NDGPS funding in terms of Federal cost avoidance alone has been estimated conservatively at 87:1; the value of private sector and state and local government use of NDGPS far exceeds this figure. Due to its usefulness in transportation, agriculture, surveying, and resource management, fifty nations have followed the U.S. lead by building compatible NDGPS systems. Many of these nations have installed full dual coverage across their land area, with nearly 100% of the NDGPS system equipment provided by American manufacturers.

DOT, in cooperation with the U.S. Coast Guard (USCG), Federal Highway Administration, Air Force, Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA)/National Geodetic Survey, NOAA/Earth Sciences Research Laboratory; U.S. Department of Agriculture, Department of Interior/National Park Service, and Department of Interior/Bureau of Land Management, has deployed and operates the inland NDGPS service in the U.S. NDGPS provides real-time, accurate dynamic navigation and positioning information to users with one-to-three meter accuracy (.1 to 1 meter accuracy “standing still”).

In 2007, RITA conducted a systems analysis and user assessment of current and potential future NDGPS requirements for transportation and other applications. The results of this assessment led to a March 2008 DOT leadership decision to continue NDGPS operations.

NDGPS user needs and system capabilities are being evaluated in conjunction with the National PNT Architecture to determine to what extent the NDGPS infrastructure can meet technical requirements as part of a national PNT architecture.

**FY 2009 Base:**

Base funding is \$5,000,000.

**Anticipated FY 2009 Accomplishments:**

DOT will preserve the government's investment in the inland Nationwide Differential Global Positioning System (NDGPS); operate and maintain the system in coordination with the U.S. Coast Guard's Maritime DGPS, while pursuing necessary equipment recapitalization to buy down technical risk.

**FY 2010 Request**

- This budget request will support continued routine operations and maintenance of the inland NDGPS segment.

**Explanation of Funding Changes for Nationwide Differential Global Positioning System Program**

**Change: -\$400,000**

Funding reflects a reduction to NDGPS operations and maintenance activities.

## **Detailed Justification for Positioning, Navigation and Timing**

**FY 2010 Request: \$400,000**

### **Overview:**

The National Security Presidential Directive on Space-Based Positioning Navigation and Timing Policy gives the Secretary of Transportation broad responsibilities in providing for and implementing positioning, navigation and timing (PNT) services for the civil community. The fundamental goal of this policy is to ensure that the United States maintains space-based positioning, navigation, and timing services, augmentation, back-up, and service denial capabilities. The basic civil requirements are to: (1) provide uninterrupted availability of positioning, navigation, and timing services; (2) meet growing national, homeland, economic security, and civil requirements, and scientific and commercial demands; and (3) continue to provide civil services that exceed or are competitive with foreign civil space-based positioning, navigation, and timing services and augmentation systems.

The Secretary of Transportation has the lead responsibility for the development of requirements for civil applications from all United States Government civil Departments and Agencies and ensures, in cooperation with the Secretary of Defense and the Secretary of Homeland Security, the performance monitoring of U.S. civil space-based positioning, navigation, and timing services. The Secretary of Transportation also has the responsibility to promote, in cooperation with other Departments and Agencies, the use of U.S. civil space-based positioning, navigation, and timing services and capabilities for transportation safety; represents the civil Departments and Agencies in the development, acquisition, management, and operations of the Global Positioning System; and develops, acquires, operates, and maintains Global Positioning System space or terrestrial augmentations for civil transportation applications.

The Secretary of Transportation ensures the earliest operational availability for modernized civil signals and services on the Global Positioning System and its augmentations, in coordination with the Secretary of Defense. In coordination with the Secretary of Homeland Security, the Secretary of Transportation develops, acquires, operates, and maintains backup position, navigation, and timing capabilities that can support critical transportation, homeland security, and other critical civil and commercial infrastructure applications within the United States in the event of a disruption of the Global Positioning System.

Under this policy, the Secretary of Transportation provides resources to the Secretary of Defense for assessment, development, acquisition, implementation, operation, and sustainment of additional designated Global Positioning System civil capabilities beyond the second and third civil signals already contained in the current Global Positioning System program. Funding to develop and acquire the civil capabilities for the United States Air Force GPS modernization program are requested in the budget of the Federal Aviation Administration.

Within the Department of Transportation, the Research and Innovative Technology Administration (RITA) has the responsibility to represent the civil departments and agencies in the development, acquisition, management, and operations of GPS, as well as to provide civil PNT system analysis including requirements and architecture development and performance monitoring. RITA serves as the civil lead of the National PNT Architecture effort that is intended to guide future PNT system-of-systems investment and implementation decisions. The objective is to provide more effective and efficient PNT capabilities, and an evolutionary path for government-provided PNT systems and services.

**FY 2009 Base:**

In FY 2009, RITA did not receive direct funding to support the PNT program.

**Anticipated FY 2009 Accomplishments**

Through indirect funding, RITA will develop a time-phased, fiscally informed roadmap of PNT activities, including research and development needs based on the FY 2008 recommendations of the National PNT Architecture,. This effort will be published in a National PNT Architecture Transition and Implementation Plan to meet the civil requirements for PNT. RITA also will publish the 2008 Federal Radionavigation Plan.

**FY 2010 Request:**

The requested funding will support the activities of the Department as required by the Presidential Directive on U.S. Space-Based Positioning, Navigation and Timing Policy. The requested funding also will support RITA's responsibilities for coordinating PNT technology, PNT policy, and spectrum management. Specifically, the request includes \$400,000 for the systems engineering and analysis work to develop the requirements for civil PNT applications

RITA has the responsibility to lead the effort on behalf of the civil community to develop architecture (National PNT Architecture) to help guide future civil PNT investment and implementation decisions. The objective is to provide more effective and efficient PNT capabilities and an evolutionary path for government-provided PNT systems and services. This effort has documented the current national PNT architecture and will evaluate alternative future mixes of global (space and non space-based) and regional PNT solutions, PNT augmentations, and autonomous PNT capabilities to address priorities identified by both the civil and military communities. In addition, this work supports the development of the Federal Radionavigation Plan as directed by the National Defense Authorization Act for Fiscal Year 1998 (10 U.S.C. 2281(c)).

**Explanation of Funding Changes for Positioning, Navigation and Timing**

**Amount: + \$400,000**

Funding provides support for RITA's responsibilities in coordinating PNT technology, PNT policy, and spectrum management; and for supporting the National Security Presidential Directive on Space-Based PNT. Support will also continue for the National PNT Architecture effort on behalf of the civil community which includes the development and assessment of requirements for civil applications of PNT services.

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**RESEARCH  
AND  
DEVELOPMENT**

**REIMBURSABLE PROGRAM**

**RESEARCH AND DEVELOPMENT**  
**REIMBURSABLE/OTHER PROGRAMS**

**University Transportation Centers (UTC)**      **Funding Level: \$76,700,000**

The University Transportation Centers (UTC) Program advances U.S. technology and expertise in the many disciplines comprising transportation through the mechanisms of education, research and technology transfer at university-based centers of excellence.

The UTC Program is a Congressionally mandated financial-assistance program to support transportation education, research and technology transfer activities at university-based centers. Under the program, UTCs receive grant funds from DOT to educate the future transportation workforce and to conduct research to advance the field of transportation. UTC grant funds require grantees to provide a dollar-for-dollar match on the Federal funds (with the exception of eight UTCs that Congress exempted from this requirement), thus doubling DOT's investment in transportation research and education.

In FY 2007, the UTC Program awarded funding to 60 grantees. Forty of the grantees were designated in SAFETEA-LU and 20 were chosen from two competitions held in FY 2006. The amount of each grant is specified in SAFETEA-LU. Success is measured by the number of students graduating with transportation-related advanced degrees from universities funded under the UTC program.

SAFETEA-LU expires at the end of FY 2009. The FY 2010 Budget represents a baseline level of \$76,700,000 in grants to the UTCs to perform program-coordination functions such as operating a clearinghouse for UTC research. UTC Program funding is provided to RITA through an allocation from the Federal Highway Administration (\$69,100,000) and a reimbursable agreement from the Federal Transit Administration (\$7,600,000).

## **Transportation Safety Institute (TSI)**

**Funding Level: \$20,000,000**

**FTE: 51**

The Transportation Safety Institute in Oklahoma City, Oklahoma, is the Nation's leading provider of transportation safety training. The TSI educates more than 50,000 professionals each year in state-of-the-art safety methods and technologies.

The TSI assists DOT modal administrations in accomplishing their mission-essential training requirements. Since its inception, TSI has expanded its clientele to keep up with the needs of the Department and transportation industry. The Institute offers premier transit, aviation, motor carrier, traffic safety, hazardous material, and risk management training nationally and internationally.

The TSI supports several key strategies in the Department's Strategic Plan. It sponsors and participates in conferences, seminars, and meetings at which transportation consumers and providers can share advances in safety technology, regulation, and procedures. The TSI uses DOT web sites to communicate information on best safety practices, educational materials, consumer information, and other materials relating to safety. The TSI also improves safety in all modes through outreach, education, collaboration with public and industry safety partners, demonstration programs, consumer information and strategic media usage. Through training transportation industry safety professionals in accident investigation and prevention, TSI accomplishes these strategies and supports the Department's safety objectives. At the same time, TSI provides subject matter expertise to decisionmakers and the public in transportation safety.

### **How TSI Operates**

- Direction and budget oversight provided by RITA
- Funded via reimbursable agreements, tuitions, and fees
- Associate and contract staff (industry experts) are instrumental in delivery/development of the training

## **Major RITA Reimbursable and Other Programs**

**Funding Level: \$32,000,000**

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorization provides funding under Title V – Research, to fund National Cooperative Freight Research, Biobased Transportation Research, Commercial Remote Sensing Research, Appalachian Regional Commission Grants, Rural Transportation Research Initiatives Grants, Hydrogen Powered Research Grants, Cold Region and Rural Research Grants, Advanced Vehicle Technology Grants and Renewable Transport Systems Grants. The funding to support these initiatives is transferred to RITA from the Federal Highway Administration and the programs are managed by RITA staff.

RITA also collects reimbursable funds to manage the Department’s Climate Change Center.

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**VOLPE**  
**NATIONAL TRANSPORTATION**  
**SYSTEM CENTER**

## **RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**

### **VOLPE Transportation Systems Center Working Capital Fund**

#### **Program and Performance**

The Working Capital Fund finances multidisciplinary research, evaluation, analytical and related activities undertaken at the Volpe Center in Cambridge, MA. The fund is financed through negotiated agreements with the Office of the Secretary, Departmental operating administrations, and other governmental element requiring the Center's capabilities. These agreements also define the activities undertaken at the Volpe Center.

**DEPARTMENT OF TRANSPORTATION  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER  
WORKING CAPITAL FUND**

**PROGRAM AND FINANCING (in thousands of dollars)**

Identification code 69-4522-0-4-407

	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
	<b><u>ACTUAL</u></b>	<b><u>ENACTED</u></b>	<b><u>REQUEST</u></b>
<b>Obligations by Program Activity</b>			
1000 Total Obligations	230,904	235,000	240,000
<b>Budgetary resources available for obligation</b>			
2140 Unobligated balance - start of year	261,452	250,560	250,560
2200 New budget authority (gross)	<u>220,013</u>	<u>235,000</u>	<u>240,000</u>
2390 Total budgetary resources available for obligation	481,465	485,560	490,560
2395 Total new obligations	-230,904	-235,000	-240,000
2440 Unobligated Balance - End of year	250,560	250,560	250,560
<b>Permanent authority: Spending authority from offsetting collections:</b>			
5800 Offsetting collections: cash	331,483	235,000	240,000
5810 Change in orders on hand from federal sources	<u>-111,470</u>	<u>0</u>	<u>0</u>
5890 Spending auth from offsetting collections (total)	220,013	235,000	240,000
<b>Changes in unpaid obligations</b>			
<b>Unpaid obligations, start of year</b>			
7240 Obligated balance: Fund Balance	-182,734	-92,956	-92,956
7310 Total Obligations	230,904	235,000	240,000
7320 Total Outlays (Gross)	-252,595	-235,000	-240,000
<b>Unpaid obligations, end of year</b>			
7400 Change in uncollected customer payments from Fed source	111,470	0	0
7440 Obligated balance, end of year	-92,956	-92,956	-92,956
<b>Outlays (gross), detail</b>			
8690 Outlays from new discretionary authority	174,572	235,000	240,000
8693 Outlays from discretionary balances	<u>78,023</u>	<u>0</u>	<u>0</u>
8700 Outlays (Gross)	252,595	235,000	240,000
<b>Offsets</b>			
8800 Federal funds	331,483	235,000	240,000
8840 Non-federal funds	<u>0</u>	<u>0</u>	<u>0</u>
8890 <b>Total offsetting collections</b>	331,483	235,000	240,000
8895 Change in orders on hand from federal sources	<u>-111,470</u>	<u>0</u>	<u>0</u>
8900 <b>Budget Authority (net)</b>	0	0	0
9000 <b>Outlays (net)</b>	-78,888	0	0
9502 Unpaid obligation, end of year	105,860	0	0



**DEPARTMENT OF TRANSPORTATION  
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**

**VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER  
WORKING CAPITAL FUND**

**Object Classification  
(in thousands of dollars)**

Identification code 69-4522-0-4-407

**Reimbursable Obligations**

Obj Code	Item	<u>FY 2008 ACTUAL</u>	<u>FY 2009 ENACTED</u>	<u>FY 2010 REQUEST</u>
<b>Personnel compensation</b>				
2 111	Full-time permanent	43,963	46,000	48,000
2 113	Other than full-time permanent	3,258	3,000	3,000
2 115	Other personnel compensation	<u>1,128</u>	<u>1,000</u>	<u>1,000</u>
2 119	Total personnel compensation	48,349	50,000	52,000
2 121	Civilian personnel benefits	13,575	13,000	13,000
2 130	Benefits for former personnel	9	-	-
2 210	Travel & transportation of persons	4,540	5,000	5,000
2 220	Transportation of things	96	-	-
2 233	Commun, utilities & misc. charges	2,613	4,000	4,000
2 240	Printing and reproduction	172	-	-
2 251	Advisory and assistance services	666	-	-
2 252	Other services	59,168	60,000	60,000
2 253	Purch of G&S from Govt accounts	65	1,000	1,000
2 254	O&M of facilities	3,633	5,000	5,000
2 255	R&D Contracts	87,652	85,000	87,000
2 257	O&M of equipment	738	1,000	1,000
2 260	Supplies and materials	1,577	1,000	1,000
2 310	Equipment	6,049	7,000	8,000
2 320	Land and structures	<u>2,002</u>	<u>3,000</u>	<u>3,000</u>
2 999	Total new obligations	230,904	235,000	240,000

**EMPLOYMENT SUMMARY**

Reimbursable:				
2 001	Civilian full-time equivalent employment	505	550	550

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**INTELLIGENT  
TRANSPORTATION  
SYSTEMS**

## **Intelligent Transportation Systems**

**FY 2010 Request: [\$110,000,000]**

**FTE: [17]**

### **Overview:**

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) established a Federal Program to research Intelligent Transportation Systems (ITS). The ITS program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing, technology transfer, training and technical guidance.

In 2005, Congress enacted the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorizing \$550 million for the ITS program over five fiscal years (2005-2009). The ITS program continues to play a vital role in addressing the transportation problems which our Nation faces and in preparing the Nation's surface transportation system to serve in the digital age.

### **FY 2009 Base:**

The FHWA is requesting \$110.0 million for Intelligent Transportation Systems (ITS) programs. The ITS Program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing, technology transfer, training and technical guidance. The ITS program continues to play a vital role in addressing the transportation problems which our Nation faces and in preparing the Nation's surface transportation system to serve in the digital age. The ITS Program is organized around major research initiatives, and technology transfer and evaluation programs. The major research initiatives are large multi-year programs focused on a particular transportation issue with specific milestones and end goals. Technology transfer consists of several programs all focused on providing the necessary tools, guidance, and training to support deployment and operation of ITS by State and local governments. The evaluation program independently assesses the results of the ITS research projects and documents the findings for stakeholders and the public. These programs consist of Architecture and Standards, Professional Capacity Building, Evaluation and Assessments and Outreach.

### **Anticipated FY 2009 Accomplishments:**

- IntelliDrive<sup>SM</sup> (formerly Vehicle Infrastructure Integration): In collaboration with the auto industry, a proof of concept (POC) test was completed for a wireless network to link vehicles to vehicles and vehicles to infrastructure to support safety and mobility applications. POC results and evolutions in technology capability are being used to update the system architecture and requirements. A long-

standing real world test environment is being established for use by government and industry for continuing research, evaluation, and demonstration. Research on early deployment scenarios and applications using IntelliDrive data was initiated as well as follow-on technical research based on POC results.

- Congestion Initiative: At competitively selected sites, initiated field operational tests of ITS and other congestion reduction strategies to support USDOT's congestion initiative. Completed evaluation plans to guide the process and expectations for assessing the effectiveness of the strategies.
- Integrated Vehicle Based Safety Systems (IVBSS): During FY 2009, development of the IVBSS systems for both light vehicles and heavy trucks was completed and the systems' performance were validated. Pilot Field Operational Tests (FOT) of both systems were completed. Full-scale, one-year FOTs of both heavy truck and light vehicle systems will begin in FY 2009 and to be completed in FY2010. The results of the FOTs will provide both systems effectiveness data to assess the potential real-world safety benefits of the systems along with user acceptance and user acceptance data. The IVBSS system warns against multiple crash types that account for approximately 60% of all police-reported crashes.
- Next Generation 9-1-1 (NG9-1-1): Completed system design and proof of concept testing at five selected Public Safety Answering Points (PSAPs) and three laboratories. Successfully tested critical components which included: transmission of vehicle telematics data, ability to identify caller location for wireless, wireline, and Internet Protocol (IP) based calls; and the ability to send and receive voice, video, data and text messaging to the PSAP. Completed the NG9-1-1 architecture and transition plan. Distributed research results to stakeholders.
- Professional Capacity Building (PCB) Program – The PCB program provided a learning environment for the transportation workforce in which to develop ITS knowledge, skills, and abilities for the enhancement of the safety, mobility, global connectivity. The PCB collaborated with NHI, academic programs (CITE, UTCs), FHWA Resource Centers, ITS America, and State ITS Chapters to deliver courses, updated numerous core courses, converted numerous courses to web-based learning.
- Mobility Services for All Americans (MSAA): Completed detailed design of ITS-enhanced, scalable and replicable models of human service transportation. Selected three sites that initiated field testing of model MSAA demonstrations. Demonstrations will be completed and evaluated in FY 2010.
- Clarus: Completed integration of road weather data from 29 state departments of transportation, three Canadian provinces and three local agencies into the Clarus national database. Continued development and evaluation of five user services

based on Clarus data. Initiated development of algorithms that convert vehicle sensor data into weather observations to be integrated into the Clarus system.

- Electronic Freight Management (EFM): Completed the field test with The Limited Brands. To facilitate the commercialization of the research, case studies were initiated to examine the degree to which the EFM service oriented architecture can promote improved operational efficiency and transportation within intermodal supply chains.
- Integrated Corridor Management (ICM): Completed analysis modeling and simulation for three of the eight ICM sites. The analysis will indicate what multimodal transportation strategies will provide the most benefit during various operating conditions such as high or low demand and incident or non-incident conditions. Selected up to three sites to field operationally test the effectiveness of integrated corridor management systems.

### **FY 2010 Budget Request:**

SAFETEA-LU expires at the end of FY 2009. The FY 2010 Budget represents a baseline level of funding of \$110 million. Several previous research initiatives will continue their work begun in previous years. In addition, the ITS program will initiate new research in key areas to support Departmental goals in safety, mobility and the environment. The new ITS research will focus on high risk, high profile, high impact research that is primarily multi-modal in nature. The research will address specific problems and needs, have a high level of stakeholder commitment, involve the private sector extensively, and have significant potential benefits to the transportation community and the Nation. ITS will initiate and/or complete the following in FY 2010:

- Congestion Initiative: Implement operational tests of ITS technologies at selected sites for congestion reducing benefits. Begin evaluation of the use of the technology.
- Integrated Corridor Management: The integrated corridor management system initiative will finalize the design of up to three systems and initiate implementation. An independent evaluator will be selected and will complete evaluation plans for the demonstration sites.
- Clarus: Further integration of road weather data sites into Clarus. Complete development of applications that were initiated in 2008. Further the migration of Clarus data into the National Weather Service.
- Mobility Services for All Americans: Complete and evaluate the demonstration of the three operational test sites for development of scaleable, replicable architectures for Travel Management Coordination Centers that connect various transportation service providers for simplified access for customers.

- IntelliDrive: Technical research will be continued to resolve scalability, security, positioning and other issues, including a variety of institutional issues such as data ownership and access, liability, and governance. Work will continue on harmonized international standards around the vehicle. Requirements update and validation, benefits assessment, and driver workload research will continue as applications evolve over time.
- Crashless vehicles: Initiate new technology research that expands on current IntelliDrive<sup>SM</sup> research to develop a wireless communications network to connect vehicles with vehicles and vehicles with the infrastructure. Work includes application development, evaluation of effectiveness, and research into driver implications of increased technology insertion into the vehicle.
- Optimized multi-modal transportation: Initiate a new technology research program to create an information rich transportation network that provides new capabilities for transportation managers to transform multi-modal network performance. The research will support technology to generate new data across all modes and all roads, new applications for system performance, new capabilities to gather cost/price data, and provide robust information to travelers on all aspects of transportation network performance and cost. Portions of this research are encompassed by IntelliDrive<sup>SM</sup>.
- Environmental impact: Initiate a new technology research program working closely with the automotive industry to gather vehicle-based environmental and energy consumption data. Conduct research to create new applications for road managers and travelers to better operate the transportation network to reduce environmental impact. Portions of this research are encompassed by IntelliDrive<sup>SM</sup>.
- E-Payment technology demonstrations: Initiate new technology research on the range of e-payment options that may be available to support seamless payment across all modes and/or policy decisions for nationwide payment. Portions of this research are encompassed by IntelliDrive<sup>SM</sup>.

**DEPARTMENT OF TRANSPORTATION**  
**Intelligent Transportation Systems**  
**Obligation Limitation**  
**(in thousands of dollars)**

	<b>FY 2008 ACTUAL</b>	<b>FY 2009 ENACTED</b>	<b>FY2010 REQUEST</b>
	<b><u>101,530</u></b>	<b><u>102,960</u></b>	<b><u>110,000</u></b>
Vehicle Infrastructure Integration	22,800	0	0
IntelliDrive (SM)	0	23,910	20,000
Integrated Vehicle Based Safety Systems	5,800	1,350	0
Rural Safety Initiative	0	0	0
Cooperative Intersection Collision Avoidance Systems	7,925	0	0
Next Generation 911	0	1,454	0
Integrated Corridor Management	6,650	7,400	9,000
Safe Trip 21	0	0	0
Emergency Management and Operations	3,000	0	0
Mobility Services for All Americans	4,775	310	0
Clarus	2,950	2,200	3,500
Road Weather Research and Development	5,377	3,300	1,500
I-95 (T)	8,612	7,800	12,158
Architecture and Standards (T)	4,423	4,700	9,858
Professional Capacity Building (T)	4,732	2,700	9,158
Program Assessment (T)	5,351	3,100	5,600
Outreach & Policy (T)	3,985	440	4,958
Congestion Relief Research and Development (T)	0	40,000	0
ITS Program Support	8,530	4,296	7,000
Rural Communications Corridor Study	6,620	0	0
Multi-Modal Mobility	0	0	10,000
Environment	0	0	5,000
E-Payment	0	0	9,000
Modal-specific research	0	0	3,268



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**BUREAU  
OF  
TRANSPORTATION STATISTICS**

**EXHIBIT III-1**  
**BUREAU OF TRANSPORTATION STATISTICS (HIGHWAY TRUST FUND ALLOCATION)**  
**Appropriations Summary by Program Activity**  
**Appropriations, Obligation Limitations, and Exempt Obligations**  
**(\$000)**

	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>CHANGE</b>
	<b><u>ACTUAL</u></b>	<b><u>ENACTED</u></b>	<b><u>REQUEST</u></b>	<b><u>FY 2009-2010</u></b>
<b><u>Bureau of Transportation Statistics:</u></b>				
Travel Statistics	2,947	2,947	3,056	109
Freight Statistics	10,723	10,723	11,120	397
Transportation Economics	1,811	1,811	1,878	67
Geospatial Information	1,758	1,758	1,823	65
Compilations, Methods and Standards	7,416	7,416	7,691	275
National Transportation Library	<u>2,345</u>	<u>2,345</u>	<u>2,432</u>	<u>87</u>
<b>TOTAL: [Discretionary] <sup>1/</sup></b>	<b>[27,000]</b>	<b>[27,000]</b>	<b>[28,000]</b>	<b>[1,000]</b>
<b>Direct FTE</b>	85	70	70	0
<b>Reimbursable FTE</b>	0	19	19	0

<sup>1/</sup> Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highways program.

**Program and Performance Statement**

This account provides the necessary resources to support transportation research, statistical collections, reviews, and consulting services.

**EXHIBIT III-2**

**BUREAU OF TRANSPORTATION STATISTICS  
SUMMARY ANALYSIS OF CHANGE FROM FY 2009 TO FY 2010  
Appropriations, Obligation Limitations, and Exempt Obligations**

(\$000)

<b>Item</b>	<b>Change from FY 2009 to FY 2010</b>	<b>FY 2010 PC&amp;B by Program</b>	<b>FY 2010 FTEs by Program</b>	<b>FY 2010 Contract Expenses</b>	<b>Appropriation Total</b>
<b>FY 2009 ENACTED</b>	<b>27,000</b>	<b>Note Columns are Non-Add</b>			<b>27,000</b>
<b>Adjustments to Base</b>					
2009 Pay Raise Annualization (3.9%)	173				
2010 Pay Raise (2.0%)	217				
GSA Rent Increase	107				
Working Capital Fund Increase	212				
Inflation	41				
Program adjustment	251				
<b>Subtotal, Adjustments to Base</b>	<b>1,000</b>				
<b>New or Expanded Programs</b>					
Travel Statistics		3,056	9	0	3,056
Freight Statistics		8,110	23	3,010	11,120
Transportation Economics		1,878	5	0	1,878
Geospatial Information		1,622	6	201	1,823
Compilation Methods and Standards		6,585	20	1,106	7,691
National Transportation Library		1,980	7	452	2,432
<b>Subtotal, New or Expanded Programs</b>	<b>0</b>	<b>23,231</b>	<b>70</b>	<b>4,769</b>	<b>28,000</b>
<b>Total FY 2010 Request</b>	<b>28,000</b>	<b>23,231</b>	<b>70</b>	<b>4,769</b>	<b>28,000</b>

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
**BUREAU OF TRANSPORTATION STATISTICS**  
**(Allocation Account under FHWA's Federal-Aid Highways)**  
**OBJECT CLASSIFICATION**  
**(In thousands of dollars)**

		<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>
		<b><u>ACTUAL</u></b>	<b><u>ENACTED</u></b>	<b><u>REQUEST</u></b>
<b><u>Direct Obligations:</u></b>				
	Personnel compensation:			
1111	Full-time permanent	7,297	10,210	10,422
1115	Other personnel compensation	<u>211</u>	<u>338</u>	<u>409</u>
	Total personnel compensation	7,500	10,548	10,832
1121	Civilian personnel benefits	1,845	3,900	4,005
1210	Travel and transportation of persons	154	204	116
1220	Transportation of things	-	-	-
1231	Rent to GSA	792	1,414	1,521
1240	Printing & production	3	10	10
1251	Advisory and assistance services	7,944	7,225	4,700
1252	Other services	92	5,329	2,439
	Other purchases of goods and services			
1253	from gov't accounts	620	3,607	4,000
1257	Operation and maint. of equipment	650		
1260	Office supplies	32	40	20
2310	Equipment	<u>543</u>	<u>2,200</u>	<u>357</u>
1990	Subtotal, direct obligations	20,175	34,477	28,000
1990	Reimbursable obligations	6,562	12,000	12,000
1990	Total obligations	26,737	46,477	40,000

**Personnel Summary:**

<b>Reimbursable:</b>				
2001	Civilian full-time equivalent employment	14	19	19
<b>Direct:</b>				
3001	Civilian full-time equivalent employment	<u>71</u>	<u>70</u>	<u>70</u>
		85	89	89

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
**BUREAU OF TRANSPORTATION STATISTICS**  
**10-Year Funding History**  
**(In thousands of dollars)**

<u>YEAR</u>	<u>REQUESTED</u>	<u>ENACTED</u>
2001	31,000	30,932 <sup>1/</sup>
2002	43,760	30,808 <sup>2/</sup>
2003	35,806	30,499 <sup>3/</sup>
2004	35,239	30,235 <sup>4/</sup>
2005	32,199	30,015 <sup>5/</sup>
2006	32,869	26,730 <sup>6/</sup>
2007	27,480	27,562 <sup>7/</sup>
2008	27,000	27,000 <sup>8/</sup>
2009	27,000	27,000 <sup>9/</sup>
2010	28,000	-

<sup>1/</sup>FY 2001 reflects a reduction of \$68,000 as stated in P.L. 106-554.

<sup>2/</sup>FY 2002 reflects a reduction of \$192,000 to WCF expenses as stated in P.L. 106-554. based on an across the board rescission.

<sup>3/</sup>FY 2003 reflects a reduction of \$300,000 for WCF expenses (section 362) and .65% rescission of \$201,500 (section 601) of P.L. 108.7.

<sup>4/</sup>FY 2004 reflects a reduction of \$581,000 for WCF expenses (section 517) and .59% across the board rescission of \$183,000 (section 168) of P.L. 180-199.

<sup>5/</sup>FY 2005 reflects a reduction of \$737,000 to WCF expenses (section 197) as stated in P.L. 108-477.

<sup>6/</sup>FY 2006 reflects a 1% across the board rescission of \$270,000 as stated in P.L. 109-148, section 3801.

<sup>7/</sup>FY 2007 reflects levels under a year long CR. An increase of \$562,000 over amount is due to Revenue Aligned Budget Authority (RABA) estimates (\$462,000) and a pay increase (\$93,000) provided by H.J. Res 20.

<sup>8/</sup>FY 2008 reflects funding provided in P.L. 110-161.

<sup>9/</sup>FY 2009 reflects funding provided in P.L. 111-8.

## Detailed Justification for Travel Statistics Program

**FY 2010 Request: \$3,056,000**  
**FTE: 9.0 [includes 2.0 overhead]**

### Overview:

The Travel Statistics Program is Congressionally mandated under SAFETEA-LU. Travel data are prepared and disseminated for Federal, State, and local governments to effectively establish transportation policy, planning, and program management. The Travel Statistics Program provides information regarding business and personal travel as well as passenger travel facilities.

The Travel Statistics Program:

- Develops and maintains the National Census of Ferry Operators needed by state transportation officials for resource determinations for ferry operations and infrastructure.
- Organizes and summarizes the U.S. Customs and Border Protection international border crossing data used by DOT in the Coordinated Border Infrastructure Program allocation formulae.
- Improves the safety and security of transportation through projects such as the development, maintenance, and statistical analysis of a Confidential Close Call Reporting System for the Federal Railroad Administration, or by conducting targeted data collections for other agencies' key performance indicators under the OMB approved Omnibus Survey Program.
- Provides transportation data to decision makers on intermodal connectivity of passenger facilities, public accessibility to transportation in rural areas, and risk exposure in transportation.
- Develops congestion measures to assist planners in determining the impacts of congestion or in prioritizing mitigation efforts.

### FY 2009 Base:

The Travel Statistics Program in FY 2009 will augment and refine the National Ferry Database (NFD), continue to organize and summarize U.S. Customs and Border Protection crossing data at the port level, produce updates of BTS' rural access studies, continue working with the Federal Railroad Administration (FRA) on the Confidential Close Call Reporting System, continue releasing data from the Intermodal Passenger Connectivity Study, and coordinate the travel community needs for data from the Census' American Community Survey.

### Anticipated FY 2009 Accomplishments

- Perform research to determine the feasibility of conducting targeted surveys focused on livability measures. Provide technical support to the DOT Livability Measurement Team.
- Release the 2008 National Census of Ferry Operators, update the public use file for the National Ferry Database, and publish a summary report of findings. Augment the

database with data from other sources (U.S. Coast Guard, U.S. Army Corps of Engineers, and AASHTO) on ferry routes, vessels, and terminals.

- Expand the Intermodal Passenger Connectivity Database to include commuter, light and heavy rail transit.
- Continue the reimbursable partnership with FRA on the Confidential Close Call Reporting System (C<sup>3</sup>RS) Demonstration Project to develop a database of observational and corporate data, and assist FRA's Human Factors Program in data collection and data analysis of behavioral-based safety studies and program evaluation data.
- Release updated data on rural access to transportation quantifying the availability of air, rail, intercity bus, and ferry services available for the rural population.
- Produce timely and relevant information on international travel, including processing and publishing monthly Border Crossing/Entry data for use in Departmental allocation formulae.
- Continue statistical data analysis to determine the impact on transportation planning data of the Census Bureau's implementation of the annual American Community Survey, which replaced the decennial long form.
- Develop statistics for the measurement of congestion in various modes of transportation.
- Develop and release special reports, studies, and analyses of key travel issues such as exposure to risk of accident and injury and unique transportation issues faced by members of demographic groups.
- Support user requests for data and assistance with analysis of the National Household Travel Survey, the American Travel Survey, the Survey for State Funding for Public Transportation, and the Omnibus Household Survey.

### **FY 2010 Budget Request**

In FY 2010, the Travel Statistics Program will continue to provide unique services to other Federal agencies, particularly in DOT. Staff will conduct the 2010 National Census of Ferry Operators. The Confidential Close Call Reporting System—a collaborative project with the FRA—will be in its fifth year of data collection. Work will continue on developing statistics for the measurement of congestion and safety risk exposure. Border Crossing/Entry data will be processed and published. The Omnibus Household Survey and other targeted surveys will be conducted on an on-demand basis and results will be summarized and published on the Travel Statistics Program web page. Travel program staff will also continue development of the Intermodal Passenger Connectivity Database and update the rural access analysis. Both of these areas are anticipated to be important elements of the Department's Livability initiatives. The Travel Statistics program will continue to prepare special reports based on the needs of the Administration and Congress on travel data issues, and continue its coordination role with the Census Bureau on travel data.

### **Explanation of Funding Changes for Travel Statistics**

**Amount: \$109,000**

Increased funding will support BTS overhead activities.



## Detailed Justification for Freight Statistics

**FY 2010 Request: \$11,120,000**  
**FTE: 23.0 [Includes 13.0 overhead]**

### Overview:

The Freight Data Program develops and compiles data and information on the movement of freight within, through, into, and from the U.S. by all modes of transportation. The program provides key freight data for the Congressionally mandated Intermodal Transportation Database under SAFETEA-LU, and meets the most commonly cited, high priority freight data needs of the Department, other federal agencies, and the transportation community.

Its Commodity Flow Survey (CFS) is the most comprehensive source of nationwide data on the flow of goods, the geography of freight movements, and the distance of shipments that covers all modes of transportation, including multi-modal shipments. The CFS is the only source of nationwide data on domestic truck freight flows; and the sole source of national-level flow data on hazardous materials shipments by highway and air that is collected by the federal government.

The program contains the International Data Team which provides research and data on U.S. imports and exports with its trading partners and which also maintains and supplies the Department with transborder freight data and border crossing/entry data used in Congressionally specified allocation formula for border state infrastructure grants under SAFETEA-LU. The International Data Team also engages in data exchanges with Canada and Mexico (U.S. NAFTA partners) and China. The Team provides technical expertise and support for the international activities of the Department.

Freight Data Program provides:

- Transborder and Border Crossing/Entry data for the Coordinated Border Infrastructure Program allocation formula required by SAFETEA-LU;
- National freight data and freight shipment information, especially for nationwide domestic truck freight shipments;
- A federal source for nationwide hazardous materials flow data for truck and aviation modes;
- Data to update the Freight Analysis Framework, a Departmental tool that resides in the Federal Highway Administration that allows analysis of freight movements by all Operating Administrations for their particular purposes;
- Data on North American Free Trade Agreement (NAFTA) freight flows and trends, which includes all modes of transportation, particularly trucks;
- Engages in data exchanges with U.S. major trading partners to improve knowledge of the trade relationship between and among these countries;
- Data on the transport of U.S. exports and imports worldwide for all modes of transportation.

## **FY 2009 Base:**

The Freight Data Program for FY 2009 includes completing the data processing phase of the 2007 Commodity Flow Survey, as well as finalizing the content and format of the final CFS data products to be released in December 2009. A preliminary set of estimates from the 2007 CFS were produced and released in a limited set of tables in December 2008. The Freight Data Program also includes processing and disseminating international trade and freight transportation data and analysis, including data used in the formula used in calculating apportionments for border state infrastructure grants under SAFETEA-LU.

The Freight Data Program responds to requests from Congress, OST, and the White House, for quick responses on the relationship between transportation and the economy, and provides transportation expertise and technical support for urgent data and analysis needs.

## **Anticipated FY 2009 Accomplishments**

- Publish *North American Trade Growth Continued in 2007*, a special report which provides a comprehensive summary of North American Freight flows for all modes of transportation.
- Release the initial set of preliminary 2007 CFS tables in December 2008.
- Complete processing of the 2007 Commodity Flow Survey data. The majority of data processing activities will occur during FY 2009, including completion of the mileage calculations, weekly and quarterly edits and imputation of missing data items, as well as running the final weighting and estimation programs utilizing approximately 5 million shipment records.
- Finalize design and content of all final 2007 CFS data products scheduled for release in December 2009.
- Release the Transborder and Border Crossing/Entry data, permitting scheduled and reliable access to a wide variety of customers who utilize the U.S. international freight data, including Departmental staff, Congressional staff, state transportation departments, international organizations, and universities. Customers use this data for a variety of purposes, including trade corridor studies and transportation infrastructure planning.
- Continue to participate in planning and design workshops for the International Trade Data System (ITDS) that are held by the U.S. Department of Homeland Security's Customs and Border Protection to ensure that needed transportation data are provided.
- Publish *Maritime Vessels Carry More than Half of Growing U.S.-East Africa Trade*. This special report examines trends in trade with Burundi, Kenya, Rwanda, Tanzania and Uganda by air and vessel.
- Lead the effort to design the International Freight Data System (IFDS) which will serve as the Department's interface with the ITDS and serve as the warehouse for international freight data. The IFDS is a DOT agency partnership which will support the international freight data needs of the participating DOT modal administrations. This also supports the DOT agencies' requirement to interface with ITDS according to the OMB directive under the Import Safety Initiative.

- Conduct a detailed research project on the effectiveness of the questionnaire used to collect data for the 2007 Commodity Flow Survey.
- Provide technical support for the oversight committees and project panels of the National Cooperative Freight Research Program (NCFRP) and the Hazardous Materials Cooperative Research Program (HMCRP). These applied research programs administered by the National Academy of Sciences' Transportation Research Board were established and funded by Congress under SAFETEA-LU.
- Produce a report on the current status of container imports and exports with a focus on the U.S. ports that handle container traffic – *America's Container Ports*.
- Produce other relevant, timely, and focused technical and analytical reports on national and international freight transportation-related issues and data.

### **FY 2010 Budget Request**

In FY 2010, the Freight Data Program will continue to finalize CFS data products for the 2007 Commodity Flow Survey—a major, national benchmark survey of the flow of commodities nationwide. A series of presentations on the output from the 2007 CFS will be developed and presented in the appropriate venues during FY 2010. In addition, staff will also continue research and engage in survey design efforts aimed at the next generation of commodity flow surveys.

The Freight Data Program will continue to release transborder freight data and border crossing/entry data, providing data users with trade statistics on the commodities and mode of transportation used with our largest trading partners. The Freight Data Program will continue and expand its international data exchange activities.

The Freight Data Program will continue to produce relevant and timely national and international freight transportation data and analysis for all modes of transportation. The Freight Data Program will include outreach to customers to assure that the most important data are provided, and innovative methods for meeting freight data needs at the state and local levels will be encouraged.

The Freight Data Program will lead the testing and deployment of the IFDS for the Department, in cooperation with other DOT agencies and the Department of Homeland Security (DHS). The IFDS is the DOT interface to the DHS Customs and Border Protection's International Trade Data System (ITDS).

### **Explanation of Funding Changes for Freight Statistics**

**Amount: \$397,000**

Increased funding will support BTS overhead activities.

## Detailed Justification for Transportation Economics

**FY 2010 Request: \$1,878,000**  
**FTE: 5.0 [includes 1.0 overhead]**

### Overview:

The Transportation Economics Program develops basic economic and financial data to support transportation decision making, including development of economic indicators that explain the relationship between transportation and the economy. Program products provide transportation policy officials with information and data on how their decisions impact the larger economy so they can optimize transportation investments, improve transportation system productivity, and increase the value of transportation to users. The program focuses on topics identified by Congress in BTS' authorizing legislation, such as transportation sector productivity, transportation costs, and national accounting for transportation expenditures.

### Transportation Economics program:

- Maintains the Transportation Satellite Accounts to measure the effect of transportation upon Gross Domestic Product (GDP). This information is provided to DOT and other governmental economists to accurately calculate the total effects of the transportation sector upon the economy.
- Produces the Air Travel Price Index (ATPI), an index of representative air fares that measures the changes that people pay for commercial air travel. This information on the increase in air travel prices by airport, is used for analysis of the aviation industry, by the Bureau of Labor Statistics, in a supporting capacity for development of the Consumer Price Index, and by the Bureau of Economic Analysis.
- Measures transportation productivity. The productivity data are important to DOT for evaluating the economic performance of transportation modes and determining priorities for resource allocation, and are used by economists to understand the factors that affect changes in productivity over time to evaluate alternatives for increasing production efficiency.
- Develops and publishes key financial information such as the Government Transportation Financial Statistics (GTFS), and the State Transit Expenditure Survey for the Association of State Highway and Transportation Officials (AASHTO), which provide data on Federal, state and local transportation revenues and expenditures.
- Conducts research using the Transportation Services Index, to improve the quality, timeliness, and usefulness of that index, and to gain a fuller understanding of the relationship between transportation and the economy. The index and research is used by academics, government officials, and by the financial community and press.
- Develop estimates of transportation forecasts, trends and seasonal patterns. This includes estimation of trends and seasonal factors for data on transportation energy consumption and vehicle miles traveled. Implement the Transportation Economic Analysis Modeling System (TEAMS), which will be used to make mid-range forecasts of the impacts of important economic trends and policies on the transportation modes.

- Responds to requests from Congress, OST, and the White House, for quick responses on the relationship between transportation and the economy, and current transportation issues of urgency requiring emergency data and analysis needs.

### **FY 2009 Base:**

The Transportation Economics Program in FY 2009 includes continued development of the Transportation Satellite Accounts (extending the transportation component of GDP beyond for-hire services to include transportation services provided in-house by industries), quarterly production of the Air Travel Price Index, measures of productivity, studies of the economic consequences of transportation investments, development of a transportation and economic forecasting center, publication of Government Transportation Financial Statistics, research on the Transportation Services Index, estimation of seasonal patterns of highway congestion for three urban areas, development of trends in national congestion levels over time, and modal data and expertise in development of a multi-modal network and forecasting model for the Federal Highway Administration.

### **Anticipated FY 2009 Accomplishments:**

- Provide economic research and other technical support to the projects and activities related to the American Recovery and Reinvestment Act.
- Provide economic research and other technical support to the DOT Livability Measurement Team.
- Update the Transportation Satellite Account (TSA) estimates for private truck, rail, aviation, and waterborne modes for use by the USDOT Chief Economist, and other economists in measuring the impacts of transportation expenditures on Gross Domestic Product.
- Produce the Air Travel Price Index on a quarterly basis. Continue development of new ATPI automated system components, including an operational seasonal adjustment component into the experimental production system.
- Publish multi-factor productivity (MFP) measures and analysis for trucking, pipeline, and waterborne modes. This will include an enhancement of previous long-distance trucking estimates and an assessment of the causes for pipeline productivity gains.
- Publish the 2009 edition of the Government Transportation Financial Statistics (GTFS).
- Create a Time Series and Forecasting Center and publish short-term time series and mid-term forecasts. Provide an international workshop on Transportation Forecasting, in conjunction with the International Institute of Forecasters.
- Produce fact sheets of time series analyses on transportation data (such as transportation energy use per GDP) to be published quarterly with the Key Transportation Indicators.
- Provide aviation and other modal data, and modeling and forecasting expertise to the Federal Highway Administration in the construction of a multi-modal network and forecasting model.
- Develop estimates of seasonal congestion patterns for selected cities, and estimates of trends in historical nationwide congestion measures.

- Update and publish the State Transit Expenditure Survey results, which will include a summary report.
- Make estimates of the economic impacts on the Highway Trust Fund of changes in gasoline prices and total number of vehicle miles traveled.

### **FY 2010 Budget Request**

In FY 2010, the Transportation Economics Program will produce the core set of economic data and indicators as in 2009, which include the Transportation Satellite Accounts, Air Travel Price Index, Government Transportation Financial Statistics, multi-factor productivity measures, and the State Transit Expenditure Survey. The Transportation Economics Program will expand to include forecasting, trending and time series analysis of transportation modal data.

### **Explanation of Funding Changes for Transportation Economics**

**Amount \$ 67,000**

Increased funding will support BTS overhead activities.

## **Detailed Justification for Geospatial Information**

**FY 2010 Request: \$1,823,000**

**FTE: 6.0 [includes 1.0 overhead]**

### **Overview:**

The vision of the Office of Geospatial Information Systems (OGIS) is to improve transportation decision making by providing a comprehensive set of geospatial information as the basis for planning, policy, investment, and asset management. The OGIS provides visual and analytic tools that enable data to be linked using a geographic reference. This capability is particularly useful for transportation, which is inherently geospatial, and represents an important IT investment. Transportation planners and others can use geospatial information systems to prioritize highway maintenance projects, study noise “footprints” around airports, and plan for system disruptions due to natural disasters or national security threats.

### **FY 2009 Base:**

In FY 2009, BTS will work with other modal administrations to distribute transportation data through the National Transportation Atlas Databases (NTAD). BTS is congressionally mandated to produce the NTAD on an annual basis. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 contained the original mandate and it remained in the legislation that followed, including the most recent SAFETEA-LU. The NTAD is distributed on DVD and is available for download from the BTS web site. The NTAD is used by geospatial professionals throughout all levels of government, academia and the private sector. Many of the transportation data sets have been incorporated in to Department of Defense programs for national security, including the Homeland Security Infrastructure Protection Program.

BTS built a sophisticated mapping capability for the DOT Crisis Management Center (CMC) and will continue its support, providing mapping and spatial analyses during emergency transportation situations and emergency preparedness exercises. BTS also provides this critical function for Continuity of Operations (COOP).

The OGIS provides mapping and geospatial analysis support. This includes standard map products for BTS publications, surveys and the development of Internet Mapping applications supporting other RITA offices and selected agencies within the DOT. Of critical importance here is the support with GIS expertise and Internet Mapping resources the identifying and tracking of transportation oriented stimulus projects funded under the American Recovery and Reinvestment Act (ARRA).

As mandated in SAFETEA-LU, Section 5601 (6), this program has the responsibility to lead the development of the transportation component of the National Spatial Data Infrastructure (NSDI). This responsibility is also a requirement in OMB Circular A-16 and Executive Order 12906. Staff have been leading DOT through participation in the development of the Geospatial Line of Business. Also, this staff chairs the Federal Geographic Data Committee (FGDC) Ground Transportation Subcommittee, and participates on the FGDC Coordination Group. In response to OMB memorandum M-06-07, the RITA Administrator has been designated the Senior

Agency Official for Geospatial Information within DOT. To aid in these efforts, the Director of the OGIS was appointed Geospatial Information Officer for the DOT.

**Anticipated FY 2009 Accomplishments:**

- Lead DOT and the geospatial transportation community, support the development of the legislatively mandated NSDI, participate in the Federal Geographic Data Committee, the National States Geographic Information Council, the Transportation Research Board, and the AASHTO GIS for Transportation Symposium Planning Committee.
- Produce the Congressionally mandated National Transportation Atlas Databases (NTAD) for 2009. Staff will gather transportation geospatial data and accompanying metadata from throughout the DOT and other federal agencies. The data will be compiled and distributed via DVD and offered for download from the BTS web site.
- Provide mapping and geospatial analysis support. This will include continuing support of Internet Mapping applications for the transportation projects funded under the ARRA, standard map and analytical products for BTS publications and surveys, and the development of Internet Mapping applications supporting sister RITA offices and other agencies within the DOT.
- As practical, provide mapping and geospatial analysis support to DOT’s Crisis Management Center (CMC), for Continuity of Operations (COOP), and government-wide exercises such as TOPOFF.

**FY 2010 Budget Request**

In FY 2010, this Program will compile and disseminate transportation specific geospatial data. The data will continue to be disseminated through the annual release of the National Transportation Atlas Databases (NTAD).

This Program will provide geospatial leadership within the DOT, in the form of mapping, Geospatial analyses and the development and modification of Internet Web Mapping tools for decision makers. The Program staff will provide support to the Department’s Crisis Management Center (CMC) and for Continuity of Operations (COOP).

BTS will continue leading and representing DOT in the geospatial community through Federal Geographic Data Committee participation, support of the National Spatial Data Infrastructure, and continued involvement in National transportation geospatial communities.

**Explanation of Funding Changes for Geospatial Information**

**Amount \$65,000**

Increased funding will support BTS overhead activities.



## Detailed Justification for Compilations, Methods and Standards

**FY 2010 Request: \$7,691,000**

**FTE: 20.0 [includes 12.0 overhead]**

### Overview:

The statistical compilations component of this program brings together data from the BTS programs and other national data sources to produce the Congressionally mandated *Transportation Statistics Annual Report*, which presents the state of transportation data and discusses several different topics specified by Congress in SAFETEA-LU and the DOT Strategic Plan. In response to SAFETEA-LU's mandate to compile and publish a comprehensive set of transportation statistics, the program produces *National Transportation Statistics*, mandated by Congress since 1991, as a broad reference updated quarterly on the web and the *State Transportation Statistics* – a comprehensive set of key statistics at the state level. The *Pocket Guide to Transportation* provides aggregate statistics in an easy to use format, consistent with the SAFETEA-LU mandate to make statistics published by BTS readily accessible to the public. The Compilations, Methods and Standards program compiles multi-modal transportation data covering most transportation topics and updates them regularly. It also prepares publications and other materials for printing and posting on the web, and handles product distribution. Publishing statistics is a Congressionally mandated role for BTS under SAFETEA-LU.

To assure the quality of these compilations and of individual data programs throughout the Department, the Methods and Standards program coordinates efforts to develop standards for transportation data; develops and implements statistical standards and policy for BTS; maintains with the DOT-CIO the statistical quality guidelines for the Department; consults with other DOT operating administrations on statistical issues; performs quality assurance reviews for BTS information products and publications; and provides statistical support for DOT's annual performance report. These also are Congressionally mandated roles for BTS under SAFETEA-LU.

The Methods and Standards program also: reviews and reports to the Secretary on the sources and reliability of statistics proposed to be used to measure outputs and outcomes under the Government Performance and Results Act; develops guidelines for collection of transportation statistics to ensure accurate, reliable and relevant transportation information; provides data quality support for BTS statistical program; reviews BTS information products, and special and technical reports for compliance with BTS statistical standards and the appropriate application of statistical methodology; monitors agency wide confidentiality procedures, reviews information products for potential disclosures of confidential information, and provides confidentiality training to BTS employees and contractors.

### FY 2009 Base:

Statistical compilations include recurring print and web publications: the *Transportation Statistics Annual Report* (an annual report to Congress), the *National Transportation Statistics*, the *State Transportation Statistics*, and the *BTS Pocket Guide to Transportation*. The program also produce Key Transportation Indicators data, lead the production and release of the monthly

Transportation Services Index and disseminate transportation data through multinational exchanges.

The Methods and Standards program will conduct statistical data quality reviews of BTS data compilations and dissemination of information products; provide consulting support to other DOT modes to help ensure that rulemakings and other program actions are based on sound, defensible data; and provide statistical support for the Department's Performance and Accountability Report.

### **Anticipated FY 2009 Accomplishments:**

- Produce and publish the *Transportation Statistics Annual Report* (TSAR) to provide Congress with key indicators on transportation issues.
- Lead in the production and release monthly the Transportation Services Index (TSI), which is a measure of the movement of freight and passengers, and is an indicator of changes in the economy.
- Update, publish, and distribute the annual *Pocket Guide to Transportation*, including revisions resulting from consultations with key customers.
- Quarterly update the web compendium of the *National Transportation Statistics* and produce an associated volume of the *State Transportation Statistics*.
- Produce and publish Key Transportation Indicators on a regularly scheduled basis.
- Produce relevant and timely focused analytical and technical reports on transportation and statistics-related issues and data.
- Prepare BTS products for print publication and web posting, including scheduled data releases, recurring publications and special reports, and distribute products to the public.
- Host the North American Transportation Statistics Interchange with Canada and Mexico and continue the international data exchanges with other nations. In partnership with statistics and transportation agencies in Canada and Mexico, release an update of the North American Transportation Statistics Online Database (NATS OD) on the web. NATS OD houses comprehensive key statistics from the three countries along with technical documentation related to data collection methods, definitions and applicable standards.
- Provide assistance and technical support to the DOT operating administrations with rebaselining of performance measures, and performance measure estimation, projection, and extrapolation methodologies. Assemble data from the DOT operating administrations and prepare the data presentation for annual reporting, to help ensure the reliability of the data, transparency in the process, and utility in data presentation.
- Support DOT in the interpretation and implementation of the statistical portion of the DOT Information Dissemination Quality Guidelines. Support other ad hoc requests from DOT such as review of statistical methods in rulemaking processes.
- Continue monitoring agency-wide confidentiality procedures. Review information products for potential disclosures of confidential information. Continue annual confidentiality training to all BTS employees and contractors. Assess privacy compliance of RITA information systems.
- Continue to provide data and statistics to other agencies and organizations within and outside the U.S. for national and international statistics compilations such as OMB, the

United Nations, and OECD. BTS takes the lead in reporting transportation data and statistics for the DOT in these compilations.

### **FY 2010 Budget Request**

BTS will continue to produce, publish and make available a core set of online and print documents, and scheduled data releases, at a level commensurate with resources. This includes a Congressionally mandated *Transportation Statistics Annual Report*, quarterly web update of the *National Transportation Statistics*, *State Transportation Statistics*, a *Pocket Guide to Transportation*, and other regularly scheduled data releases including the Transportation Services Index and Key Transportation Indicators. Key Transportation Indicators will be evaluated and expanded in FY 2010. It also includes data interchanges with Canada and Mexico and an interchange with China.

This program will also provide assistance to the DOT operating administrations for the DOT performance measurement and general statistical consulting, perform data quality reviews of BTS data systems and information products as requested by the BTS Director, and provide training on BTS' confidentiality standards.

### **Explanation of Funding Changes for Compilations, Methods and Standards**

**Amount \$437,000**

Increased funding will support BTS overhead activities.

## Detailed Justification for the National Transportation Library

**FY 2010 Request: \$2,432,000**

**FTE: 7.0 [includes 1.0 overhead]**

### **Overview:**

The National Transportation Library (NTL) is a virtual library, accessible through the Internet, providing broad access to the nation's transportation research and planning literature. The NTL offers reference services, a digital archive, web portal, and access standards and tools including Transportation Research Information Service (TRIS) Online, in cooperation with the Transportation Research Board, the Transportation Research Thesaurus (TRT), the Transportation Libraries Catalog (TLCat), and the NTL Integrated Search platform.

The NTL was created out of the need to fill a national leadership role to support and coordinate networking among transportation libraries. For the Department, it provides a knowledge access point through its reference services, which field inquiries from the Department's key stakeholders. Internationally, the NTL's Organization for Economic Cooperation and Development (OECD) membership permits TRIS Online participation in the International Road Transport Database. The NTL Integrated Search platform combines a metadata standard and digital document repository to provide full-text access to technical, research, and statistical policy resources. Through the Integrated Search platform, the NTL is moving to a metadata and digital object exchange environment to serve the University Transportation Centers, the National Highway Traffic Safety Administration, Intelligent Transportation Systems Joint Program Office, and other modes and state DOTs, such as the Virginia Department of Transportation, with a long term solution to information access.

The NTL is unique in its role as a catalyst and tool for national transportation information access. It stands alone in the industry for representation and cooperation with other national libraries, facilitation of cooperation and collaboration among US transportation libraries, and participating in convocations and forums on behalf of the Agency. Without the NTL, there would be a void in national leadership of transportation information. Within the community, NTL supports and coordinates activities of regional Transportation Knowledge Networks, that will come together to form a national network of transportation libraries and information system to deliver timely, high quality, relevant information to transportation professionals.

### Legislative Mandate:

49 U.S.C. 111(e) directs BTS to establish a National Transportation Library, create a collection of statistical and other information, to promote access to the library, to improve transportation community's ability to share information, and to work with other transportation libraries and information providers in to achieve these goals.

## **FY 2009 Base:**

The major components of the NTL are:

*Reference Management:* This is the transportation information front-door to the Department. The NTL reference service responds to transportation information requests from the community, including DOT, other federal agencies, State DOTs, Congress, and the general public. The library staff handles about 3,000 requests for information each month. Special technology is used to retain canned responses and FAQs to assure consistency and efficiency in delivering repeatedly requested information, and making it more accessible to the user.

*Database and Archive Management:* Through a partnering agreement with the Transportation Research Board, the NTL publishes the Transportation Research Information Service on the Web as *TRIS Online*, which provides researchers and the public with free desktop access to over 575,000 information and research resources. *TRIS Online* has the broadest coverage of transportation resources of any analytical index in the world. The NTL Integrated Search platform also includes a Digital Repository and web portal. The Digital Repository contains 16,000 full-text documents, including significant transportation documents from the University Transportation Centers, State DOTs, transportation associations, and other research and policy institutions. New collections are added to the repository for long-term preservation as agreements are reached. In FY08, an agreement to add all of the VDOT Research Library's reports to the Digital Repository was reached. The NTL Portal Collection is an index to select transportation web sites. The NTL Integrated Search platform greatly improves access to *TRIS Online* and the NTL Repository, and also provides for expansion into other department collections.

*Tools and Standards Management:* The NTL's metadata standard for indexing digital resources and use of controlled vocabularies (e.g., Transportation Research Thesaurus) allows interoperability with other web resources and targeted access to both the Digital Repository and the Portal Collection. NTL also makes its databases available to Internet Search Engines such as Google and Yahoo! through implementation of Google Sitemaps and other protocols. To increase access NTL has joined science.gov, a joint project of 17 federal agencies providing access to federal scientific and technical information. Other NTL access tools include directories, bibliographies, and a taxonomy. NTL houses custom Google searches of all State DOT, UTC, MPO, and transit agency websites. Additionally, the NTL has developed the Rural and Agricultural Transportation Data and Information Resources website. These tools are used in tandem with the databases and archives enabling efficient, robust search, retrieval, and access to NTL, *TRIS Online*, and other transportation information resources.

*Networking:* Through partnership with the Federal and State DOT libraries, university transportation libraries, and the largest holder of library catalog records, the Online Computer Library Consortium (OCLC), the NTL has made available to the public a one-stop portal, the Transportation Librarians Catalog (TLCat) to the catalogs of the Nation's most significant transportation libraries. The NTL created TLCat which provides users with unprecedented desktop access to policy, administrative, operations, and research literature through interlibrary loan. NTL has also coordinated and supported the development of two new transportation library networks. Additionally, in cooperation with other national transportation and library

organizations, NTL hosts the Transportation Librarians Roundtable, a monthly forum for transportation librarians to discuss and exchange best practices on issues of mutual interest.

### **Anticipated FY 2009 Accomplishments:**

- Support USDOT TIGER Team efforts on the American Recovery and Reinvestment Act by receiving, reviewing, and responding to all telephone (202-366-0745) and email (tigerteam@dot.gov) inquiries within 24 hours of receipt.
- Continue to provide online reference services, answering the thousands of questions received each month that are related to the business of the Department of Transportation. Queries are received by telephone (800-853-1351), or by email: Librarian@bts.gov, Answers@bts.gov, DOT.Comments@dot.gov, TRIS@bts.gov or RITAInfo@dot.gov.
- Coordinate and work with US transportation librarians and information providers to develop a national plan for the exchange and dissemination of transportation information through transportation knowledge networks (TKNs).
- Completely integrate the USDOT Library and NTL tools and services into one website, ntl.bts.gov, which reflects the 2008 merger of the USDOT Library into the NTL.
- Continue to provide monthly updates for content in the USDOT Climate Change Clearinghouse.
- Increase the total number of USDOT resources in science.gov.
- Increase total number of full-text links in TRIS Online.
- Increase the number of participating libraries in TLCat.
- Expand the regional and national transportation knowledge networks.
- Augment the content and robustness of the digital archive by incorporating new standards and aligning with other digital repositories.
- Continued compliance with international information interoperability standards such as the Open Archive Initiative and Z39.50. This effort will expand the universe of archives that hold digital documents and other files, thus improving long term preservation and access.
- Work with University Transportation Centers and other object and data providers to create a more efficient method for transfer of digital documents and metadata into the NTL Digital Repository.
- Collect materials focusing on US transportation policy, planning, research, and operations; resources of long-term significance and value; and resources indexed in the Transportation Research Board's TRIS database.

### **FY 2010 Budget Request**

- The NTL will continue to provide quick, courteous, and accurate answers to requests for information within 24 – 48 hours of receipt.
- The NTL will continue to provide access to, and improve the NTL Integrated Search platform.
- NTL will continue to expand and provide access to TLCat.
- NTL will continue to develop, maintain, and promote new tools and standards providing better access to information.

- NTL will continue to coordinate national information dissemination and exchange activities through the TKNs and cooperative projects such as the USDOT Climate Change Clearinghouse.

**Explanation for Funding Changes National Transportation Library**

**Amount: \$87,000**

Increased funding will support BTS overhead activities.

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**BUREAU OF TRANSPORTATION STATISTICS**  
**REIMBURSABLE PROGRAMS**

## Detailed Justification for Air Transportation Statistics

### Reimbursable

**FY 2010 Request: \$4,000,000**

**FTE: 19**

#### **Overview:**

BTS collects and publishes a variety of data about the operations of foreign and U.S. domestic airlines. The primary purpose of the program is to provide Congress, DOT, and other Federal agencies with uniform and comprehensive aviation data that are accurate, timely, and relevant for use in making aviation policy decisions and administering aviation-related programs. DOT program uses of BTS airline data include the Airport Improvement program, Essential Air Service, monitoring the performance of the air transportation industry, and conducting status evaluations at both the individual airline and at industry levels, as well as conducting International Negotiations of air service agreements. The use and visibility of this airline data collection, which was originally mandated to enable oversight of airline competition, has grown in recent years as airlines and their markets have increased in complexity and competitiveness.

The BTS Form 41 traffic data is relied upon to manage key Departmental programs such as the FAA Airport Improvement Program to distribute billions of dollars, annually, to airports. The Office of the Secretary relies on this data in managing airline programs, including its International program which relies upon the BTS Form 41 data for international negotiations, grants of authority to airlines and other purposes. Also, the monthly On-Time Flight Performance and Flight Delay data is important to the airlines and public in understanding of airline performance.

#### **FY 2009 Base:**

The Air Transportation Statistics Program collects, processes, and regularly releases/disseminates airline data from four primary data collections: On-Time Flight Performance (including causes of delays), domestic and international passenger and freight traffic, passenger ticket information, and airline financial and employment information. This air passenger itinerary and fare information is disseminated on the BTS website and directly from BTS as datasets and reports. The program also provides specialized reports for DOT and other Government agencies that are required in fulfilling their legislative mandates.

BTS collects and disseminates airline financial, traffic, performance and operational data from 150 U.S. airlines. Traffic data to and from the United States are collected and disseminated from 135 foreign air carriers that operate air service to the United States. Annually, BTS collects over 8,000 reports from U.S. and foreign airlines. Besides collecting and disseminating airline data, BTS continues to enhance its airline data edit and validation procedures in order to maintain a high level of data quality for DOT decision-makers.

### **Anticipated FY 2010 Accomplishments:**

- Monthly release of traffic data covering air passenger enplanements for the industry; airline rankings by air passenger enplanements, traffic volume, revenue miles, available seat miles, load factors and trip lengths;
- Quarterly release of Air Passenger Origination-Destination Survey of passenger fare and trip itinerary data;
- Quarterly release of domestic operating profit and loss data for individual airlines and by carrier groups (e.g. majors, low cost carriers); airline domestic unit costs; and revenue yield;
- Monthly release of On-Time performance data, providing the overall on-time arrival and departure performance of airlines, airports, and specific flights;
- Monthly data on causes of flight delays, characterized in five categories: Air Carrier, Extreme Weather, National Aviation System (NAS), Late-Arriving Aircraft, and Security;
- Maintain and operate OAI's data processing environment.
- Make further progress in E-GOV goals and continue to develop and further enhance and expand a pilot program to enable air carriers to file their financial, operational, and traffic data reports with BTS using a more efficient electronic means (Web e-filing), improving data processing efficiency and reducing reporting burden on the industry.
- BTS will continue to support the Office of the Secretary in mail ratemaking and Essential Air Service (EAS) programs.
- Continue to provide weekly airline traffic data collection and processing as required jointly of DOT and the U.S. Postal Service by the Rural Service Improvement Act.
- Continue to provide GAO with request data traffic and financial information.
- Develop and implement further enhancements to the processing system for data validation, improving the edit logic or "business rules" to maintain a high level of airline data quality in a Total Quality Management (TQM) program.

BTS continues to refine the newly-established process by which tarmac delay and flight cancellation data are reported and disseminated. During FY 2010 BTS will continue to pursue a number of data quality improvement activities including the enhancement of support tables and automation of manual data processes. BTS is currently upgrading these support tables to ensure that unique identifiers are consistently used throughout the process. BTS will continue to enhance the existing database structures and applications to ensure the integrity of the support tables. The support tables will be incorporated into the overall data base schema.

## **FY 2010 Budget Request**

In FY 2010, the Air Transportation Statistics Program will continue the maintenance and operation of the existing airline data collections, ensuring high quality data and maintaining a steady state production of accurate, timely and relevant outputs. BTS plans to continue to expand the coverage of its pilot Web-Filing project to include additional airlines and additional databases that can benefit from the advances implemented in electronically filing airline data. Also, support will continue to be provided to the mail ratemaking and Essential Air Service programs in the Office of the Secretary. Weekly airline traffic data collection and processing (as required jointly of DOT and the U.S. Postal Service by the Rural Service Improvement Act) will continue to be provided by the Air Transportation Statistics Program. BTS will also continue with the implementation of its total quality management program, improving the integrity of its airline data systems, and ensuring data consistency across data systems and across all the historical years of data collection. In addition, the program will continue planning and implementation of an airline data modernization program in partnership with other DOT organizations.

### **Explanation of Funding Changes for Air Transportation Statistics Program:**

**Amount: \$0**

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**SECTION 4**  
**BUDGET REQUEST**  
**BY**  
**PERFORMANCE OBJECTIVE**

**EXHIBIT IV-1**  
**FY 2010 BUDGET REQUEST BY STRATEGIC GOAL AND PERFORMANCE GOAL**  
**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
**Appropriations, Obligation Limitations, & Exempt Obligations**  
(In thousands of dollars)

<b>STRATEGIC &amp; PERFORMANCE GOALS by Performance Measure</b>	<b>FY 2008 <u>ACTUAL</u></b>	<b>FY 2009 <u>ENACTED</u></b>	<b>FY 2010 <u>REQUEST</u></b>
<b>1. SAFETY STRATEGIC GOAL</b>			
A. <u>Hazmat Safety</u>			
ITS Joint Program Office <sup>1</sup>	[40,400]	[37,350]	[44,716]
Subtotal Performance Goal	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total – Safety Strategic Goal</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2. REDUCED CONGESTION STRATEGIC GOAL</b>			
A. <u>High Performance Transportation Infrastructure</u>			
Geospatial Information <sup>2</sup>	[1,758]	[1,758]	[1,823]
NDGPS	4,948	5,348	4,948
PNT	400	0	400
B. <u>Increased Use of ITS</u>			
ITS Joint Program Office <sup>1</sup>	[56,000]	[58,100]	[56,726]
Subtotal Performance Goal	<u>5,348</u>	<u>5,348</u>	<u>5,348</u>
<b>Total – Reduced Congestion Strategic Goal</b>	<b>5,348</b>	<b>5,348</b>	<b>5,348</b>
<b>3. GLOBAL CONNECTIVITY STRATEGIC GOAL</b>			
A. <u>Increase the Efficiency of Passenger and Cargo Movement</u>			
Travel Statistics <sup>2</sup>	[2,947]	[2,947]	[3,056]
Freight Statistics <sup>2</sup>	[10,723]	[10,723]	[11,120]
Compilations <sup>2</sup>	[4,945]	[4,945]	[5,128]
B. <u>Enhanced Competitiveness of US Transport Providers and Manufacturers</u>			
Transportation Economics <sup>2</sup>	[1,811]	[1,811]	[1,878]
Airline Statistics Reimbursable Program <sup>3</sup>	[4,000]	[4,000]	[4,000]
Subtotal Performance Goal	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total – Global Connectivity Strategic Goal</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>4. ENVIRONMENTAL STEWARDSHIP STRATEGIC GOAL</b>			
A. <u>Reduction in Pollution and Adverse Effects</u>			
ITS Joint Program Office <sup>1</sup>	[0]	[0]	[8,558]
Hydrogen Fuels Safety R&D	852	1,752	852
Subtotal Performance Goal	<u>852</u>	<u>1,752</u>	<u>852</u>
<b>Total – Environmental Stewardship Strategic Goal</b>	<b>852</b>	<b>1,752</b>	<b>852</b>
<b>5. ORGANIZATIONAL EXCELLENCE STRATEGIC GOAL</b>			
A. <u>Fulfill the President’s Management Agenda</u>			
ITS Joint Program Office <sup>1</sup>	[13,600]	[14,550]	[0]
Methods & Standards <sup>2</sup>	[2,471]	[2,471]	[2,563]
National Transportation Library <sup>2</sup>	[2,345]	[2,345]	[2,432]
RD&T Coordination	5,800	5,800	6,979
UTC Reimbursable Program <sup>4</sup>	[76,700]	[76,700]	[76,700]
Subtotal Performance Goal	<u>5,800</u>	<u>5,800</u>	<u>6,979</u>
<b>Total – Organizational Excellence Strategic Goal</b>	<b>5,800</b>	<b>5,800</b>	<b>6,979</b>
<b>GRAND TOTAL</b>	<b>12,000</b>	<b>12,900</b>	<b>13,179</b>

<sup>1/</sup> Resources are shown as non-adds because resources reside in the FHWA budget.

<sup>2/</sup> Resources are shown as non-adds because the Bureau of Transportation Statistics is an allocation account under the Federal-aid Highways program.

<sup>3/</sup> Resources are shown as non-adds because resources are reimbursable resources.

<sup>4/</sup> Resources are shown as non-adds because resources are reimbursable from FHWA and FTA.

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## **SAFETY**

**SAFETY**

This funding request contributes to the DOT Safety strategic objective and to the following performance outcome goals:

- Performance Goal 1: Reduction in transportation-related deaths.**
- Performance Goal 2: Reduction in transportation injuries.**

This request would allow RITA to:

- To execute a program of ITS research and development, and technology transfer to enhance safety

The resources requested to achieve this goal are:

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION  
Appropriations, Obligations Limitations, & Exempt Obligations**

Strategic & Performance Goals by Program Measure	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
	<b><u>ACTUAL</u></b>	<b><u>ENACTED</u></b>	<b><u>REQUEST</u></b>
<b>1. SAFETY STRATEGIC GOAL</b>			
<b>A. Hazmat Safety</b>			
<b>a. Other</b>			
<b>ITS Joint Program Office</b>	[40,400]	[37,350]	[44,716]
<b>Subtotal</b>	<b>[40,400]</b>	<b>[37,350]</b>	<b>[44,716]</b>
<b>FTE</b>	[7]	[7]	[7]
<b>Total - Safety Strategic Goal</b>	<b>0</b>	<b>0</b>	<b>0</b>

## SAFETY

### **Performance Goal 1: Reduction in transportation-related deaths.**

### **Performance Goal 2: Reduction in transportation injuries.**

## PERFORMANCE ISSUES

### **Intelligent Transportation Systems**

- The Intelligent Transportation System (ITS) Program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, and operational testing, technology transfer, training and technical guidance.
- In FY 2010, the ITS Program will research activities focused on high risk, high profile, high impact, and high reward. This research will address specific problems and needs, have a high level of stakeholder commitment, involve the private sector extensively, and have significant potential benefits to the transportation community and the Nation.
- Technology transfer programs will focus on providing the necessary tools, guidance, and training to support deployment and operation of ITS by State and local governments. These programs consist of Architecture and Standards, Professional Capacity Building, Evaluation and Assessments and Outreach. The evaluation program independently assesses the results of the ITS research projects and documents the findings for stakeholders and the public.

## ANTICIPATED FY 2010 ACCOMPLISHMENTS

### **Intelligent Transportation Systems**

- Continue major initiative research to establish the technical and institutional foundation for a nationwide vehicle to vehicle, vehicle to roadside, and roadside to vehicle communications network enabling a wide range of safety applications. Develop network-based applications to significantly reduce crashes, injuries, fatalities, and the associated costs.
- Further integration of road weather data sites into a national network. Complete development of FY 2008 applications and migration of weather data into the National Weather Service systems. Integrate road weather information products into transportation system operations applications.
- Develop, upgrade, and maintain ITS standards and architecture
- Provide learning and peer assistance opportunities that facilitate the awareness and understanding of ITS technologies to the ITS workforce to improve the safety of the transportation network.

## FY 2010 PERFORMANCE BUDGET REQUEST

Inputs	Activities	Outputs	Outcomes
<i>ITS</i>			
<b>Major Research Initiatives</b>			
[\$23,925,000/ 4.4 FTE]	<ol style="list-style-type: none"> <li>1. IntelliDrive system updates.</li> <li>2. Update and open testbed environment.</li> <li>3. Advance safety applications</li> <li>4. Road weather system demonstrations</li> </ol>	<ol style="list-style-type: none"> <li>1. Updated design</li> <li>2. Testbed for continued use.</li> <li>3. Safety application prototypes.</li> <li>4. Potential deployment options</li> </ol>	<ol style="list-style-type: none"> <li>1. Advance technical and institutional foundation for wireless vehicle-to-vehicle and vehicle-to-infrastructure network and applications to significantly reduce crashes</li> <li>2. Road weather systems and tools that reduce crashes.</li> </ol>
<b>ITS Architecture and Standards</b>			
[\$4,000,000/.6 FTE]	<ol style="list-style-type: none"> <li>1. Develop Version 7.0 of the National ITS Architecture.</li> <li>2. Update and develop ITS Standards for vehicle connectivity.</li> <li>3. Maintain and update existing ITS standards (100+)</li> <li>4. Provide technology transfer.</li> </ol>	<ol style="list-style-type: none"> <li>1. Version 7.0 of the National ITS Architecture.</li> <li>2. ITS Standards for vehicle connectivity.</li> <li>3. Maintain and update existing ITS standards (100+)</li> <li>4. Training and outreach materials and delivery.</li> </ol>	National ITS Architecture and related standards to support ITS deployment and interoperability.
<b>Professional Capacity Building (PCB)</b>			
[\$4,458,000/.7 FTE]	<ol style="list-style-type: none"> <li>1. New course development</li> <li>2. Peer-to-Peer Program.</li> <li>3. ITS Solution Center.</li> <li>4. Support of numerous public, private, and academic partnerships for enhancing the accessibility of ITS learning.</li> </ol>	<ol style="list-style-type: none"> <li>1. New course materials and programs that address increased transportation safety</li> <li>2. ITS workforce training</li> </ol>	<ol style="list-style-type: none"> <li>1. Facilitate the awareness and understanding of ITS technologies, enhance the efficiency and effectiveness of deployments, and foster the development of the ITS workforce.</li> <li>2. Improved transportation system maintenance and operation through the use of ITS technology.</li> </ol>
<b>ITS Program Support, Evaluation, and Outreach</b>			
[\$8,000,000/1.3 FTE]	<ol style="list-style-type: none"> <li>1. ITS JPO website maintenance.</li> <li>2. Electronic libraries maintenance Analyses and simulation, preparation of white papers, reviews of technical reports, program planning and tracking, and procurement support.</li> <li>3. Independent evaluations of ITS deployments.</li> </ol>	<ol style="list-style-type: none"> <li>1. Program plans; procurement plans; analyses and papers on such topics as wireless communication traffic simulation, RFID technology, etc.; detailed comments on draft reports</li> <li>2. A comprehensive Web-based and multimedia-supported dissemination program.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rigorous ITS program management of all ITS research projects through the use of a Project Management Office (PMO)</li> <li>2. Community support for deployment and operation of ITS technology and systems for improving transportation safety</li> </ol>

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**REDUCED CONGESTION**

## REDUCED CONGESTION

This funding request contributes to the DOT Reduced Congestion strategic objective and to the following performance outcomes:

**Performance Outcome 3: Increased use of Intelligent Transportation Systems (ITS) networks and new incident management approaches.**

**Performance Outcome 4: Reduced impediments to the efficient movement of freight over the transportation network, especially at key freight gateways.**

This request would allow RITA to:

- Develop civil requirements for Positioning, Navigation, and Timing (PNT), coordinate PNT technology, PNT policy, and spectrum management.
- Continue operations and maintenance of the inland segment of the Nationwide Differential Global Positioning System (NDGPS).
- Advance high-risk, high profile, high impact and high reward research on congestion mitigation and traffic management through intelligent transportation system technologies and capacity-building.
- Develop geospatial data useful for transportation planning and continue work toward a common geospatial information infrastructure for transportation.

The resources requested to achieve this goal are:

### RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION Appropriations, Obligations Limitations, & Exempt Obligations

Strategic & Performance Goals by Program Measure	FY 2008	FY 2009	FY 2010
1. REDUCED CONGESTION STRATEGIC GOAL	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
A. Increase use of ITS			
a. Other			
ITS Joint Program Office	[56,000]	[58,100]	[56,726]
ITS Subtotal	<u>[56,000]</u>	<u>[58,100]</u>	<u>[56,726]</u>
FTE	[9.0]	[9.0]	[9.0]
B. Reduced impediments			
a. Other			
NDGPS	4,948	5,348	4,948
PNT	<u>400</u>	<u>0</u>	<u>400</u>
R&D Subtotal	<b>5,348</b>	<b>5,348</b>	<b>5,348</b>
FTE	1.0	1.0	1.0
Geospatial Information	<u>[1,758]</u>	<u>[1,758]</u>	<u>[1,823]</u>
BTS Subtotal	<u>[1,758]</u>	<u>[1,758]</u>	<u>[1,823]</u>
FTE	7.4	7.4	6.0
<b>Total - Reduced Congestion Strategic Goal</b>	<b>5,348</b>	<b>5,348</b>	<b>5,348</b>

## **REDUCED CONGESTION**

### **Performance Goal 3: Increased use of Intelligent Transportation Systems (ITS) networks and new incident management approaches.**

#### **PERFORMANCE ISSUES**

##### **Intelligent Transportation Systems**

- The ITS Program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation. The ITS program carries out its goals through research and development, operational testing technology transfer, training and technical guidance.
- In FY2010, the ITS Program will initiate a new set of research activities focused on high risk, high profile, high impact, and high reward. This research will address specific problems and needs, have a high level of stakeholder commitment, involve the private sector extensively, and have significant potential benefits to the transportation community and the Nation. At the same time, several previous research initiatives will be completed.
- Technology transfer will be a key element of the ITS program that consists of several programs all focused on providing the necessary tools, guidance, and training to support deployment and operation of ITS by State and local governments. These programs consist of Architecture and Standards, Professional Capacity Building, Evaluation and Assessments and Outreach. The evaluation program independently assesses the results of the ITS research projects and documents the findings for stakeholders and the public.

#### **ANTICIPATED FY 2010 ACCOMPLISHMENTS**

##### **Intelligent Transportation Systems**

- Major Research Initiatives: Complete the Integrated Corridor Management (ICM) initiative. Partner with several pioneer sites to develop and analyze strategies for integrated operations on the selected corridors and conduct a field test of promising strategies in up to three sites. Complete development of road weather applications, further integration of road weather data sites into a national network, and migrate data to the National Weather Service systems. Integrate road weather information products into transportation system operations applications with the goal of optimizing system performance and reducing congestion.
- Optimized Multi-Modal Transportation: Initiate a new technology research program to create an information rich transportation network that provides new capabilities for transportation managers to transform multi-modal network performance. The research will support technology to generate new data across all modes and all roads, new applications for system performance, new capabilities to



gather cost/price data, and information provision to travelers to optimize system performance and reduce congestion.

- Next Generation E-Payment: Initiate new technology research on the range of e-payment options that may be available to support seamless payment across all modes and/or policy decisions for nationwide payment and advanced mobility.
- Tech Transfer: Maintain and enhance the National TS Architecture, develop open and non-proprietary ITS Standards to support interoperability of ITS deployments, and execute related technical assistance programs. Provide training to the ITS workforce to assist in the deployment, and operational use of ITS technologies for congestion reduction. Develop qualitative and quantitative information on the costs, impacts, and benefits of ITS Systems and to provide knowledge resource products to ITS investment decision-makers and deploying organizations.

**FY 2010 PERFORMANCE BUDGET REQUEST**

Inputs	Activities	Outputs	Outcomes
<i>ITS</i>			
<b>ITS Major Research Initiatives</b>			
[\$19,000,000/3.2 FTE]	<ol style="list-style-type: none"> <li>1. USDOT will partner with several pioneer sites to develop and analyze strategies for integrated operations on the selected corridors.</li> <li>2 Analyze local ICM site strategies and suggest potential for benefits from implementing the strategies and conduct a field test in up to three sites.</li> <li>3. Development of road weather algorithms.</li> <li>4. Conduct operational demonstrations</li> <li>5. Initiate a new technology research program to create an information rich transportation network that provides new capabilities for transportation managers to transform multi-modal network performance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Surveillance and detection systems requirements and application guide;</li> <li>2. Feasibility reports</li> <li>3. Pioneer Site Analysis and Modeling Plans;</li> <li>4. Tested ICM modeling strategies;</li> <li>5. Analysis and Modeling Tools Assessment Report;</li> <li>6. Compendium of ICM Best Practices;</li> <li>7. ICM Outreach materials</li> <li>8. Weather systems integration with NOAA</li> <li>9. Research and demonstrations of technology options to capture real-time transportation data;</li> <li>10. Prototype applications for the use of real-time data;</li> </ol>	<ol style="list-style-type: none"> <li>1. Improve mobility and safety in major urban corridors.0</li> <li>20. Surface transportation system weather network and tools used by state DOTs to reduce delays</li> <li>3. Integration of road weather information products into transportation system operations and maintenance applications</li> <li>4. Development of new congestion reduction ITS technologies and applications.</li> <li>5. Optimized multi-modal surface transportation performance through the capture and use of real-time data.</li> </ol>

<b>Next Generation E-Payment</b>			
[\$9,000,000/1.4 FTE]	Initiate new technology research on the range of e-payment options that may be available to support seamless payment across all modes and/or policy decisions for nationwide payment.	<ol style="list-style-type: none"> <li>1. Define existing payment options, technologies and standards;</li> <li>2. Develop or modify a common standard to support interoperable payment across modes;</li> <li>3. Work with stakeholders to identify migration paths to a common standard;</li> <li>4. Conduct technology research on options for nationwide fee payment to advise decision makers;</li> <li>5. Standards for interoperable payment systems;</li> <li>6. Research and demonstration on technology options for seamless payment across modes;</li> </ol>	Achieve interoperable nationwide payment systems across modes
<b>Modal Specific Research</b>			
[\$1,268,000/.3 FTE]	Initiate new technology research projects that yield high value mobility benefits to one specific mode of transportation to complement the multi-modal research program	<ol style="list-style-type: none"> <li>1. Research projects focusing on smart infrastructure solutions;</li> <li>2. Transit related research to improve system performance;</li> <li>3. Freight optimization research that reduces delivery times and reduces fuel consumption</li> </ol>	Support high-value ITS research projects that focus on one specific mode of transportation to increase mobility, livability, and to reduce congestion.

**Performance Goal 4: Reduced impediments to the efficient movement of freight over the transportation network, especially at key freight gateways.**

**PERFORMANCE ISSUES**

**Spatial Information and Related Technologies** – To improve the transportation community’s capability in managing traffic flows by developing deployable spatial and related tools and technologies.

- Nationwide Differential Global Positioning System (NDGPS) – NDGPS is an enabling positioning and navigation system for civil, commercial and scientific applications. DOT’s role in the multi-agency effort is to preserve the government’s investment in the inland Nationwide Differential Global Positioning System (NDGPS); operate and maintain the system in coordination with the U.S. Coast

Guard's Maritime DGPS, while pursuing necessary equipment recapitalization to buy down technical risk.

- Position, Navigation and Timing (PNT) - Coordinate PNT technology, PNT policy, and spectrum management. Support the National Security Presidential Directive on Space-Based PNT Policy through the development of requirements for civil applications of PNT services as part of the National PNT Architecture. This program fulfills DOT's responsibility to (1) provide uninterrupted availability of PNT services, (2) meet growing homeland security, economic security and civil requirements; scientific and commercial demands, and (3) provide civil services that exceed or are competitive with foreign civil space-based PNT services and augmentation systems.
- Geospatial Information – Geospatial information provides the visual and analytical tools that enable data to be linked using a common geographic reference. This is particularly useful for gathering transportation data which is inherently location based. By using a common geospatial infrastructure to code data, the transportation community creates the capacity for dramatically enhancing the ability to prioritize highway maintenance projects, study noise footprints, plan for system disruptions, and assess the supply and demand of travel routes.

*Agency Output Measure: Ensure that the annual release of National Transportation Atlas Database (NTAD) CD is available prior to the start of the annual ESRI (Environmental Systems Research Institute) International User Conference on GIS and mapping software (to provide timely support for research, analysis, and decision-making across all modes of transportation). Goal: 1 or more weeks in advance of the target date ON-TRACK*

*Agency Outcome Measure: Reduce response time for map requests by the DOT Crisis Management Center (CMC) and in support of the Continuity of Operations (COOP) plans (improve emergency response by providing current and timely information). Goal: 0.25 hour per annum reduction the first year and 0.5 hour reduction each year thereafter --long term: 4 hour turnaround by 2010 ON-TRACK*

*Agency Output Measure: Increase the number of National Atlas Transportation Database (NTAD) CD-ROMs distributed (to broaden the customer base for this product). Goal: 15.0% growth per annum ON-TRACK*

## **ANTICIPATED FY 2010 ACCOMPLISHMENTS**

- Publish 2008 Federal Radionavigation Plan.
- Provide continued routine inland NDGPS system operations and maintenance.
- Develop civil PNT requirements document.
- Produce National PNT Architecture Transition and Implementation Plan.
- Produce the National Transportation Atlas Databases (NTAD) for 2008.

**FY 2010 PERFORMANCE BUDGET REQUEST**

Inputs	Activities	Outputs	Outcomes
<i>Spatial Information &amp; Related Technologies</i>			
<b>Geospatial Information</b>			
\$1,823,000/ 6 FTE	1. Develop transportation-specific geospatial data. 2. Provide geospatial analytic support and products. 3. Represent DOT on geospatial committees.	1. NTAD. 2. Mapping products & analytical reports. 3. Recommendations on the Geospatial Line of Business	A common foundation for transportation information analysis and exchange.
<b>Nationwide Differential Global Positioning System</b>			
DGPS \$4,948,000/ 1 FTE	1. Continue routine inland NDGPS system operations and maintenance.	1. Support system users identified through the NDGPS system assessment.	Accurate positioning and location information is available for routing and control.

<b>Positioning, Navigation and Timing</b>			
PNT \$ 400,000/ 0 FTE	<ol style="list-style-type: none"> <li>1. Develop and implement the national PNT architecture, including development of civilian agency user requirements and projections for Federally provided radionavigation systems in the 2008 Federal Radionavigation Plan.</li>   <li>2. Evaluations of alternative future mixes of global (space and non-space-based) and regional PNT solutions, PNT augmentations, and autonomous PNT capabilities to address priorities identified by both the civil and military communities.</li> </ol>	<ol style="list-style-type: none"> <li>1. Civil PNT requirements document and 2008 Federal Radionavigation Plan.</li>   <li>2. National PNT Architecture Transition and Implementation Plan</li> </ol>	Accurate positioning and location information is available for routing and control.

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## **GLOBAL CONNECTIVITY**

## GLOBAL CONNECTIVITY

This funding request contributes to the DOT Global Connectivity strategic objective and to the following performance outcomes:

**Performance Outcome 2: Safer, more efficient and cost effective movement of passengers and cargo throughout international and domestic transportation systems, including U.S. ports of entry, modal and intermodal supply chains.**

**Performance Outcome 4: Enhanced competitiveness of U.S. transport providers and manufacturers in the global marketplace.**

**This request would allow RITA to:**

- Produce financial and economic transportation data including the Air Travel price Index (ATPI), the effect of transportation on the Gross Domestic Product, government transportation financial statistics and the State Transit Expenditure Survey.
- Provide prompt information on 150 airlines including passenger ticket information and airline financial and employment information for government agencies and stakeholders.
- Produce multiple annual publications of transportation data including the Transportation Statistical Annual Report on key indicators and issues, National Transportation Statistics compendium and state volumes, and the Pocket Guide to Transportation.
- Continue joint partnership with the Census Bureau on the Commodity Flow Survey.
- Provide transborder data, border crossing data and design recommendations on the development of the International Freight Data System (IFDS) interface to (ITDS).

**The resources requested to achieve this goal are:**

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
Appropriations, Obligations Limitations, & Exempt Obligations

Strategic & Performance Goals by Program Measure	FY 2008	FY 2009	FY 2010
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
<b>1. Global Connectivity Strategic Goal</b>			
<b>A. Cost effective movement of passengers and cargo movement</b>			
<b>a. Other</b>			
Travel Statistics	[2,947]	[2,947]	[3,056]
Freight Statistics	[10,723]	[10,723]	[11,120]
Complications	<u>[4,945]</u>	<u>[4,945]</u>	<u>[5,128]</u>
<b>BTS Subtotal</b>	<b>[18,615]</b>	<b>[18,615]</b>	<b>[19,304]</b>
<b>FTE</b>	49	49	48
<b>B. Enhanced competitiveness</b>			
<b>a. Other</b>			
Transportation Economics	<u>[1,811]</u>	<u>[1,811]</u>	<u>[1,878]</u>
<b>BTS Subtotal</b>	<b>[1,811]</b>	<b>[1,811]</b>	<b>[1,878]</b>
<b>FTE</b>	5	5	5
<b>a. Other</b>			
Air Statistics Reimbursable	<u>[4,000]</u>	<u>[4,000]</u>	<u>[4,000]</u>
<b>BTS Subtotal</b>	<b>[4,000]</b>	<b>[4,000]</b>	<b>[4,000]</b>
<b>FTE</b>	19	19	19
<b>Total - Global Connectivity Strategic Goal</b>	<b>0</b>	<b>0</b>	<b>0</b>



## GLOBAL CONNECTIVITY

### **Performance Goal 2: Safer, more efficient and cost effective movement of passengers and cargo throughout international and domestic transportation systems, including U.S. ports of entry, modal and intermodal supply chains.**

#### PERFORMANCE ISSUES

**System Performance** – To facilitate system-level transportation decision-making by providing intermodal and multimodal products and services related to the movement of passengers and cargo throughout the system.

- Domestic Freight Movement – The Freight Data Program meets the most commonly cited, high priority freight data needs of the Department, other federal agencies and the transportation community. The Commodity Flow Survey provides the most comprehensive source of nationwide data on the flow of goods, the geography of freight movement, and the distance of multimodal shipment, plus the sole source of national flow data on hazardous materials shipments by highway and air.

*Agency Outcome Measure: Maintain a minimum 80% response rate on the Commodity Flow Survey (CFS) (quality of outcome improvement by reducing non-response bias). Goal: 80.0% for 2007 data-- Actual 85.3%*

- International Cargo & Passenger Movement - The Freight Data Program provides transborder and border crossing statistical data specified in the allocation formula for border state infrastructure grants.

*Agency Output Measure: Number of hits on the Transborder Freight Web Pages Goal 4% increase per annum over 5 years ON-TRACK*

*Agency Efficiency Measure: Time between source data availability and BTS publication-- Average days between source data availability and BTS publication for monthly TransBorder Freight Data. Goal: 2 month reduction per annum over 5 years. ON-TRACK*

- Domestic Passenger Movement - The Travel Statistics Program provides data on personal and business travel that is used by state transportation officials to manage ferry operations and infrastructure, modal administrations to improve transportation projects, and to develop measures of system reliability.
- Compilations - Statistical compilations include recurring print and web publications: *National Transportation Statistics*, the annual report to Congress, and the *BTS Pocket Guide to Transportation*. The program also provides transportation data to the White House website, and improves and disseminates transportation data through multinational exchanges. As required under SAFETEA-LU, the program also interacts with the Transportation Research Board to provide statistical data.

*Agency Efficiency Measure: Time between source data availability and BTS publication-- Months between the close of reference period and release date of National Transportation Statistics data tables Goal: Maintain current time period requirement over the next 5 years ON-TRACK*

## **ANTICIPATED FY 2009 ACCOMPLISHMENTS**

- Release the initial set of preliminary 2007 Commodity Flow Survey (CFS) tables in December 2009.
- Complete processing of the 2007 Commodity Flow Survey data.
- Finalize design and content of all final 2007 CFS data products scheduled for release in December 2009.
- Release the Transborder and Border Crossing/Entry data
- Publish *North American Trade Growth Continued in 2007*,
- Publish *Maritime Vessels Carry More than Half of Growing U.S.-East Africa Trade* which examines trends in trade with Burundi, Kenya, Rwanda, Tanzania and Uganda by air and vessel.
- Publish *America's Container Ports* report
- Lead the effort to design the International Freight Data System (IFDS) which will serve as the Department's interface with the International Trade Data System (ITDS), and serve as the warehouse for international freight data.
- Produce and publish the *Transportation Statistics Annual Report (TSAR)* to Congress.
- Update, publish, and distribute the annual *Pocket Guide to Transportation*.
- Update and release quarterly the web compendium of the *National Transportation Statistics* and produce an associated volume of the *State Transportation Statistics*.
- Produce and release monthly the Transportation Services Index (TSI.)
- Produce Key Transportation Indicators on a regularly scheduled basis.
- Host the XXIII North American Transportation Statistics Interchange.
- Release an update of the North American Transportation Statistics Online Database (NATS OD) in conjunction with statistics and transportation agencies in Canada and Mexico.

## FY 2010 PERFORMANCE BUDGET REQUEST

Inputs	Activities	Outputs	Outcomes
<i>System Performance</i>			
<b>Domestic Freight Movement (BTS) Freight Statistics</b>			
\$7,991,000 / 15 FTE	1. Validate CFS data. 2. Finalize mileage calculations.	1. Mileage calculation data.	Transportation decision-makers are informed of key freight flow patterns and issues.
<b>International Freight Movement (BTS) Freight Statistics</b>			
\$3,129,000 / 8 FTE	1. Conduct outreach to assess needs. 2. Prepare border crossing and transborder data. 3. Design IFDS 4. Conduct international data exchanges	1. Monthly transborder and border crossing data releases. 2. Publish NAFTA Trends report. 3. Publish America's Container Ports report.	Transportation stakeholders have information about the current positioning of the US in international transportation environment.
<b>Domestic Passenger Movement (BTS) Travel Statistics</b>			
\$3,056,000 / 9 FTE	1. Run Confidential Close Calls reporting system.	1. Issue briefs and reports on various topics. 2. Rural travel analysis update.	DOT has a clear picture of the nature of passenger travel within the US and insights into where the system fails to meet the needs of travelers.
<b>Compilations (BTS)</b>			
\$5,128,000/ 16 FTE	1. Collect and maintain transportation data. 2. Measure freight & passenger movement – Transportation Services Index.	1. Publications & postings: TSAR, NTS and Pocket Guide. 2. Produce TSI. 3. Produce Key Transportation Indicators.	DOT and Congress have a clear picture of the state of transportation statistics and the overall state of transportation.

## **Performance Goal 4: Enhanced competitiveness of U.S. transport providers and manufacturers in the global marketplace.**

### **PERFORMANCE ISSUES**

**Industry Economics** - To facilitate informed transportation planning and management by providing information about the transportation industry and the sector's relationship to economics.

- Airline Industry - [reimbursable] - The Air Transportation Statistics Program is the only source for objective airline performance information. Data provided by this program is the basis for significant decision-making efforts such as the FAA Airport Improvement Program and provides the core information used in airline policy initiatives, international negotiations, and grants of authority to airlines. It also provides the basis for the public's use of airline performance information in making consumer travel decisions.

*Agency Output Measure: Increase the percentage of periodic data releases (airline traffic and financial data, Transportation Services Index, and Air Travel Price Index) that occurred on schedule (enable our stakeholders and customers predictable delivery of our datasets).*

*Goal: 100% ON-TRACK*

- Transportation Economic Statistics - The Transportation Economics Program serves to explain key relationships and impacts between economics and transportation. Information can then be used to make decisions that can optimize transportation investments and improve system productivity. This includes the Air Travel price Index (ATPI), the effect of transportation on the Gross Domestic Product, government transportation financial statistics and the State Transit Expenditure Survey.

### **ANTICIPATED FY 2009 ACCOMPLISHMENTS**

- Release traffic data monthly covering total monthly enplanements for the industry, airline rankings by enplanements, passenger volume, revenue miles, available seat miles, load factors and trip lengths.
- Release quarterly Air Passenger Origin-Destination Survey for passenger fare and trip itinerary data.
- Release domestic operating profit and loss data quarterly for individual airlines and by carrier groups, airline domestic unit costs; and revenue yield.
- Release On-Time performance data monthly providing overall on-time arrival and departure performance information on airlines, airports and specific flights.
- Provide monthly data on causes of flight delays, characterized in five categories: air carrier, extreme weather, National Aviation System (NAS), late-arriving aircraft, and security.
- Implement enhancements to the processing system for airline data validation.
- Publish Transportation Satellite Account (TSA) estimates for private truck, rail, aviation, and waterborne modes and post the data.
- Produce the Air Travel Price Index (ATPI), a quarterly index of representative air fares.

- Publish enhanced multi-factor productivity measures and analysis for long-distance trucking and pipeline modes.
- Publish the revamped Government Transportation Financial Statistics 2007 (GTFS).
- Publish an updated State Transit Expenditure Survey.
- Publish Intermodal Passenger Connectivity report and release updated data.

## FY 2010 PERFORMANCE BUDGET REQUEST

Inputs	Activities	Outputs	Outcomes
<b><i>Industry &amp; Economics</i></b>			
<b>Air Transportation Statistics (BTS)</b>			
[\$4,000,000] / 19 FTE]	1. Expand web-filing to additional states. 2. Maintain and operate airline data collections. 3. Continue data modernization project.	1. Data reports on airline financial performance. 2. Monthly airline traffic data releases. 3. On-time data releases.	Stakeholders are better informed about transportation system efficiency, performance and reliability.
<b><i>Industry Economics</i></b>			
<b>Transportation Economic Statistics (BTS)</b>			
\$1,878,000/ 5 FTE	1. Analyze economic and financial data. 2. Produce economic indicators for transportation.	Electronic publishing of: 1. Transportation Satellite Accounts, 2. Air Travel Price Index, 3. Government Transportation Financial Statistics, 4. Multi-factor productivity measures, and 5. State Transit Expenditure Survey results.	Transportation decision-makers are informed about the economic impact of transportation and transportations impact on the economy.

# **ENVIRONMENTAL STEWARDSHIP**

## ENVIRONMENTAL STEWARDSHIP

This funding request contributes to the DOT Environmental Stewardship strategic objective and to the following performance outcomes:

**Performance Outcome 1: Reduced pollution and other adverse environmental effects of transportation and transportation facilities.**

This request would allow RITA to:

- Coordinate, manage, and conduct the Department’s R&D activities involving alternative fuels technology, advanced propulsion systems for these fuels and other alternative fuels projects including hydrogen materials compatibility.
- Conduct outreach and other collaboration with federal and other key stakeholders.
- To execute a program of ITS research and development, and technology transfer to enhance environmental stewardship.

The resources requested to achieve this goal are:

**RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION**  
**Appropriations, Obligations Limitations, & Exempt Obligations**

**Strategic & Performance Goals by  
Program Measure**

	FY 2008	FY 2009	FY 2010
	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
<b>1. Environmental Stewardship Goal</b>			
<b>A. Reduced environmental effects</b>			
<b>a. Other</b>			
ITS Joint Program Office	[0]	[0]	[8,558]
ITS Subtotal	[0]	[0]	[8,558]
FTE	[0]	[0]	[1]
Hydrogen Fuel Safety R&D	<u>852</u>	<u>1,752</u>	<u>852</u>
R&D Subtotal	<u>852</u>	<u>1752</u>	<u>852</u>
FTE	1.0	1.0	1.0
 <b>Total - Environmental Stewardship Goal</b>	 <b>852</b>	 <b>1752</b>	 <b>852</b>

## ENVIRONMENTAL STEWARDSHIP

### **Performance Goal 1: Reduced pollution and other adverse environmental effects of transportation and transportation facilities.**

#### PERFORMANCE ISSUES

**Alternative Fuels Objective** - To improve the transportation community's capabilities in reducing adverse environmental impacts through environmental assessment, alternatives fuels research, and development of mitigation tools.

- **Alternative Fuels - Creation of a Greener, More Secure Economy** - As part of the President's Management Agenda, RITA is coordinating, managing, and executing key components of the Department's hydrogen R&D activities to ensure fuel cell and hydrogen-fueled vehicles can be developed, demonstrated, and deployed and used as a safe and reliable alternative to petroleum fueled vehicles. Part of this coordination role is the responsibility to maintain the DOT and Federal Hydrogen Portal.
- **Hydrogen Safety** – There is a need to continue support of cooperative initiatives to determine how best to protect responders in real-world hydrogen-related scenarios, and develop training and educational materials to support Federal and state initiatives. Based on a variety of research and information, RITA has a responsibility to help establish safety codes and standards development at the local, state, national, and international level as the Department's technical representative for hydrogen fuels infrastructure safety R&D committees and organizations.
- **Bio-Fuels** – [Directed Grants] – Expanding RITA's work to include hydrogen fuel and bio-fuel research presents policy-makers and transportation professionals with a variety of viable alternative fuels options. Research and related program activity includes bio-fuel production, transport, economics and sustainability, analysis, outreach, education and training. Many advances in hydrogen research are transferable to bio-fuels under controlled conditions and vice versa, providing RITA with excellent leveraging of expertise for pursuit of multi-faceted alternative fuel solutions.
- **Climate Change** – [Reimbursable] –Continuing RITA's work to advance climate change research to support federal policy and other decision-making. Continue the Climate Change Center as a centralized DOT modal effort to better realize the vision of the joint program and to leverage available resources to provide reliable insight on climate change issues for application in transportation policy and program planning.

**Intelligent Transportation Systems-** To execute a program of ITS research and development, and technology transfer to enhance environmental stewardship.

- The ITS Program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability



of surface transportation. The ITS program carries out its goals through research and development, operational testing technology transfer, training and technical guidance.

- In FY2010, the ITS Program will initiate a new set of research activities focused on high risk, high profile, high impact, and high reward. This research will address specific problems and needs, have a high level of stakeholder commitment, involve the private sector extensively, and have significant potential benefits to the transportation community and the Nation. At the same time, several previous research initiatives will be completed.
- Technology transfer consists of several programs all focused on providing the necessary tools, guidance, and training to support deployment and operation of ITS by State and local governments. These programs consist of Architecture and Standards, Professional Capacity Building, Evaluation and Assessments and Outreach. The evaluation program independently assesses the results of the ITS research projects and documents the findings for stakeholders and the public.

### **ANTICIPATED FY 2009 ACCOMPLISHMENTS**

- Research and produce a Report to Congress on the *Challenges of Building a Hydrogen Infrastructure*.
- Continue support of cooperative initiatives to determine how best to protect responders in real-world hydrogen-related scenarios, and develop training and educational materials to support Federal and state initiatives.
- Use the results of R&D activities to ensure fuel cell and hydrogen-fueled vehicles can be developed, demonstrated, and deployed and used as a safe and reliable alternative to petroleum fueled vehicles.
- Continue to leverage the advances in hydrogen and biofuels to more effectively support climate change goals and objectives.
- Research and produce a Report to Congress on *Transportation's Impact on Climate Change and Solutions*.
- Establish a technology transfer mechanism incorporating the first RITA-sponsored technology transfer into a peer outreach conference forum.
- ITS Research: Initiate a new technology research program working closely with the automotive industry to gather vehicle-based environmental and energy consumption data. Conduct research to create new applications for road managers and travelers to better operate the transportation network to reduce environmental impact.

## FY 2010 PERFORMANCE BUDGET REQUEST

Inputs	Activities	Outputs	End Outcomes
<i>Alternative Fuels</i>			
<b>Hydrogen (plus limited staff support for Bio-Fuels &amp; climate change)</b>			
\$852,000/ 1 FTE	1. Support collaborative research projects 2. Continue partnering on safety codes and standards and on public safety response training & education. 3. Foster more collaborative alternative fuels and climate change activities within the Department as well as with federal and other key stakeholders.	1. Continued improvements to DOT Hydrogen and Climate Change websites 2. Improved hydrogen codes, standards and training materials. 3. Multiple outreach sessions.	Hydrogen and/or alternative fuels infrastructure is deployed by/in in the market.
<i>ITS</i>			
<b>Environment Research</b>			
[\$8,558,000/1 FTE]	Initiate a new technology research program working closely with the automotive industry to gather vehicle-based environmental and energy consumption data. Conduct research to create new applications for road managers and travelers to better operate the transportation network to reduce environmental impact.	1. Define requirements and data needs for emissions and fuel consumption data; 2. Define standards for collection of the vehicle-based data; 3. Develop requirements for applications in partnership with stakeholders; 4. Prototype applications for the use of the environmental data; 5. Research roadmap with specific deliverables	1. Gather and use vehicle-based environmental data to support decreased environmental impact of emissions and fuel consumption. 2. Vehicle research or products that utilize ITS to decrease emissions, reduce fuel consumption, and decrease particulate pollution

**Major research initiatives for FY 2010 fall into the following areas:**

- a. Continue support of cooperative initiatives to determine how best to protect responders in real-world hydrogen-related scenarios, and develop training and educational materials to support Federal and state initiatives.
- b. Use the results of R&D activities to ensure fuel cell and hydrogen-fueled vehicles can be developed, demonstrated, and deployed and used as a safe and reliable alternative to petroleum fueled vehicles.
- c. Continue to leverage the advances in hydrogen and biofuels to more effectively support climate change goals and objectives.

# **ORGANIZATIONAL EXCELLENCE**

## ORGANIZATIONAL EXCELLENCE

This funding request contributes to the DOT Organizational Excellence strategic objective and to the following performance outcomes:

- Performance Outcome 1: Achieved strategic management of human capital.**
- Performance Outcome 5: Achieved e-government goals.**
- Performance Outcome 6: Achieved research and development goals.**

This request would allow RITA to:

- Provide \$76.7 million in reimbursable funding for investment in education, research, and technology transfer through the University Transportation Centers.
- Validate performance and accountability measures and methodology for DOT and uphold the statistical quality and confidentiality.
- Continue to merge the DOT Library into the National Transportation Library providing a central source for transportation and R&D information primarily through electronic means.
- Enhance Department-wide RD&T coordination through the creation of a Department-wide RD&T database; enhance planning and prioritization efforts, and initiation of common RD&T performance measures.

The resources requested to achieve this goal are:

### RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION Appropriations, Obligations Limitations, & Exempt Obligations

Strategic & Performance Goals by Program Measure	FY 2008	FY 2009	FY 2010
1. Organizational Excellence Strategic Goal	<u>ACTUAL</u>	<u>ENACTED</u>	<u>REQUEST</u>
A. Achieved strategic management of human capital.			
a. Other			
UTC Reimbursable Program	[76,700]	[76,700]	[76,700]
UTC Subtotal	[76,700]	[76,700]	[76,700]
FTE	0	0	0
B. Achieved e-government goals.			
a. Other			
National Transportation Library	[2,345]	[2,345]	[2,432]
BTS Subtotal	[2,345]	[2,345]	[2,432]
FTE	7	7	7
C. Achieved research and development goals.			
a. Other			
RD&T Coordination	5,800	5,800	6,979
R&D Subtotal	5,800	5,800	6,979
FTE	24	24	24
Methods and Standards	[2,471]	[2,471]	[2,563]
BTS Subtotal	[2,471]	[2,471]	[2,563]
FTE	4	4	4
Total - Organizational Excellence Goal	5,800	5,800	6,979

## ORGANIZATIONAL EXCELLENCE

### **Performance Goal 1: Achieved strategic management of human capital goals.**

#### PERFORMANCE ISSUES

**Education & Technology Transfer** - To advance the transportation workforce by delivering transportation education, research and technology transfer.

- University Transportation Centers – [reimbursable] - RITA anticipates \$76,700,000 to provide financial assistance to support transportation education, research and technology transfer activities at university-based centers. UTC program funding is provided to RITA through reimbursable agreements with the Federal Highway Administration and Federal Transit Administration.

#### ANTICIPATED FY 2009 ACCOMPLISHMENTS

- Utilize a clearinghouse for UTC research.

#### FY 2010 PERFORMANCE BUDGET REQUEST

Inputs	Activities	Outputs	Outcomes
<i>Research, Education &amp; Technology Transfer</i>			
<b>University Transportation Centers</b>			
[\$76,700,000/ 0 FTE]	<ol style="list-style-type: none"> <li>1. Manage grants.</li> <li>2. Review UTCs' work to improve efficiency and productivity.</li> <li>3. Transfer results of UTCs' research to transportation community.</li> <li>4. Collect, analyze, and publicize UTC performance measures.</li> <li>5. Provide collaborative effort within other DOT modal administrations and UTC to disseminate information.</li> </ol>	<ol style="list-style-type: none"> <li>1. Deliver continuing education courses.</li> <li>2. Deliver transportation degree courses.</li> <li>3. Award grants.</li> </ol>	Transportation professionals in sufficient numbers and qualifications to plan and operate an advanced transportation system.

### **Performance Goal 5: Achieved e-government goals.**

#### PERFORMANCE ISSUES

**Electronic Information** - To improve accessibility and ease of use of transportation research and other transportation information by providing transportation research and statistical data in a variety of electronic information formats.

- National Transportation Library (NTL) - The NTL fills the need for national leadership and coordination among transportation libraries. It provides a metadata standard and repository for technical, research, and statistical policy resources, serving as a catalyst and lever for access to a broad spectrum of transportation information across modes and geography. It serves as a knowledge access point of

reference for DOT enabling customers to access needed information more thoroughly and quickly. NTL also coordinates the cooperative activities of the three regional transportation knowledge networks, which include members from academic, government, non-profit, and corporate libraries. The NTL integrates USDOT transportation information resources into the broader cooperative activities of Federal libraries.

#### ANTICIPATED FY2009 ACCOMPLISHMENTS

- Support USDOT TIGER Team efforts on the American Recovery and Reinvestment Act by receiving, reviewing, and responding to all telephone and email inquiries within 24 hours of receipt.
- Continue to provide online reference services, answering thousands of questions received each month related to the business of the Department of Transportation Queries are received by telephone (800-853-1351), or by email: Librarian@bts.gov, Answers@bts.gov, DOT.Comments@dot.gov, TRIS@bts.gov or RITAInfo@dot.gov.
- Coordinate and work with US transportation librarians and information providers to develop a national plan for the exchange and dissemination of transportation information through transportation knowledge networks (TKNs).
- Completely integrate the USDOT Library and NTL tools and services into one website, ntl.bts.gov, which reflects the 2008 merger of the USDOT Library into the NTL.
- Continue to provide monthly updates for content in the USDOT Climate Change Clearinghouse.
- Increase the total number of USDOT resources in science.gov.
- Increase total number of full-text links in TRIS Online.
- Increase the number of participating libraries in TLCat.
- Expand the regional and national transportation knowledge networks.
- Augment the content and robustness of the digital archive.
- Continue compliance with international information interoperability standards such as the Open Archive Initiative and Z39.50 expands the universe of archives that hold digital documents and other files, thus improving long term preservation and access.
- Collect materials focusing on US transportation policy, planning, research, and operations; resources of long-term significance and value; and resources indexed in the Transportation Research Board's TRIS database.

FY 2010 PERFORMANCE BUDGET REQUEST

Inputs	Activities	Outputs	Outcomes
<i>Electronic Information</i>			
<b>National Transportation Library</b>			
\$2, 432,000/ 7 FTE	1. Provide transportation information and answers to general public, media, governmental, non-profit stakeholders. 2. Provide access to and improve the NTL Integrated Search 3. Increase membership TLCat. 4. Develop & promote tools and standards for transportation information.	1. Answers within 24-48 hours. 2. Increased numbers of documents in the NTL Digital Collection. Interface and functionality improvements in the electronic services and products of NTL. 3. Access to more transportation library collections via TLCat. 4. New and updated policies, standards & guidance available via the NTL website.	A rich and accessible transportation research library that is used regularly by transportation professionals and those in need of transportation information.

**Performance Goal 6: Achieved research and development goals.**

PERFORMANCE ISSUES

**Research & Statistical Planning & Management** – To maximize research investment toward national and departmental priorities by ensuring reliable research and statistical methods are applied within a coordinated DOT research and statistical portfolio.

- RD&T Coordination – With limited resources and opportunities for collaboration combined with near-term and long-term needs to develop transportation solutions, RITA has the responsibility of proactively coordinating, evaluating and reporting on the Department’s RD&T portfolio. Without over-arching priorities and an objective entity to assess and report on such abroad portfolio, the Department is far less likely to achieve cost-savings, a high degree of quality control, and an acceleration of priority RD&T solutions.

*Agency Output Measure: Percentage and value of RD&T programs that incorporate shared research and cost-leveraging techniques. ON-TRACK*

*Agency Output Measure: Degree to which DOT research, development and technology programs demonstrate effective application of the R&D investment criteria.*

**MEASUREMENT UNDER DEVELOPMENT**

*Agency Output Measure: Degree to which DOT RD&T programs incorporate evaluation best practices. MEASUREMENT UNDER DEVELOPMENT*

*Agency Output Measure: Annual milestones to improve the management and ensure the effectiveness of DOT RD&T activities. MEASUREMENT UNDER DEVELOPMENT*

*Agency Efficiency Measure: Cost of executing basic research, development and technology (RD&T) coordination functions. MEASUREMENT UNDER DEVELOPMENT*

- **Methods & Standards** – There is a need to maintain statistical standards and guidelines and provide procedural tools and specific descriptions of minimum levels of quality. The protection of confidential information from unauthorized disclosure in this era of information accessibility is paramount in a research and statistical environment. Expert statistical advice in support of rulemakings, the Department’s Performance and Accountability Report, and other DOT matters is the responsibility of RITA as an objective agency with statistical experts on staff.

#### ANTICIPATED FY 2009 ACCOMPLISHMENTS

- RITA will enhance the web-based data tracking system for DOT’s RD&T portfolio from the FY 2008 Research Planning and Investment Control (RPIC) pilot program.
- RITA will continue to conduct stakeholder workshops on crossmodal research priorities or emerging priorities as part of a strategic plan update.
- RITA will conduct to provide cost-benefit analysis and return-on-investment analysis on key segments of DOT’s research agenda and targeted technologies.
- RITA will increase statistical review of print and web statistical publications.
- RITA will facilitate DOT in achieving a high ranking from the Mercatus Center on the DOT Performance and Accountability Report through expert services in performance measure estimation, projection and extrapolation.



FY 2010 PERFORMANCE BUDGET REQUEST

Inputs	Activities	Outputs	Outcomes
<b><i>Research &amp; Statistical Planning &amp; Management</i></b>			
<b>RD&amp;T Coordination</b>			
\$6,979,000/ 24 FTE	<ol style="list-style-type: none"> <li>1. Provide planning &amp; coordination activities.</li> <li>2. Develop and implement an electronic reporting mechanism to capture research program management information.</li> <li>3. Conduct 10 stakeholder workshops.</li> <li>4. Establish guidelines for communication among DOT and partners.</li> <li>5. Construct performance goals for program and partners.</li> </ol>	<ol style="list-style-type: none"> <li>1. Report to Congress, Annual Update for DOT RD&amp;T Strategic Plan.</li> <li>2. Demonstration and assessment of database tool before full launch.</li> <li>3. Update to DOT's RD&amp;T Strategic Plan.</li> <li>4. Communications guidelines.</li> <li>5. Performance goals and implementation plan.</li> </ol>	To maximize resources toward departmental priorities and achieve efficiencies in research efforts throughout the Department.
<b>Statistical Methods &amp; Standards</b>			
\$2,563,000/ 4 FTE	<ol style="list-style-type: none"> <li>1. Maintain confidentiality protocols.</li> <li>2. Perform data quality reviews.</li> <li>3. Provide statistical consulting services.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training on confidentiality standards.</li> <li>2. Assessments &amp; recommendations on data quality.</li> <li>3. Data transparency validation for the DOT PAR.</li> </ol>	Advanced methodologies and standards are employed within DOT in its statistical research, data, and measurement activities.

**SECTION 5**

**RESEARCH, DEVELOPMENT  
AND  
TECHNOLOGY**

**EXHIBIT V-1**

**Research and Innovative Technology Administration  
RD&T Budget Authority  
(\$000)**

	<b><u>FY 2008 ACTUAL</u></b>	<b><u>FY 2009 ENACTED</u></b>	<b><u>FY 2010 REQUEST</u></b>
<b>Research and Development</b>			
Salaries and Administrative Expenses	3,597	4,201	4,701
Hydrogen Fuels and Safety R&D	500	1,400	500
RD&T Coordination	536	536	536
Nationwide Differential Global Positioning System	4,600	5,000	4,600
Positioning, Navigation, and Timing	400	0	400
Intelligent Transportation Systems 1/	<u>[101,530]</u>	<u>[102,960]</u>	<u>[110,000]</u>
<b>Total RITA</b>	<b>9,633</b>	<b>11,137</b>	<b>10,737</b>

1/ Resources are shown as non-adds because the funding resides in the FHWA budget.

**EXHIBIT V-2**  
**Research and Innovative Technology Administration**  
**FY 2010 RD&T Budget Request**  
**(\$000)**

<b>RD&amp;T Program</b>	<b>FY 2010 Request</b>	<b>Safety</b>	<b>Reduced Congestion</b>	<b>Global Conn.</b>	<b>Environmental Stewardship</b>	<b>Security</b>	<b>Org. Excellence</b>
Salaries and Administrative Expenses	4,701						4,701
Hydrogen Fuels Safety R&D	500				500		
RD&T Coordination	536						536
National Differential Global Positioning System	4,600		4,600				
Positioning, Navigation, and Timing	400		400				
<b>Total RITA</b>	<b>10,737</b>		<b>5,000</b>	<b>0</b>	<b>500</b>	<b>0</b>	<b>5,237</b>

**Research and Innovative Technology Administration  
FY 2010 RD&T Program Summary**

**RD&T PROGRAM:** Hydrogen Fuels Safety R&D

**AMOUNT REQUESTED FOR FY 2010:** \$500,000

Objective: Advance milestones adopted in the Department's Hydrogen Roadmap.

Description: RITA was created by Congress with the primary objective of serving as the Department's focal point for coordination of crosscutting research and clearing the pathway to technology deployment. As part of the Administration's initiative for Energy Security for the 21<sup>st</sup> Century, RITA will continue to coordinate, manage and execute key components of the Department's hydrogen activities. Many of these activities will be conducted in collaboration with DOT, Federal, state, academic, and industry partners.

Outputs:

- Produced within 90 days a Report to Congress on the challenges of building hydrogen infrastructure.
- Conduct multi-modal research and outreach to further RITA's mission and respond to direct stakeholder and industry needs in advancing hydrogen as part of the Administration's goal of a greener, more secure and sustainable economy.
- Conduct targeted research aimed at addressing near-term gaps identified in the independent DOT safety gap analysis study completed in FY 2006. The gaps relate to technology development and validation of hydrogen transport and storage.
- Ensure the safety of hydrogen transportation continues involvement in domestic and international partnerships. Monitor and develop safety codes, standards, and regulations.
- Partner with public and private sector representatives to continue to educate and train the state and local public safety officials and first responders.
- Conduct research to develop, evaluate, and validate under real world conditions non-destructive testing and other safety and inspection technologies that will facilitate the reliable and safe operation of components of the hydrogen transportation system.
- Support collaborative demonstration efforts for hydrogen stations, vehicles, and infrastructure with federal, state, local, industry, and academia partners. These

demonstrations will focus on evaluating real world real use operational scenarios and validation.

- Maintain national and DOT hydrogen websites and conduct other outreach on the issue.
- Execute individual projects and participate in collaborative efforts that analyze or advance the hydrogen initiative and facilitate an effective transition to the use of hydrogen fuels and fuel cells.
- Manage and serve as a technical partner with RITA hydrogen grantees under SAFTEA-LU. Facilitate coordination between the RITA grantees and contractors, and disseminate information to the DOT modes

RD&T Partners: RITA chairs the Department's Hydrogen Working Group, which is the primary mechanism for coordinating program activities with other operating administrations, including FAA, FMCSA, FTA, MARAD, NHTSA, PHMSA, and with the Office of the Secretary. RITA coordinates with other Federal agencies through the Interagency Working Group on Hydrogen, and chairs its Ad Hoc Committee on a Regulatory Framework for a Hydrogen Economy. Members of the Ad Hoc Committee include the Department of Energy, Environmental Protection Agency, Department of Agriculture, Department of State, Occupational Safety and Health Administration, Federal Energy Regulatory Commission, and U.S. Coast Guard. RITA also participates in the California Fuel Cell Partnership and International Partnership for a Hydrogen Economy; coordinates with the U.S. Fuel Cell Council, the and National Hydrogen Association; and works closely with the National Association of State Fire Marshals, fire chiefs, and other emergency responders.

RD&T Strategies: *Safety* – Support safety rulemaking by assessing the potential safety impacts of new transportation technologies, vehicles, concepts, designs, and procedures; *Environmental Stewardship* – Conduct and support research to understand the various impact of transportation activities on natural and artificial environments and communities.

**Research and Innovative Technology Administration  
FY 2010 RD&T Program Summary**

**RD&T PROGRAM:** RD&T Coordination

**AMOUNT REQUESTED FOR FY 2010:** \$536,000

Objective: Continue to implement DOT Order 1120.39A by continuing coordination efforts and providing strategic direction for the Department's research programs through strategic planning; annual program reviews; budget and performance planning; prioritization, and tracking. Identify areas for cross-modal collaboration, and advance the deployment of innovative technologies.

Description: In direct support of the DOT Organizational Excellence strategic goal, RITA coordinates RD&T through the RD&T Planning Council and RD&T Planning Team (per the DOT Order) to identify research priorities, promote the efficient use of RD&T resources, provide transparency, prevent unnecessary duplication, and encourage joint efforts.

Outputs:

- Revise and deliver to Congress the Department's *Transportation RD&T Strategic Plan*, for 2010-2015.
- Preparation of recommendations to the Secretary on strategic RD&T objectives and department goals.
- Development of FY 2012 RD&T budget priorities to include in the Department's FY 2012 budget guidance.
- Review of FY 2012 RD&T budget requests to ensure alignment with DOT strategic objectives and priorities.
- Annual RD&T program reviews to ensure implementation of research evaluation best practices.
- Annual RD&T Funding Report to Congress (SAFETEA-LU, sec. 5208).
- Annual Federal Laboratory Technology Transfer Summary Report to Congress as required in 15 USC Sec 3710(g)(2).
- Operations and Maintenance of a web-based data tracking system for research, coordination, in accordance to requirements specified in the Functional Requirements Document and the System Design Document.
- Conduct multiple stakeholder workshops supporting at least ten (10) cross modal research priorities identified by RD&T Planning Team on emerging technologies as part of a strategic update to the current RD&T Strategic Plan.
- Development of a Technology Transfer support program with the capability to support all research areas.
- Implementation of communications guidelines to strengthen collaboration/coordination across DOT and to support efforts to share information

- with University Transportation Centers (UTC's), Centers of Excellence and other entities such as hydrogen and other alternative fuels' grantees.
- Provide staff support to the RD&T Planning Council, RD&T Planning Team and other cross modal working groups.
  - Implementation of the RPIC departmental-wide collaborative RD&T portfolio management and advise the Secretary on budgetary implications of R&D investment decisions.
  - Development of common performance measures related to DOT's RD&T activities in consultation with the Operating Administrations.

RD&T Partners: RITA works closely with the Office of the Secretary, FAA, FHWA, FMCSA, FRA, FTA, NHTSA, PHMSA and MARAD to continue implementation of the RD&T Coordination program: The primary components for this intra-agency coordination are the Department's RD&T Planning Council, RD&T Planning Team. Across the Government, RITA coordinates with other Federal agencies to identify and leverage their transportation-related research efforts. RITA also works with external stakeholders through the NRC Committee on the review of the Departmental Strategic Plan for R&D and through participation in stakeholder committees and activities of the operating administrations. In the international arena, RITA represents DOT serving as the official DOT delegate to the Organization for Economic Co-Operation and Development/International Transport Forum/Joint Transport Research Center.

RD&T Strategies: *Organizational Excellence* – Consistently apply R&D Investment Criteria—transparency, relevance, quality, and performance—to all DOT-sponsored and in-house research.



**RD&T PROGRAM:** Nationwide Differential Global Positioning System

**AMOUNT REQUESTED FOR FY 2010:** \$4,600,000

Objective: Preserve the government's investment in the inland Nationwide Differential Global Positioning System (NDGPS); operate and maintain the system in coordination with the U.S. Coast Guard's Maritime DGPS, while pursuing necessary equipment recapitalization to buy down technical risk.

Description: This program will support continued routine operations and maintenance of the inland NDGPS segment. In 2007, RITA conducted a systems analysis and user assessment of current and potential future NDGPS requirements for transportation and other applications. The results of this assessment led to a March 2008 DOT leadership decision to continue NDGPS operations. NDGPS user needs and system capabilities is being evaluated in conjunction with the National PNT Architecture to determine to what extent the NDGPS infrastructure can meet technical requirements as part of a national PNT architecture.

Outputs: Outputs include continued routine inland NDGPS systems operations and maintenance in support of the March 2008 decision, and in support of the hundreds of thousands of system users identified through the system assessment.

RD&T Partners: Partners include the U.S. Coast Guard, Federal Highway Administration, Air Force, Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA)/National Geodetic Survey, NOAA/Earth Sciences Research Laboratory; U.S. Department of Agriculture, Department of Interior/National Park Service, and Department of Interior/Bureau of Land Management.

RD&T Strategies: *Reduced Congestion* – Conduct and support research to advance the use of next generation technologies and to make effective use of combinations of modes in moving people and goods.

**RD&T PROGRAM:** Positioning, Navigation, and Timing

**AMOUNT REQUESTED FOR FY 2010:** \$400,000

Objective: Coordinate Positioning, Navigation, and Timing (PNT) technology, PNT policy, and spectrum management. Support the National Security Presidential Directive on Space-Based PNT Policy through the development of requirements for civil applications of PNT services as part of the National PNT Architecture.

Description: The National Security Presidential Directive on PNT gives the Secretary of Transportation broad responsibilities for identifying and implementing PNT services on behalf of the civil government and commercial community. The Directive establishes a permanent Space-Based PNT Executive Committee co-chaired by the Deputy Secretaries of Transportation and Defense. Within DOT, RITA has the responsibility to represent the civil departments and agencies in the development, acquisition, management, and operations of GPS, as well as to provide civil PNT system analysis including requirements and architecture development and performance monitoring. RITA serves as the civil lead of the National PNT Architecture effort that is intended to guide future PNT system-of-systems investment and implementation decisions. The objective is to provide more effective and efficient PNT capabilities, and an evolutionary path for government-provided PNT systems and services.

Outputs:

- Development and implementation of the national PNT architecture, including development of civilian agency user requirements and projections for Federally provided radionavigation systems in the 2010 Federal Radionavigation Plan.
- Evaluations of alternative future mixes of global (space and non-space-based) and regional PNT solutions, PNT augmentations, and autonomous PNT capabilities to address priorities identified by both the civil and military communities.

RD&T Partners: The National Space-Based PNT Executive Committee is co-chaired by the Deputy Secretaries of the Department of Transportation and Department of Defense. Membership includes equivalent-level officials from the Departments of State, Commerce, Agriculture, Interior and Homeland Security; the Joint Chiefs of Staff; and NASA. Components of the Executive Office of the President participate as observers to the Executive Committee, and the Federal Communications Commission Chairman participates as a liaison. The National PNT Architecture team consists of 31 government agencies representing civil, military, and homeland security PNT interests.

RD&T Strategies: *Reduced Congestion* – Conduct and support research to advance the use of next generation technologies and to make effective use of combinations of modes in moving people and goods.

**RD&T PROGRAM:** Intelligent Transportation Systems (ITS)

**AMOUNT REQUESTED FOR FY 2010:** [\$110.0 Million]

Objective: The ITS Program was designed to research, demonstrate, test and facilitate deployment of technology to enhance the safety, efficiency, convenience, and environmental sustainability of surface transportation.

Description: The ITS program supports the advancement of ITS through investments in major RD&T research initiatives and the transfer of lessons and technology to our federal, State, and local government partners. The major initiatives are large multi-year programs, each focused on a specific transportation issue with precise milestones and goals. The Technology Transfer Program provides the tools, guidance, and training to support the deployment and operation of ITS by State and local governments. The ITS program carries out its goals through research and development, engineering and operational testing, technology transfer, training, and technical guidance in the areas of transportation supply and demand management, vehicle-infrastructure integration, congestion pricing and electronic payment, transportation information management, commercial vehicle operations, public safety, traveler information, and advanced traffic, transit, and intermodal freight management.

**Outputs:**

- Research results on technical, application, and policy research for a nationwide vehicle-to-vehicle and vehicle-to-roadside communication infrastructure that will enable a wide range of safety, mobility, environmental and commercial applications.
- Demonstrate in up to three operational test sites the ability of integrated technology to optimize network performance in a corridor. The Integrated Corridor Management Initiative will connect freeways, arterials, and transit.
- Demonstrate the technology necessary to equip new vehicles (automobiles and trucks) with advanced driver assistance systems to help drivers avoid deadly crashes.
- Demonstrate the use of environmental sensor stations that are currently deployed along America's highways to help reduce the impact of adverse weather on all road users and operators.
- Development, demonstration and evaluation of five business-to-government, services that utilize and rely on Clarus data.

- Develop or modify a common standard to support interoperable payment across modes.
- Complete the operational testing and evaluation of innovative and aggressive congestion reduction strategies that can demonstrate measurable reductions in congestion levels.
- Share and disseminate information about ITS through benefit, cost, and lessons learned resources, professional capacity building activities, architecture and standards, and stakeholder technology transfer.

**EXHIBIT V-3**  
**Research and Innovative Technology Administration**  
**Support for Secretarial and Administration RD&T Priorities**

Priority	Supporting RD&T Program (s)	FY2010 Request (\$000)
System Performance and Reliability – <i>Secretarial Priority</i>	Nationwide Differential GPS	4,600
21 <sup>st</sup> Century Solutions for 21 <sup>st</sup> Century Transportation Problems – <i>Secretarial Priority</i>	Positioning, Navigation, and Timing	400

**Hydrogen Fuels Safety R&D:**

*Priorities Supported: Safety, Alternative Energy Sources*

RITA’s Hydrogen R&D program will help to achieve the Secretary’s Safety priority by conducting multimodal safety R&D and supporting the development of consensus codes and standards for hydrogen delivery infrastructure, transportation and vehicle fuel system containers and components, and in-service inspection technologies. In addition, these activities will support the priority for alternative energy sources by addressing barriers to the widespread deployment of hydrogen-fueled vehicles. This program collaborates with FAA, FMCSA, FTA, MARAD, NHTSA, PHMSA, the Office of the Secretary, the Department of Energy, other federal agencies, and with multiple stakeholders and partners outside the Government.

**Nationwide Differential GPS:**

*Priorities Supported: System Performance and Reliability*

This program will advance the Secretarial priority for System Performance and Reliability by funding continued operations and maintenance of the inland NDGPS in coordination with the U.S. Coast Guard’s Maritime DGPS, while pursuing necessary equipment recapitalization to buy down technical risk and planning to expand combined DGPS coverage across 100% of CONUS. Partners include the U.S. Coast Guard, Federal Highway Administration, Air Force, Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA)/National Geodetic Survey, NOAA/Earth Sciences Research Laboratory; U.S. Department of Agriculture, Department of Interior/National Park Service, and Department of Interior/Bureau of Land Management.

**Positioning, Navigation, and Timing:**

*Priority Supported: 21<sup>st</sup> Century Solutions for 21<sup>st</sup> Century Transportation Problems*

The PNT program will support this Secretarial priority for identifying and implementing PNT services on behalf of the civil government and commercial community by working

with the Departments of Defense, State, Commerce, Agriculture, Interior and Homeland Security; the Joint Chiefs of Staff; and NASA to develop the requirements for civil applications of PNT as part of the National PNT Architecture.

**EXHIBIT V-4**  
**Research and Innovative Technology Administration**  
**Implementation of the R&D Investment Criteria**

<b>R&amp;D Investment Criteria</b>	<b>How Applied</b>	<b>Actions Reflected in FY 2010 Request</b>
<b>Relevance</b>	<p>All RD&amp;T supports DOT goals and objectives and RITA's mission.</p> <p>On all stages of program planning and execution, RITA works closely with its internal stakeholders, through the RD&amp;T Planning Council and RD&amp;T Planning Team, and with external stakeholders, including the National Research Council (NRC), GAO, other Federal agencies, and state, local, and industry partners.</p>	<p>RITA is enhancing the Research Planning , Investment and Coordination (RPIC) initiative by incorporating the RITA Notification System (R2NS) developed in response to recommendations of the GAO for capturing and preserving information on research projects.</p> <p>Through the RPIC process and analysis RITA will continue its development of performance measures in response to recommendations of the GAO to delineate how RITA's activities ensure the effectiveness of the department's RD&amp;T investment.</p> <p>As called for in the National Security Presidential Directive on Space-Based PNT, RITA is requesting additional resources to identify civil GPS requirements as part of the National PNT Architecture.</p>
<b>Quality</b>	<p>RITA awards funding on a competitive basis whenever possible.</p> <p>Grants and contracts are posted at <a href="http://www.grants.gov">www.grants.gov</a> and FedBizOpps.</p>	<p>All activities proposed for FY 2010 incorporate the results of the competitive selection process and merit review of proposals.</p>
<b>Performance</b>	<p>RITA has established long-term and annual goals for significant RD&amp;T programs.</p> <p>RITA has established efficiency measures for the RD&amp;T Coordination and other programs.</p> <p>RD&amp;T program results are linked to DOT and RITA performance plans.</p>	<p>FY 2010 activities will be evaluated against RITA's long-term, annual, and efficiency goals.</p> <p>DOT's RD&amp;T Planning Council and RD&amp;T Planning Team will assess program performance during the annual review conducted in FY 2010. RITA will continue to implement and enhance the research planning and investment, and coordination process (RPIC) across DOT.</p>