U.S. Department of Transportation
Federal Highway Administration

Research, Technology, and Education Provisions of Moving Ahead for Progress in the 21ˢᵗ Century Act (MAP-21)

August 2012

MAP-21 Overview

MAP-21 Themes

- Strengthens America's highway and public transportation systems

- Creates jobs and supports economic growth

- Supports the Department's aggressive safety agenda

- Simplifies and focuses the Federal program

- Accelerates project delivery and promotes innovation

- Establishes a performance-based Federal program

Two years of funding at current levels

- Authorizes program through FY14
  - Current law through end of FY12
  - Most new provisions go into effect on October 1st

- Avg. annual funding at FY12 levels (plus minor inflation)
  - $40.4 billion in FY13 from Highway Trust Fund (HTF)
  - $41.0 billion in FY14 from HTF

- Ensures two years of solvency for Highway Trust Fund
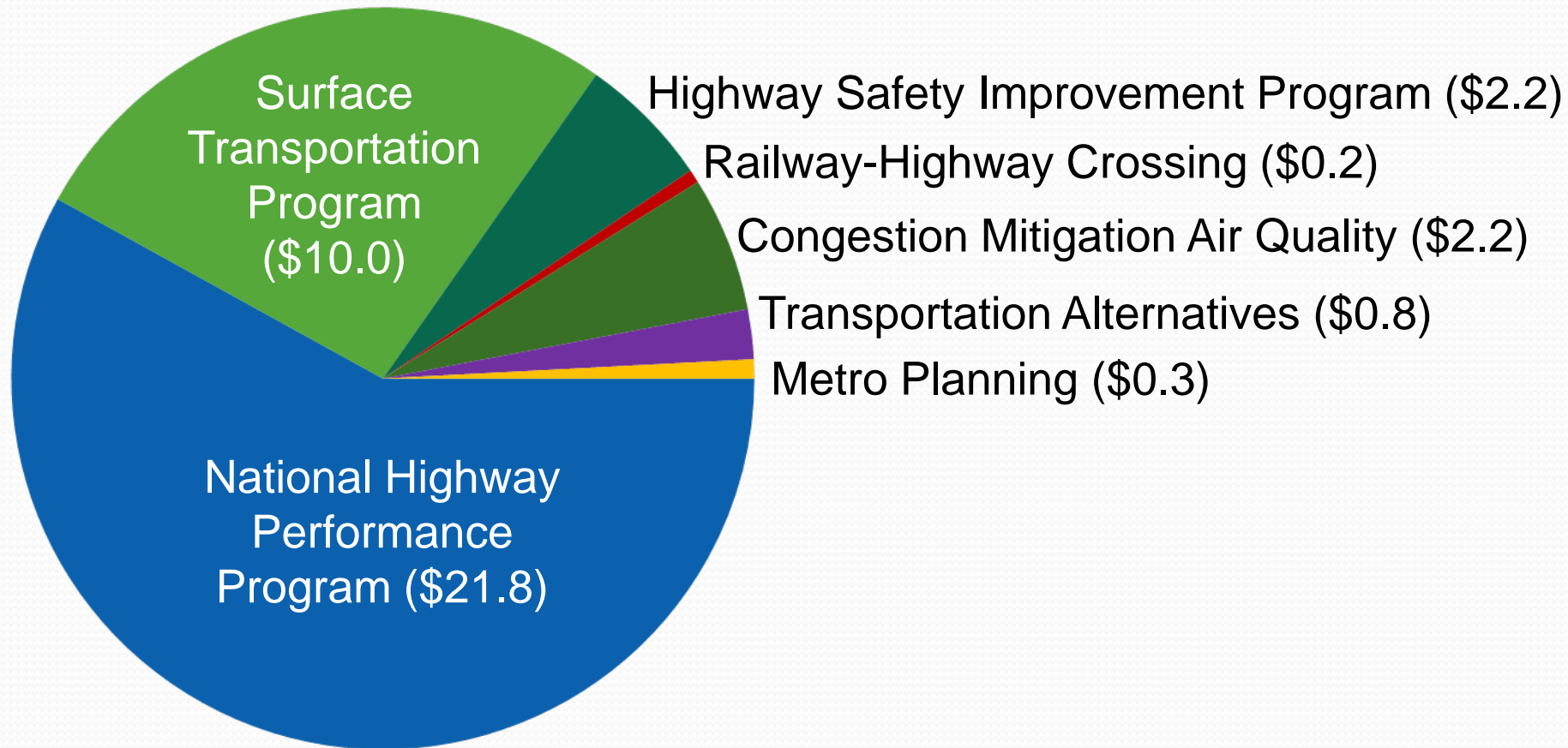
Focuses the Federal role

- Substantial programmatic consolidation
  - Fewer formula programs
  - Most discretionary programs eliminated
  - No earmarks

- Redefines (and increases emphasis on) the NHS

- Accelerates project delivery

- Larger (and modified) role for TIFIA program
  - >700% growth in TIFIA ($1B in FY14 vs. $122M in FY11)
  - Reforms to make TIFIA attractive to wider range of projects

Apportioned programs

Program structure

MAP-21	Current Law
National Highway Performance Program (NHPP)	NHS, IM, & Bridge (portion)
Surface Transportation Program (STP)	STP, ADHS & Bridge (portion)
Congestion Mitigation & Air Quality Improvement Program (CMAQ)	CMAQ
Highway Safety Improvement Program (HSIP)	HSIP (incl. High Risk Rural Roads)
Railway-Highway Grade Crossing *(takedown from HSIP)*	Railway Highway Grade Crossing
Metropolitan Planning	Metropolitan Planning
Transportation Alternatives *(setaside from NHPP, STP, HSIP, CMAQ, and Metro Planning)*	TE, Recreational Trails, and Safe Routes to School

$37.7 billion/year in formula funding

Surface Transportation Program ($10.0)

Highway Safety Improvement Program ($2.2)

Railway-Highway Crossing ($0.2)

Congestion Mitigation Air Quality ($2.2)

Transportation Alternatives ($0.8)

Metro Planning ($0.3)

National Highway Performance Program ($21.8)

Note: Amounts in $ billions; individual program amounts do not add exactly to total due to rounding

Other Programs

- TIFIA

- Emergency Relief Program ($100 M)

- Federal Lands & Tribal Transportation Programs ($1 B)

- Ferry Program ($67 M)

- Territorial and Puerto Rico Program ($250 M)

- Research, Technology, and Education

Research, Technology, and Education programs

Research, Technology, and Education Philosophy and Principles
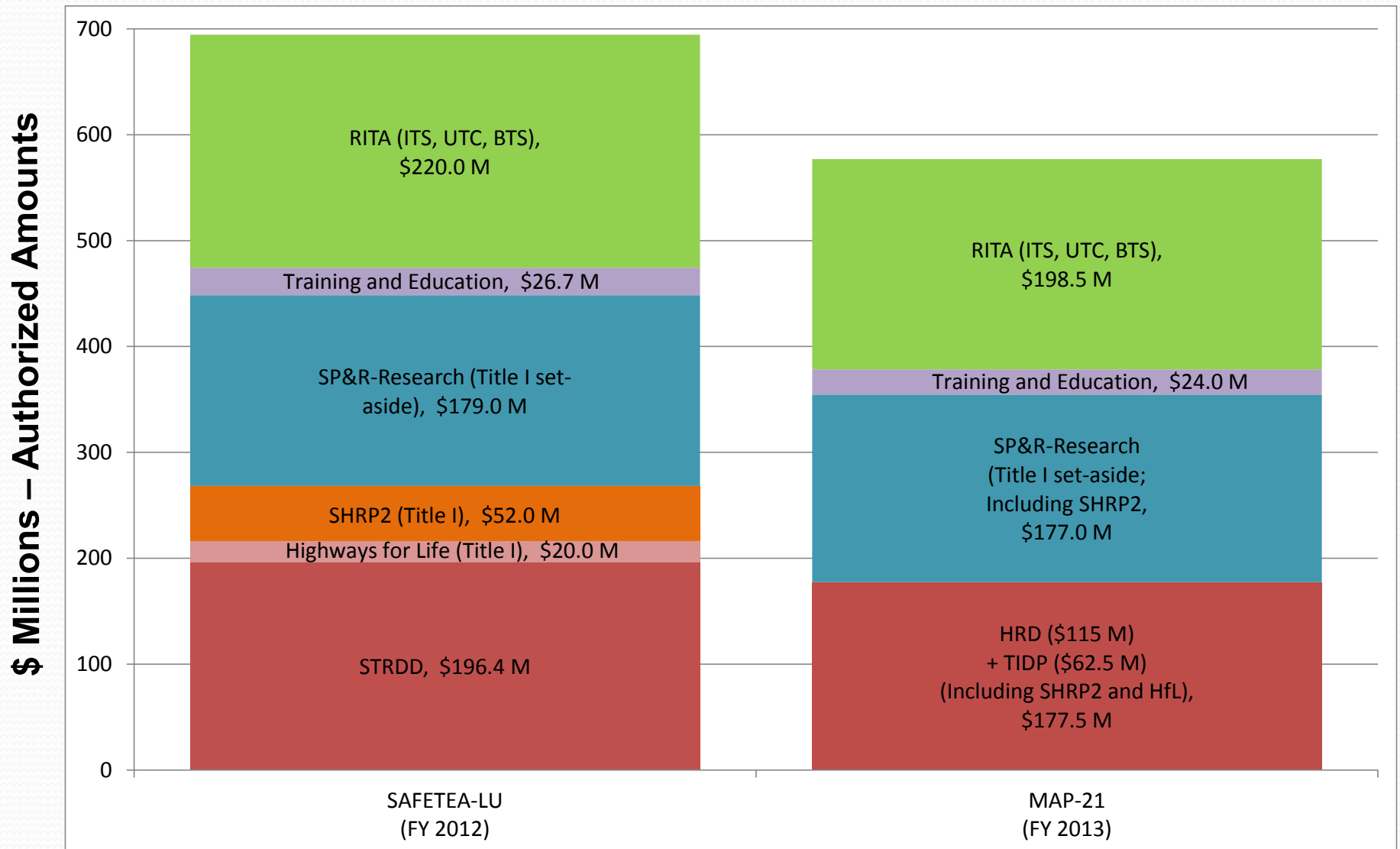
- Continue principles of Competition and Peer Review

- Emphasis in Technology Deployment: separate funding

- Funding level reduced by about 17% overall

- Flexible program – no earmarks

- Training and Education program continues
  - Adds Centers for Excellence to Title 23
- RITA programs continue

Authorized Funding for RT&E Programs

Program	FY-2013	FY-2014
FHWA-Administered Programs:		
Highway Research and Development (HRD)	$115.0M	$115.0M
Technology and Innovation Deployment Program (TIDP)	$62.5M	$62.5M
Training and Education (T&E)	$24.0M	$24.0M
RITA-Administered Programs:		
Bureau of Transportation Statistics	$26.0M	$26.0M
University Transportation Centers	$72.5M	$72.5M
Intelligent Transportation Systems Research	$100.0M	$100.0M
Total:	**$400.0 M**	**$400.0 M**
State-Administered Funds:		
State Planning & Research (SPR Research) – Title I Funds	$183.0 M	$184.0 M

Note: SHRP2 Implementation to be funded from TIDP and as set-aside of SPR funds

Funding Comparison SAFETEA-LU vs. MAP-21

FHWA-Administered Research, Technology, and Education programs

Research, Technology, and Education

- No earmarks
  - Minimal sub-allocations; e.g., $12M set-aside for pavement technology transfer program
- State planning and research (SPR) funded by 2% set-aside from NHPP, STP, CMAQ and HSIP
- SHRP2 Implementation funds from SPR
  - IF 75% of States agree to a percentage of funds for this use
- Centers for Excellence continued
  - Now in U.S. Code, and funded under Training & Education
- International Highway Transportation Outreach Program repealed; however, some international research & collaboration is built into core R&D program

Authorized Funding for FHWA-Administered RT&E Programs

Program	FY-2013	FY-2014
FHWA-Administered Programs:		
Highway Research and Development (HRD)	$115.0M	$115.0M
Technology and Innovation Deployment Program (TIDP)	$62.5M	$62.5M
Training and Education (T&E)	$24.0M	$24.0M
Total	$201.5M	$201.5M
State-Administered Funds:		
State Planning & Research (SP&R) –Title I–Research portion	$183.0 M	$184.0 M

Note: SHRP2 Implementation to be funded from TIDP and as set-aside of SPR funds

Highway Research and Development

- $115 M per FY (2013-14)

- Program areas:

  - Infrastructure
  - Safety
  - Planning and Environment
  - Operations
  - Policy
  - Exploratory Advanced Research

Technology and Innovation Deployment Program

- $62.5 M per FY (2013-14)

  - SHRP2 Implementation
  - Every Day Counts initiatives
  - Demonstrations
  - Pilots and Testing
  - Accelerated Innovation Deployment
  - Minimum of $12 M for Pavements Technology Deployment

Training and Education

- $24 M per FY (2013-14)

- Current programs continue – no specific funding

  - National Highway Institute
  - Local Technical Assistance Program
  - Garrett Morgan Program
  - Eisenhower Fellowships
  - Transportation Education Development
  - Freight Planning Capacity Building
  - Surface Transportation Workforce Development, Training and Education

- Additional program: Centers for Excellence to address:

  - *Project Finance*
  - *Environment*
  - *Rural Safety*
  - *Transportation Safety*

State Planning and Research

- A 2% Set-Aside from four Core programs
  - STP *
  - HSIP
  - NHPP
  - CMAQ

- States may agree on percent for SHRP2 Implementation
- At least 25% of 2% set-aside must be used for research, development, and technology transfer
- Eligible as non-federal match for LTAP, UTC
- SP&R – Research Portion Funding:
  - FY 2012: $179 M
  - FY 2013 (est.): $183 M
  - FY 2014 (est.): $184 M
- Due to core program reformulation, some States SP&R set-aside will decrease, while others will increase

States are allowed to utilize STP funds for State planning and research activities

Other FHWA Programs

- Small Business Innovation Research (SBIR)

  - Continues as 2.6% take-down of Extramural R&D budget

- Authority remains to continue

  - Freight research
  - Environment and planning research
  - Some international highway transportation research

RITA-Administered Research, Technology, and Education programs

Authorized Funding for RITA-Administered RT&E Programs

Program	FY-2013	FY-2014
RITA-Administered Programs:		
University Transportation Centers	$72.5M	$72.5M
Intelligent Transportation Systems Research	$100.0M	$100.0M
Bureau of Transportation Statistics	$26.0M	$26.0M
Total	$198.5M	$198.5M

University Transportation Centers

- Authorized: $72.5 M per FY (2013-14)

- Funds University Transportation Centers (UTCs) to:

  - advance transportation expertise and technology;
  - provide for a critical transportation knowledge base outside USDOT;
  - address workforce needs

- Establishes and funds

  - 5 National UTCs: $3 M each, per FY ($15 M total per FY)
  - 10 Regional UTCs: $2.75 M each, per FY ($27.5 M total per FY)
  - Up to 20 Tier I UTCs: $1.5 M each, per FY ($30 M total per FY)

Intelligent Transportation Systems Research

- Funded at $100 M per FY (2013-14)

- Continue ITS R&D Program

- Emphasizes Both Research and Deployment

- Defines Goals and Purpose of ITS Program

ITS Research Goals

- Enhance efficiency, facilitate intermodalism and international trade
- Achieve safety goals
- Protect and enhance natural environment
- Accommodate needs of all users of surface transportation
- Enhance national defense mobility

ITS Research Priority Areas

- Enhance mobility and productivity
- Use interdisciplinary approaches to address impacts of congestion
- Address traffic, incident, and transit management, and toll collection traveler information
- Incorporate potential environmental impacts
- Enhance intermodal use of ITS for diverse groups
- Enhance safety through improved crash avoidance and protection, commercial vehicle operations, and infrastructure-based or cooperative safety systems
- Facilitate integration of intelligent infrastructure, vehicle, and control technologies.

Bureau of Transportation Statistics

- Funded at $26 M per year (FY 13-14)

- Focuses on collecting, analyzing and disseminating data to support transportation decision-making

- Maintains National Transportation Library

- Establishes an Advisory Council on Transportation Statistics

- Submits to the President and Congress a Transportation Statistics Annual Report

- Develops the National Transportation Atlas Database

- Establishes National Ferry Database

BTS Core Programs

- **Intermodal Transportation Database (ITD)**
  - Passenger and freight flows by commodity or trip purpose, mode, origin and destination (including Commodity Flow Survey, Trans-border Data Program, and International Freight Data System)
  - Intermodal connections (including the Intermodal Passenger Connectivity Database)
  - Transportation economic accounts for capital stocks, expenditures, and employment

- **National Transportation Atlas Database (NTAD)**
  - Transportation network for analysis of passenger and freight flows by all modes
  - Detailed transportation network for measures of condition and performance
  - Links to social, economic, and environmental data

BTS Core Programs (continued)

- **Transportation Performance and Impacts Program**
  - Compile, analyze, and publish statistics on the extent, connectivity, condition, economic efficiency, safety, and consequences for human and natural environment of the transportation system, and on factors affecting demand for transportation
- **Airline Information**
  - *… collect and disseminate information on civil aeronautics … including, at a minimum, information on (A) the origin and destination of passengers in interstate air transportation … and (B) the number of passengers traveling by air between any two points in interstate air transportation …*
  - Products include:
    - Passenger origin-destination and freight volume by segment
    - On-time performance, tarmac delays
    - Financial data on air carriers

BTS Core Programs (continued)

- **Safety Data Program (New)**
  - *… on behalf of the Secretary a program—(I) to effectively integrate safety data across modes; and (II) to address gaps in existing safety data programs of the Department"*
- **National Transportation Library (NTL)**
  - *… acquire, preserve, and manage transportation information and information products and services…*
  - Provide a central clearinghouse for transportation data and information …
- **Statistical Coordination**
  - Statistical guidelines
  - Coordination with other federal agencies
  - Improved methods of data collection and analysis
  - Improved statistical quality

Questions?