PART I Moving a Nation



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Introduction

Part I of this 23rd C&P Report includes six chapters, each of which describes the current system from a different perspective:

- Chapter 1, Assets, describes the existing extent of the highways, bridges, and transit systems. Highway and bridge data are presented for system subsets based on functional classification and Federal system designation, while transit data are presented for different types of modes and assets.
- Chapter 2, Funding, provides detailed data on the revenue collected and expended by different levels of governments to fund transportation construction and operations throughout the United States. The chapter also explores alternative financing and delivery of transportation projects.
- Chapter 3, **Travel**, discusses vehicle miles traveled and passenger miles traveled on highways and transit, drivers' licensing levels, and commute times. The chapter also analyzes the impact of income levels on travel.
- Chapter 4, Mobility and Access, covers highway congestion and reliability in the Nation's urban areas, and the economic costs of congestion. The transit section explores ridership, average speed, vehicle utilization, and maintenance reliability. The chapter also looks at accessibility to transit for persons with disabilities and the elderly, as well as transit accessibility more generally.
- Chapter 5, Safety, relates directly to DOT's national safety goal. The highway section presents national-level statistics on safety performance, focusing on the most common roadway factors that contribute to roadway fatalities and injuries. The transit section summarizes safety and security data by mode and type of transit service.
- Chapter 6, Infrastructure Conditions, presents data on the current physical conditions of the Nation's highways, bridges, and transit assets.

Transportation Performance Management

A recurring theme in Part I of the C&P Report is the impact of changes under the Fixing America's Surface Transportation (FAST) Act pertaining to transportation performance management.

What is Transportation Performance Management?

The Federal Highway Administration (FHWA) defines Transportation Performance Management (TPM) as a strategic approach that uses system information to make investment and policy decisions that contribute toward national performance goals. FHWA works with States and metropolitan planning organizations to transition toward and implement a performance-based approach to carrying out the Federal-aid highway program. This transition supports both FAST Act and Moving Ahead for Progress in the 21st Century (MAP-21) legislation, which integrates performance into many Federal transportation programs.

TPM, systematically applied in a regular ongoing process:

- provides key information to help decision makers, enabling them to understand the consequences of investment decisions across multiple markets;
- improves communications among decision makers, stakeholders, and the traveling public; and
- ensures targets and measures are developed in cooperative partnerships and are based on data and objective information.

National Goals – Federal-aid Program

The FAST Act continues MAP-21's highway program transition to a performance- and outcome-based program. States will invest resources in projects that collectively will make progress toward national goals. FHWA is collaborating with State and local agencies across the country to focus on the national goals established, regardless of resource limitations.

Among the national performance goals specified in 23 United States Code §150(b) for Federal highway programs are:

- Safety To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- Infrastructure Condition To maintain the highway infrastructure asset system in a state of good repair.
- Congestion Reduction To achieve a significant reduction in congestion on the National Highway System.
- **System Reliability** To improve the efficiency of the surface transportation system.
- Freight Movement and Economic Vitality To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- Reduced Project Delivery Delays To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Transportation Performance Management Elements

FHWA has organized the performance-related provisions within MAP-21 into six TPM elements to communicate the efforts for implementing these requirements more effectively. These six TPM elements are listed below.

National Goals	MAP-21 establishment of goals or program purpose to focus the Federal-aid highway program into specific areas of performance.
Measures	The establishment of measures by FHWA to assess performance/condition to carry out performance-based Federal-aid highway programs.
Targets	Establishment of targets by recipients of Federal-aid highway funding for each of the measures to document expectations of future performance.
Plans	Development of strategic or tactical plans, or both, by recipients of Federal funding to identify strategies and investments that will address performance needs.
Reports	Development of reports by recipients of Federal funding that would document progress toward the achievement of targets, including the effectiveness of Federal-aid highway investments.
Accountability and Transparency	Requirements developed by FHWA for recipients of Federal funding to use in achieving or making significant progress toward achieving targets established for performance.

Summary of MAP-21/FAST Act Performance Requirements

The MAP-21 and FAST Act legislation integrate performance into many Federal transportation programs and contain several performance elements. FHWA will help coordinate the alignment of these requirements and provide guidance and resources. Listed below is more information regarding the performance requirements for the National Highway Performance Program, the Highway Safety Improvement Program, the Congestion

Mitigation and Air Quality Improvement Program, and Freight Movement, as established in MAP-21 and the FAST Act.

- National Highway Performance Program (http://www.fhwa.dot.gov/tpm/about/nhpp.cfm)
- Highway Safety Improvement Program (http://www.fhwa.dot.gov/tpm/about/hsip.cfm)
- Congestion Mitigation and Air Quality Improvement Program (http://www.fhwa.dot.gov/tpm/about/cmaq.cfm)
- Freight Movement (http://www.fhwa.dot.gov/tpm/about/freight.cfm)

Implementation of MAP-21/FAST Act Performance Requirements

FHWA has finalized six related rulemakings to implement the TPM framework established by MAP-21 and the FAST Act.

- A Final Rule on Statewide and Metropolitan/Non-metropolitan Transportation Planning, published May 27, 2016, implements a performance-based planning process at the State and metropolitan levels. The Final Rule defines coordination in the selection of targets, linking planning and programming to performance targets.
- A Final Rule for **Safety Performance Management Measures (PM-1)**, published March 15, 2016, with an effective date of April 14, 2016, establishes five safety performance measures to assess fatalities and serious injuries on all public roads, a process to assess progress toward meeting safety targets, and a national definition for reporting serious injuries.
- A Final Rule for the Highway Safety Improvement Program (HSIP), published March 15, 2016, integrates performance measures, targets, and reporting requirements into the HSIP. The Final Rule contains three major policy changes: Strategic Highway Safety Plan Updates, HSIP Report Content and Schedule, and the Subset of the Model Inventory of Roadway Elements.
- A Final Rule for Pavement and Bridge Performance Measures (PM-2), published January 18, 2017, with an effective date of May 20, 2017, defines pavement and bridge condition performance measures, along with minimum condition standards, target establishment, progress assessment, and reporting requirements.
- A Final Rule for an **Asset Management Plan**, published October 24, 2016, defines the contents and development process for an asset management plan. The Final Rule also defines minimum standards for pavement and bridge management systems.
- A Final Rule for **System Performance Measures (PM-3)**, published January 18, 2017, with an effective date of May 20, 2017, defined performance measures to assess performance of the Interstate System, non-Interstate National Highway System, freight movement on the Interstate System, CMAQ traffic congestion, and on-road mobile emissions.*

*On May 31, 2018, FHWA published a final rule revising the PM-3 to remove the measure for carbon dioxide (CO₂) emissions on the NHS. (83 FR 24920: https://www.federalregister.gov/documents/2018/05/31/2018-11652/national-performance-management-measures-assessing-performance-of-the-national-highway-system)

Summary of MAP-21/FAST Act Performance Measures

Measure Area	Performance Measures		
Safety ¹			
National Performance Management Measures to Assess Highway Safety	 Number of fatalities Rate of fatalities per 100 million VMT Number of serious injuries Rate of serious injuries per 100 million VMT Number of nonmotorized fatalities and nonmotorized serious injuries 		
Pavement and Bridge Condition ²			
National Performance Management Measures to Assess Pavement Condition	 Percentage of pavements of the Interstate System in Good condition Percentage of pavements of the Interstate System in Poor condition Percentage of pavements of the non-Interstate NHS in Good condition Percentage of pavements of the non-Interstate NHS in Poor condition 		
National Performance Management Measures to Assess Bridge Condition	 Percentage of NHS bridges classified as in Good condition Percentage of NHS bridges classified as in Poor condition 		
System Performance and Freight ³			
Performance of the National Highway System	 Interstate Travel Time Reliability Measure: Percentage of person-miles traveled on the Interstate that are reliable Non-Interstate Travel Time Reliability Measure: Percentage of person-miles traveled on the non-Interstate NHS that are reliable 		
Freight Movement on the Interstate System	Freight Reliability Measure: Truck Travel Time Reliability Index		
CMAQ Program ⁴			
Measures for Assessing the CMAQ Program – Traffic Congestion	 PHED Measure: Annual hours of peak hour excessive delay (PHED) per capita Non-SOV Travel Measure: Percentage of non-single occupancy vehicle (SOV) travel 		
Measures for Assessing the CMAQ Program – On-Road Mobile Source Emissions	 Emissions Measure: Total emission reductions for carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds (VOCs), particulate matter (PM10 and PM2.5) for CMAQ-funded projects in designated nonattainment and maintenance areas 		

¹ Each performance measure is based on a 5-year rolling average. These measures contribute to assessing the HSIP.

² These measures contribute to assessing the National Highway Performance Program (NHPP).

³ These measures contribute to assessing the NHPP and National Highway Freight Program (NHFP).

⁴ These measures contribute to assessing the Congestion Mitigation and Air Quality Improvement (CMAQ) Program.