

List of Exhibits

Introduction

Summary of Recovery Act Funding Received by DOT, by Appropriation Title.....	xxxv
--	------

Executive Summary

Key Findings	ES-1
--------------------	------

Chapter Overviews

Chapter 1

Average Annual Person Miles per Household by Trip Purpose.....	CO-2
--	------

Age of Household Vehicles.....	CO-2
--------------------------------	------

Weight of Shipments by Transportation Mode (Millions of Tons)	CO-3
---	------

Chapter 2

2010 Mileage and Bridges by Owner	CO-4
---	------

2010 Percentage of Highway Miles, Bridges, and Vehicle Miles Traveled by Functional System	CO-4
--	------

Annual U.S. Unlinked Transit Passenger Trips, 1995–2011	CO-5
---	------

Chapter 3

Percent of Federal-aid Highway VMT on Pavements With Good and Acceptable Ride Quality	CO-6
---	------

Percentage of NHS Bridges Classified as Deficient, 2000–2010	CO-6
--	------

Distribution of Asset Physical Conditions by Asset Type for All Rail.....	CO-7
---	------

Chapter 4

Highway Fatality Rates, 2000 to 2010	CO-8
--	------

Highway Fatalities by Crash Type, 2000 to 2010	CO-8
--	------

Annual Transit Fatality Rates by Highway Mode, 2002–2010	CO-9
--	------

Annual Transit Fatality Rates by Rail Mode, 2002–2010	CO-9
---	------

Chapter 5

Sources of Congestion	CO-10
-----------------------------	-------

Rail and Nonrail Vehicle Revenue Miles, 2000–2010	CO-11
---	-------

Chapter 6

Revenue Sources for Highways, 2010	CO-12
--	-------

Highway Expenditure by Type, 2010.....	CO-12
--	-------

Applications of Federal Funds for Transit Operating and Capital Expenditures, 2000–2010.....	CO-13
--	-------

Chapter 7

Projected Change in 2030 Average Delay per VMT Compared With 2010 Levels, for Various Spending Levels Under Forecast and Trend VMT Growth CO-16

Comparison of Current and Needed Annual Investment to Support Asset Preservation and Capacity Expansion in All Urbanized and Rural Areas CO-17

Impact of Preservation Investment on 2030 Transit State of Good Repair Backlog in All Urbanized and Rural Areas..... CO-17

Chapter 8

Average Annual Cost by Investment Scenario (Billions of 2010 Dollars) CO-18

Annual Average Cost by Investment Scenario (2010–2030)..... CO-19

Chapter 9

Gap Between Average Annual Investment Scenarios and Base Year Spending, as Identified in the 1997 to 2013 C&P Reports CO-20

Illustration of Potential Impact of Inflation on the Improve Conditions and Performance Scenario..... CO-20

Causes of the Increase in the SGR Backlog between the 2010 C&P Report and the 2013 C&P Report .. CO-21

Hybrid and Alternative Fuel Vehicles: Share of Total Bus Fleet, 2000–2010 CO-21

Chapter 10

Impact of Alternative Assumptions on Highway Scenario Average Annual Investment Levels (Billions of 2010 Dollars) CO-22

Impact of Alternative Replacement Condition Thresholds on Transit Preservation Investment Needs by Scenario (Excludes Expansion Impacts) CO-23

Chapter 11

Economic Benefits of Federal Lands..... CO-24

Roads Serving Federal Lands CO-24

Chapter 12

Selected Every Day Counts Initiatives..... CO-25

Chapter 13

Fuel Cell Electric Buses Operating in the United States, 2006–2012 CO-26

Fuel Cell Electric Bus Demonstration Sites CO-26

Main Report

Exhibit I-1 Performance Management Planning and Programming Elements I-5

Exhibit 1-1 VMT by Type of Travel 1-3

Exhibit 1-2 Summary Statistics on Total Travel, 1990–2009 NHTS (Millions) 1-3

Exhibit 1-3 Total Annual Household VMT (Billions) 1-4

Exhibit 1-4 Summary of Daily Travel Statistics, 1969–2009 NHTS..... 1-4

Exhibit 1-5 Annual Person Trips and Person Miles per Capita by Urban/Rural Residence..... 1-5

Exhibit 1-6	Average Annual Person Miles and Person Trips per Household by Trip Purpose	1-6
Exhibit 1-7	Number of Vehicle Trips by Start Time and Trip Purpose	1-7
Exhibit 1-8	Percentage Agreement Between Usual Mode to Work and Actual Commute Mode on Travel Day	1-8
Exhibit 1-9	Average Daily Person Trips and Miles per Person	1-8
Exhibit 1-10	Average Daily Miles and Daily Trips per Person by Age	1-9
Exhibit 1-11	Household Size and Vehicles Owned over Time, 1969–2009 NHTS	1-10
Exhibit 1-12	Age of Household Vehicles	1-10
Exhibit 1-13	Annual VMT per Person by Trip Purpose, Age, and Worker Status	1-11
Exhibit 1-14	Impact of Population Density on Transportation Mode	1-12
Exhibit 1-15	Walk and Transit Rates by Area Type	1-13
Exhibit 1-16	Distribution of Person Trips and Person Miles by Mode and Household Vehicles	1-13
Exhibit 1-17	Characteristics of Zero-Vehicle Households	1-14
Exhibit 1-18	Person Miles by Private Vehicle, Transit, and Walk by Age and Travel Disability.....	1-15
Exhibit 1-19	Percent of Person Trips by Selected Purpose During Peak and Off-Peak Hours	1-16
Exhibit 1-20	Average Gas Price per Month and Daily VMT per Driver, 2001–2002 and 2008–2009	1-17
Exhibit 1-21	Goods Movement by Mode, 2007	1-19
Exhibit 1-22	Tonnage on Highways, Railroads, and Inland Waterways, 2007.....	1-19
Exhibit 1-23	Average Daily Long-Haul Freight Truck Traffic on the National Highway System, 2007.....	1-20
Exhibit 1-24	Weight of Shipments by Transportation Mode (Millions of Tons)	1-21
Exhibit 1-25	Average Daily Long-Haul Freight Truck Traffic on the National Highway System, 2040.....	1-21
Exhibit 1-26	The Spectrum of Freight Moved in 2007	1-22
Exhibit 1-27	Major Truck Routes on the National Highway System, 2007.....	1-23
Exhibit 1-28	Trucks and Truck Miles by Range of Operations	1-23
Exhibit 1-29	U.S. Ton-Miles of Freight (BTS Special Tabulation) (Millions).....	1-24
Exhibit 2-1	Highway Miles by Owner and by Size of Area, 2000–2010	2-3
Exhibit 2-2	Revised Highway Functional Classification.....	2-4
Exhibit 2-3	Cumulative Percentage Distributions of Mileage by AADT Volume, by Functional System	2-5
Exhibit 2-4	Percentage of Highway Miles, Lane Miles, and VMT by Functional System.....	2-6
Exhibit 2-5	Highway Route Miles by Functional System, 2000–2010	2-7
Exhibit 2-6	Highway Lane Miles by Functional System and by Size of Area, 2000–2010.....	2-8
Exhibit 2-7	Annual VMT Growth Rates, 1990–2010.....	2-9
Exhibit 2-8	Vehicle Miles Traveled (VMT) and Passenger Miles Traveled (PMT), 2000–2010	2-9
Exhibit 2-9	Highway Travel by Functional System and by Vehicle Type, 2008–2010.....	2-10
Exhibit 2-10	Federal-Aid Highway Miles, Lane Miles, and VMT, 2000–2010.....	2-11
Exhibit 2-11	Highway Route Miles, Lane Miles, and VMT on the NHS Compared With All Roads, by Functional System, 2010	2-13

Exhibit 2-12	Interstate Highway Miles, Lane Miles, and VMT, 2000–2010	2-14
Exhibit 2-13	National Network for Conventional Combination Trucks, 2009	2-15
Exhibit 2-14	Bridges by Owner, 2000–2010	2-17
Exhibit 2-15	Bridge Inventory Characteristics for Ownership, Traffic, and Deck Area, 2010	2-18
Exhibit 2-16	Interstate, STRAHNET, and NHS Bridges Weighted by Numbers, ADT, and Deck Area, 2010	2-18
Exhibit 2-17	Number of Bridges by Functional System, 2000–2010	2-20
Exhibit 2-18	Bridges by Functional System Weighted by Numbers, ADT, and Deck Area, 2010	2-20
Exhibit 2-19	Number of Bridges by Functional Class and ADT Group, 2010.....	2-21
Exhibit 2-20	Rail Modes Serving Urbanized Areas	2-25
Exhibit 2-21	Transit Active Fleet by Vehicle Type, 2010	2-27
Exhibit 2-22	Composition of Urban Transit Road Vehicle Fleet, 2010	2-27
Exhibit 2-23	Maintenance Facilities for Directly Operated Services, 2010	2-28
Exhibit 2-24	Transit Rail Mileage and Stations, 2010	2-28
Exhibit 2-25	Rural Transit Vehicles, 2010	2-29
Exhibit 2-26	Urban Transit Operators' ADA Vehicle Fleets by Mode, 2010	2-30
Exhibit 2-27	Urban Transit Operators' ADA-Compliant Stations by Mode, 2010.....	2-30
Exhibit 2-28	Percentage of Urban Bus Fleet Using Alternative Fuels, 2000–2010	2-31
Exhibit 2-29	Hybrid Buses as a Percentage of Urban Bus Fleet, 2005–2010.....	2-31
Exhibit 3-1	Pavement Condition Criteria.....	3-2
Exhibit 3-2	Percent of NHS VMT on Pavements With Good and Acceptable Ride Quality, 2000–2010	3-5
Exhibit 3-3	Percent of VMT on Pavements with Good and Acceptable Ride Quality, by Functional System, 2000–2010	3-6
Exhibit 3-4	Percent of Mileage with Acceptable and Good Ride Quality, by Functional System, 2000–2010	3-8
Exhibit 3-5	Lane Width by Functional Class, 2008.....	3-9
Exhibit 3-6	Rural Alignment by Functional Class, 2008	3-10
Exhibit 3-7	Bridge Condition Rating Categories	3-13
Exhibit 3-8	Bridge Condition Ratings, 2010	3-14
Exhibit 3-9	Bridge Appraisal Rating.....	3-14
Exhibit 3-10	Bridge Appraisal Ratings Based on Geometry and Function, 2010.....	3-15
Exhibit 3-11	Systemwide Bridge Deficiencies, 2000–2010	3-16
Exhibit 3-12	NHS Bridge Deficiencies, 2000–2010	3-17
Exhibit 3-13	STRAHNET-Deficient Bridges	3-18
Exhibit 3-14	Bridge Deficiencies by Functional Class, 2000–2010.....	3-19
Exhibit 3-15	Bridge Deficiencies by Owner, 2010	3-20
Exhibit 3-16	Bridges by Age Range, as of 2010.....	3-20

Exhibit 3-17	Bridge Deficiencies by Period Built, as of 2010	3-21
Exhibit 3-18	Definitions of Transit Asset Conditions.....	3-23
Exhibit 3-19	Distribution of Asset Physical Conditions by Asset Type for All Modes	3-24
Exhibit 3-20	Estimated Replacement Value of the Nation’s Transit Assets, 2010	3-24
Exhibit 3-21	Urban Transit Bus Fleet Count, Age, and Condition, 2000–2010.....	3-25
Exhibit 3-22	Age Distribution of Buses and Vans, 2010.....	3-26
Exhibit 3-23	Distribution of Estimated Asset Conditions by Asset Type for Bus	3-27
Exhibit 3-24	Urban Transit Rail Fleet Count, Age, and Condition, 2000–2010	3-28
Exhibit 3-25	Age Distribution of Rail Transit Vehicles, 2010.....	3-29
Exhibit 3-26	Distribution of Asset Physical Conditions by Asset Type for All Rail	3-30
Exhibit 3-27	Distribution of Asset Physical Conditions by Asset Type for Heavy Rail	3-30
Exhibit 3-28	Age Distribution of Rural Transit Vehicles, 2010	3-31
Exhibit 4-1	Crashes by Severity, 2000–2010	4-3
Exhibit 4-2	Summary of Fatality and Injury Rates, 1966–2010.....	4-4
Exhibit 4-3	Fatalities Related to Motor Vehicle Operation, 1980–2010	4-4
Exhibit 4-4	Fatality Rates, 1980–2010.....	4-5
Exhibit 4-5	Highway Fatalities by Crash Type, 2000–2010	4-6
Exhibit 4-6	Intersection-Related Fatalities by Functional System, 2010	4-7
Exhibit 4-7	Pedestrian and Other Nonmotorist Traffic Fatalities, 2000–2010.....	4-8
Exhibit 4-8	Fatalities by Functional System, 2000–2010.....	4-9
Exhibit 4-9	Fatalities by Functional System, 2000–2010 (per 100 Million VMT)	4-10
Exhibit 4-10	Annual Transit Fatalities Excluding Suicides, 2002–2010.....	4-14
Exhibit 4-11	Transit Fatality Rates by Person Type, 2002–2010, per 100 Million PMT	4-15
Exhibit 4-12	Annual Transit Fatalities Including Suicides, 2002–2010	4-16
Exhibit 4-13	Transit Injury Rates by Person Type, 2002–2010, per 100 Million PMT.....	4-16
Exhibit 4-14	Annual Transit Fatality Rates by Highway Mode, 2002–2010.....	4-17
Exhibit 4-15	Annual Transit Fatality Rates by Rail Mode, 2002–2010	4-17
Exhibit 4-16	Transit Incidents and Injuries by Mode, 2004–2010.....	4-18
Exhibit 4-17	Commuter Rail Fatalities, 2002–2010.....	4-18
Exhibit 4-18	Commuter Rail Incidents, 2002–2010	4-19
Exhibit 4-19	Commuter Rail Injuries, 2002–2010	4-19
Exhibit 5-1	Potential Livability Performance Measures	5-5
Exhibit 5-2	Sources of Congestion.....	5-10
Exhibit 5-3	Peak-Period Congestion on High-Volume Truck Portions of the National Highway System, 2007	5-11
Exhibit 5-4	Average Truck Speeds on Selected Interstate Highways, 2010.....	5-12

Exhibit 5-5	Peak-Period Congestion on High-Volume Truck Portions of the National Highway System, 2040	5-13
Exhibit 5-6	Average Speeds for Passenger-Carrying Transit Modes, 2010	5-17
Exhibit 5-7	Unadjusted Vehicle Occupancy: Passengers per Transit Vehicle, 2000–2010	5-18
Exhibit 5-8	Average Seat Occupancy Calculations for Passenger-Carrying Transit Modes, 2010	5-18
Exhibit 5-9	Vehicle Service Utilization: Vehicle Revenue Miles per Active Vehicle by Mode	5-19
Exhibit 5-10	Distribution of Passengers by Wait-Time.....	5-19
Exhibit 5-11	Share of Working-Age Residents With Access to Transit, 100 Metropolitan Areas.....	5-20
Exhibit 5-12	Mean Distance Between Failures, 2004–2010	5-20
Exhibit 5-13	Transit Urban Directional Route Miles, 2000–2010	5-21
Exhibit 5-14	Rail and Nonrail Vehicle Revenue Miles, 2000–2010	5-22
Exhibit 5-15	Capacity-Equivalent Factors by Mode	5-22
Exhibit 5-16	Capacity-Equivalent Vehicle Revenue Miles, 2000–2010	5-23
Exhibit 5-17	Unlinked Passenger Trips (Total in Billions and Percent of Total) by Mode, 2010	5-23
Exhibit 5-18	Passenger Miles Traveled (Total in Billions and Percent of Total) by Mode, 2010	5-24
Exhibit 5-19	Transit Urban Passenger Miles, 2000–2010	5-24
Exhibit 5-20	Transit Ridership versus Employment, 2006–2011	5-25
Exhibit 5-21	Washington, DC, Transit Mode Share, 2007–2011	5-25
Exhibit 6-1	Government Revenue Sources for Highways, 2010.....	6-2
Exhibit 6-2	Disposition of Highway-User Revenue by Level of Government, 2010	6-3
Exhibit 6-3	Highway Trust Fund Highway Account Receipts and Outlays, Fiscal Years 2000–2011	6-5
Exhibit 6-4	Government Revenue Sources for Highways, 2000–2010	6-6
Exhibit 6-5	Percent of Highway Revenue Derived From User Charges, Each Level of Government, 2000–2010	6-7
Exhibit 6-6	Direct Expenditures for Highways, by Expending Agencies and by Type, 2010	6-8
Exhibit 6-7	Expenditures for Highways by Type, All Units of Government, 2000–2010	6-8
Exhibit 6-8	Funding for Highways by Level of Government, 2000–2010.....	6-9
Exhibit 6-9	Highway Capital, Noncapital, and Total Expenditures in Current and Constant 2010 Dollars, All Units of Government, 1990–2010	6-10
Exhibit 6-10	Highway Expenditures Funded by Federal and Non-Federal Sources, in Current and Constant 2010 Dollars, 1990–2010	6-11
Exhibit 6-11	Comparison of Inflation Indices (Converted to a 2003 Base Year), 1990–2010.....	6-12
Exhibit 6-12	Highway Capital Outlay by Improvement Type, 2010.....	6-13
Exhibit 6-13	Distribution of Capital Outlay by Improvement Type and Functional System, 2010.....	6-14
Exhibit 6-14	Capital Outlay on All Roads by Improvement Type, 2000–2010	6-15
Exhibit 6-15	Comparison of FHWA Expenditures by Type, Prior to and During the Recovery Act.....	6-16
Exhibit 6-16	Capital Outlay on Federal-Aid Highways, by Improvement Type, 2000–2010	6-17

Exhibit 6-17	Capital Outlay on the NHS, by Improvement Type, 2000–2010	6-17
Exhibit 6-18	Capital Outlay on the Interstate System, by Improvement Type, 2000–2010.....	6-18
Exhibit 6-19	2010 Revenue Sources for Transit Funding	6-21
Exhibit 6-20	2010 Public Transit Revenue Sources (Billions of Dollars)	6-21
Exhibit 6-21	Mass Transit Account Receipts and Outlays, Fiscal Years 2000–2011	6-22
Exhibit 6-22	Recovery Act Funding Awards Compared to Other FTA Fund Awards.....	6-23
Exhibit 6-23	State and Local Sources of Transit Funding (Millions of Dollars)	6-24
Exhibit 6-24	Average Fares and Costs per Mile—Top 10 Transit Systems, 2000–2010 (Constant Dollars)	6-24
Exhibit 6-25	Funding for Transit by Government Jurisdiction, 2000–2010	6-25
Exhibit 6-26	Current and Constant Dollar Funding for Public Transportation (All Sources)	6-26
Exhibit 6-27	Applications of Federal Funds for Transit Operating and Capital Expenditures, 2000–2010	6-26
Exhibit 6-28	Sources of Funds (Billions of Dollars) for Transit Capital Expenditures, 2000–2010	6-27
Exhibit 6-29	2010 Transit Capital Expenditures by Mode and Type	6-28
Exhibit 6-30	Sources of Funds for Transit Operating Expenditures, 2000–2010	6-29
Exhibit 6-31	Transit Operating Expenditures by Mode, 2000–2010.....	6-30
Exhibit 6-32	Operating Expenditures by Mode and Type of Cost, 2010.....	6-31
Exhibit 6-33	Rail Operating Expenditures by Type of Cost, Millions of Dollars	6-31
Exhibit 6-34	2010 Nonrail Operating Expenditures by Type of Cost, Millions of Dollars.....	6-31
Exhibit 6-35	Operating Expenditures per Vehicle Revenue Mile, 2000–2010 (Constant Dollars)	6-32
Exhibit 6-36	Growth in Operating Costs—UZAs over 1 million, 2000–2010.....	6-32
Exhibit 6-37	Operating Expenditures per Capacity-Equivalent Vehicle Revenue Mile by Mode, 2000–2010 (Constant Dollars).....	6-33
Exhibit 6-38	Operating Expenditures per Passenger Mile, 2000–2010 (Constant Dollars)	6-33
Exhibit 6-39	Farebox Recovery Ratio by Mode, 2004–2010	6-34
Exhibit 6-40	Rural Transit Funding Sources for Operating Expenditures, 2010	6-34
Exhibit 7-1	Distribution of 2010 Capital Expenditures by Investment Type (Billions of Dollars).....	7-4
Exhibit 7-2	Annual Projected Highway VMT Based on HPMS Forecasts or Actual 15-Year Average Growth Trend.....	7-9
Exhibit 7-3	Description of Ten Alternative HERS-Modeled Investment Levels Selected for Further Analysis	7-11
Exhibit 7-4	Benefit-Cost Ratio Cutoff Points Associated With Different Possible Funding Levels for Federal-Aid Highways	7-12
Exhibit 7-5	Minimum and Average Benefit-Cost Ratios (BCRs) for Different Possible Funding Levels for Federal-Aid Highways	7-13
Exhibit 7-6	Projected 2030 Average Pavement Roughness on Federal-Aid Highways Compared with Base Year, for Different Possible Funding Levels	7-14

Exhibit 7-7	Projected 2030 Pavement Ride Quality Indicators on Federal-Aid Highways Compared with 2010, for Different Possible Funding Levels.....	7-15
Exhibit 7-8	Projected Changes in 2030 Highway Travel Delay and Speed on Federal-Aid Highways Compared with Base Year, for Different Possible Funding Levels.....	7-17
Exhibit 7-9	Projected Changes in 2030 Highway Travel Delay and Speed on Federal-Aid Highways Compared with Base Year, for Different Possible Funding Levels, Assuming Trend-Based VMT Growth.....	7-18
Exhibit 7-10	Projected 2030 Average Total User Costs and VMT on Federal-Aid Highways Compared with Base Year, for Different Possible Funding Levels.....	7-20
Exhibit 7-11	Projected Changes in 2030 Average Highway User Costs on Federal-Aid Highways Compared With Base Year, for Different User Cost Components and Different Possible Funding Levels.....	7-21
Exhibit 7-12	Projected 2030 Pavement Ride Quality Indicators on the NHS Compared with 2010, for Different Possible Funding Levels.....	7-24
Exhibit 7-13	Projected Changes in 2030 Delay, Speed, and Highway User Costs on the NHS Compared with 2030 for Different Possible Funding Levels.....	7-25
Exhibit 7-14	Projected 2030 Pavement Ride Quality Indicators on the Interstate System Compared with 2010, for Different Funding Levels.....	7-27
Exhibit 7-15	Projected Changes in 2030 Speed, Delay, and Highway User Costs on the Interstate System Compared with 2010, for Different Possible Funding Levels.....	7-28
Exhibit 7-16	Projected 2030 Bridge Condition Indicators for All Bridges, for Different Funding Scenarios.....	7-31
Exhibit 7-17	Projected 2030 Bridge Condition Indicators for Bridges on Federal-Aid Highways, for Different Possible Funding Levels.....	7-32
Exhibit 7-18	Projected 2030 Bridge Condition Indicators for Bridges on the NHS, for Different Possible Funding Levels.....	7-33
Exhibit 7-19	Projected 2030 Bridge Condition Indicators for Bridges on the Interstate System, for Different Funding Levels.....	7-34
Exhibit 7-20	2010 Transit Capital Expenditures (Billions of Dollars)	7-37
Exhibit 7-21	Impact of Preservation Investment on 2030 Transit State of Good Repair Backlog in All Urbanized and Rural Areas.....	7-38
Exhibit 7-22	Impact of Preservation Investment on 2030 Transit Conditions in All Urbanized and Rural Areas	7-39
Exhibit 7-23	New Ridership Supported in 2030 by Expansion Investments in All Urbanized and Rural Areas	7-41
Exhibit 7-24	Impact of Level of Preservation Investment on 2030 Transit Conditions in Urbanized Areas Over 1 Million in Population	7-42
Exhibit 7-25	Impact of Preservation Investment on 2030 Transit State of Good Repair Backlog in Urbanized Areas Over 1 Million in Population.....	7-43
Exhibit 7-26	New Ridership Supported in 2030 by Expansion Investments in Urbanized Areas Over 1 Million in Population.....	7-44
Exhibit 7-27	Impact of Preservation Investment on 2030 Transit Conditions in Urbanized Areas Under 1 Million in Population	7-45

Exhibit 7-28	Impact of Preservation Investment on 2030 Transit State of Good Repair Backlog in Urbanized Areas Under 1 Million in Population	7-46
Exhibit 7-29	New Ridership Supported in 2030 by Expansion Investments in Urbanized Areas Under 1 Million in Population	7-47
Exhibit 8-1	Capital Investment Scenarios for Highways and Bridges, Derivation of Components	8-3
Exhibit 8-2	Summary of Average Annual Investment Levels, by Scenario	8-5
Exhibit 8-3	Systemwide Highway Capital Investment Scenarios for 2011 through 2030: Derivation and Distribution	8-8
Exhibit 8-4	Systemwide Highway Capital Investment Scenarios for 2011 through 2030: Derivation and Distribution, Assuming Lower Trend-Based VMT Growth	8-9
Exhibit 8-5	Systemwide Highway Capital Investment Scenarios for 2011 through 2030: Distribution by Capital Improvement Type Compared to 2010 Spending	8-10
Exhibit 8-6	Projected Impact of Systemwide Capital Investment Scenarios on Average Bridge Sufficiency Rating in 2030	8-11
Exhibit 8-7	Federal-Aid Highway Capital Investment Scenarios for 2011 through 2030: Derivation, Distribution, and Projected Impacts	8-12
Exhibit 8-8	Federal-Aid Highway Capital Investment Scenarios for 2011 through 2030: Derivation, Distribution, and Projected Impacts, Assuming Lower Trend-Based VMT Growth	8-13
Exhibit 8-9	Sustain 2010 Spending Scenario for Federal-Aid Highways: Distribution of Average Annual Investment for 2011 Through 2030 Compared With Actual 2010 Spending, by Functional Class and Improvement Type	8-14
Exhibit 8-10	Maintain Conditions and Performance Scenario for Federal-Aid Highways: Distribution of Average Annual Investment for 2011 Through 2030 Compared With Actual 2010 Spending, by Functional Class and Improvement Type	8-15
Exhibit 8-11	Intermediate Improvement Scenario for Federal-Aid Highways: Distribution of Average Annual Investment for 2011 Through 2030, Compared With Actual 2010 Spending, by Functional Class and Improvement Type	8-16
Exhibit 8-12	Improve Conditions and Performance Scenario for Federal-Aid Highways: Distribution of Average Annual Investment for 2011 Through 2030 Compared With Actual 2010 Spending, by Functional Class and Improvement Type	8-17
Exhibit 8-13	NHS Capital Investment Scenarios for 2011 through 2030: Derivation, Distribution, and Projected Impacts	8-19
Exhibit 8-14	Interstate System Capital Investment Scenarios for 2011 through 2030: Derivation, Distribution, and Projected Impacts	8-20
Exhibit 8-15	Estimated Highway and Bridge Investment Backlog as of 2010	8-22
Exhibit 8-16	2010 C&P Analysis Scenarios for Transit	8-23
Exhibit 8-17	Annual Average Cost by Investment Scenario (2010–2030)	8-24
Exhibit 8-18	Annual Transit Capital Expenditures, 2004 to 2010 (Billions of Current-Year Dollars)	8-25
Exhibit 8-19	Sustain 2010 Spending Scenario: Average Annual Investment by Asset Type, 2010–2030 (Billions of 2010 Dollars)	8-25

Exhibit 8-20	Sustain 2010 Spending Scenario: Over-Age Forecast by Asset Category, 2010–2030	8-26
Exhibit 8-21	Investment Backlog: Sustain 2010 Spending (\$10.3 Billion Annually).....	8-27
Exhibit 8-22	Sustain 2010 Spending Scenario: Capacity Utilization by Mode Forecast, 2010–2030	8-28
Exhibit 8-23	Projected Versus Currently Supported Ridership Growth	8-28
Exhibit 8-24	SGR Benchmark: Average Annual Investment by Asset Type, 2010–2030 (Billions of 2010 Dollars).....	8-29
Exhibit 8-25	Investment Backlog: State of Good Repair Benchmark (\$18.5 Billion Annually).....	8-30
Exhibit 8-26	Proportion of Transit Assets Not in State of Good Repair (Excluding Tunnel Structures) ...	8-31
Exhibit 8-27	Percent Reduction in Revenue Service Disruptions Relative to 2010 for State of Good Repair Benchmark.....	8-31
Exhibit 8-28	Low and High Growth Scenarios: Average Annual Investment by Asset Type, 2010–2030 (Billions of 2010 Dollars).....	8-33
Exhibit 8-29	Scenario Investment Benefits Scorecard	8-35
Exhibit 9-1	Selected Highway Investment Scenario Projections Compared With Comparable Data From the 2010 C&P Report (Billions of Dollars)	9-3
Exhibit 9-2	Comparison of Average Annual Highway and Bridge Investment Scenario Estimates With Base Year Spending, 1997 to 2013 C&P Reports.....	9-4
Exhibit 9-3	1991 C&P Report Highway and Bridge Investment Scenario Estimates and Cumulative Spending, 1990 Through 2009	9-5
Exhibit 9-4	Selected Pavement, Bridge, and Congestion Metrics, 1989, 2008, and 2010.....	9-7
Exhibit 9-5	Illustration of Potential Impact of Alternative Inflation Rates on Selected Systemwide Investment Scenarios	9-9
Exhibit 9-6	Distribution of Spending Among 5-Year HERS Analysis Periods and Projected Impacts on Average IRI and Average Delay, for Alternative Approaches to Investment Timing.....	9-11
Exhibit 9-7	Distribution of Spending Among 5-Year Periods in NBIAS and Projected Impacts on the Average Bridge Sufficiency Rating, for Alternative Approaches to Investment Timing.....	9-13
Exhibit 9-8	Asset Condition Forecast for All Existing and Expansion Transit Assets	9-16
Exhibit 9-9	SGR Baseline Scenario: Asset Percent of Useful Life Consumed.....	9-16
Exhibit 9-10	Sustain 2010 Spending Scenario: Asset Percent of Useful Life Consumed	9-17
Exhibit 9-11	Low Growth Scenario: Asset Percent of Useful Life Consumed.....	9-17
Exhibit 9-12	High Growth Scenario: Asset Percent of Useful Life Consumed.....	9-18
Exhibit 9-13	Asset Condition Forecast for All Existing and Expansion Transit Assets Under Alternative Methodology.....	9-18
Exhibit 9-14	Causes of the Increase in the Backlog between the 2010 C&P Report and the 2013 C&P Report.....	9-19
Exhibit 9-15	Comparison of Projected Investment Needs for 2010 and 2013 C&P Report Investment Scenarios	9-19

Exhibit 9-16	Passenger Miles Traveled, All Urbanized and Rural Areas	9-20
Exhibit 9-17	Passenger Miles Traveled, UZAs over 1 Million in Population	9-21
Exhibit 9-18	Passenger Miles Traveled, UZAs Under 1 Million in Population	9-22
Exhibit 9-19	Hybrid and Alternative Fuel Vehicles: Share of Total Bus Fleet, 2000–2030	9-23
Exhibit 9-20	Impact of Shift to Vehicles Using Hybrid and Alternative Fuels on Investment Needs: Low Growth Scenario	9-24
Exhibit 9-21	Impact of Shift from Diesel to Alternative Fuels and Hybrid Vehicles on Annual Investment Needs	9-24
Exhibit 9-22	Impact of Shift to Vehicles Using Hybrid and Alternative Fuels on Backlog Estimate: Sustain 2010 Spending Scenario	9-25
Exhibit 9-23	Projection of Fleet Size by Scenario	9-25
Exhibit 9-24	Projection of Guideway Route Miles by Scenario	9-26
Exhibit 9-25	Projection of Stations by Scenario	9-26
Exhibit 9-26	Stock of Fixed Guideway Miles by Year Under Low Growth Scenario, 2010–2030	9-27
Exhibit 10-1	Impact of Alternative Value of Time Assumptions on Highway Investment Scenario Average Annual Investment Levels	10-3
Exhibit 10-2	Impact of Alternative Assumptions About Growth in the Real Value of Time on Highway Investment Scenario Average Annual Investment Levels	10-6
Exhibit 10-3	Impact of Alternative Value of Life Assumptions on Highway Investment Scenario Average Annual Investment Levels	10-8
Exhibit 10-4	Impact of Alternative Discount Rate Assumption on Highway Investment Scenario Average Annual Investment Levels	10-9
Exhibit 10-5	Impact of Alternative Future Fuel Price Assumption on Highway Investment Scenario Average Annual Investment Levels	10-10
Exhibit 10-6	Impact of Alternative Bridge Maintenance, Repair, and Rehabilitation Strategies on the Economic Bridge Investment Backlog and Future Capital Investment Scenarios	10-12
Exhibit 10-7	Impact of Alternative Operations Strategies Deployment Rate Assumptions on Selected Performance Indicators and Highway Investment Scenarios	10-13
Exhibit 10-8	Impact of Alternative Replacement Condition Thresholds on Transit Preservation Investment Needs by Scenario (Excludes Expansion Impacts)	10-15
Exhibit 10-9	Impact of an Increase in Capital Costs on Transit Investment Estimates by Scenario	10-16
Exhibit 10-10	Impact of Alternative Value of Time Rates on Transit Investment Estimates by Scenario ..	10-17
Exhibit 10-11	Impact of Alternative Discount Rates on Transit Investment Estimates by Scenario	10-17
Exhibit 11-1	Major Federal Lands	11-2
Exhibit 11-2	Types of Lands Managed by Federal Land Management Agencies	11-3
Exhibit 11-3	Summary of Annual Recreation Use and Visits	11-4
Exhibit 11-4	Federal Land Use	11-5
Exhibit 11-5	Economic Benefits of Federal Lands	11-6

Exhibit 11-6	Roads Serving Federal Lands	11-6
Exhibit 11-7	Forest Roads Pavement Condition (Paved Roads Only)	11-7
Exhibit 11-8	Park Roads and Parkways Pavement Condition (Paved Roads Only)	11-8
Exhibit 11-9	Wildlife Refuge Roads Condition.....	11-9
Exhibit 11-10	BLM Roads Pavement Condition (Paved Roads Only).....	11-10
Exhibit 11-11	U.S. Army Corps of Engineers Road Condition.....	11-13
Exhibit 11-12	FLHP Annual Authorizations (\$M)	11-14
Exhibit 12-1	Selected Every Day Counts Initiatives.....	12-4
Exhibit 12-2	Every Day Counts State-Based Structure	12-5
Exhibit 12-3	Design-Build Process	12-8
Exhibit 12-4	Construction-Manager-General Contractor Process.....	12-8
Exhibit 12-5	Diverging Diamond Interchange	12-11
Exhibit 12-6	3D Modeling	12-12
Exhibit 12-7	Intelligent Compaction.....	12-13
Exhibit 13-1	Diagram of Fuel Cell Operation.....	13-3
Exhibit 13-2	Progress Toward Achieving Technical Performance Objectives.....	13-6
Exhibit 13-3	Fuel Cell Electric Buses Operating in the United States, 2006–2012.....	13-6
Exhibit 13-4	Fuel Cell Electric Bus Demonstration Sites.....	13-7
Exhibit 13-5	Fuel Cell Bus Configurations.....	13-7
Exhibit A-1	Types of Operations Strategies Included in Each Scenario	A-5
Exhibit A-2	Impacts of Operations Strategies in HERS	A-6
Exhibit A-3	Typical Costs per Lane Mile Assumed in HERS, by Type of Improvement	A-8
Exhibit A-4	Estimated 2010 Values of Travel Time by Vehicle Type	A-11
Exhibit C-1	Definitions of Transit Asset Conditions.....	C-4
Exhibit C-2	Scale for Determining Asset Condition Over Time, From Acquisition to Replacement	C-5
Exhibit C-3	Distribution of Asset Physical Condition by Asset Type for All Modes	C-6
Exhibit C-4	Weighted Average by Asset Category, 2010–2029.....	C-7
Exhibit C-5	Assets in Marginal or Poor Condition, 2010–2029.....	C-7
Exhibit C-6	TERM Asset Decay Curve for 40-Foot Buses.....	C-8