

**2040 Statewide Transportation Plan /
2015 Statewide Strategic Transportation Plan:
Revenue Forecast**

Technical Memorandum 4A

**final technical
memorandum**

prepared for

Georgia Department of Transportation

prepared by

Cambridge Systematics, Inc.

final technical memorandum

2040 Statewide Transportation Plan / 2015 Statewide Strategic Transportation Plan: Revenue Forecast

Technical Memorandum 4A

prepared for

Georgia Department of Transportation

prepared by

Cambridge Systematics, Inc.
730 Peachtree Street, NE, Suite 1000
Atlanta, GA 30308

date

October 14, 2015

Table of Contents

Executive Summary	ES-5
Summary of Revenues	ES-6
1.0 Federal Funding Detail.....	1-1
1.1 Federal Highway Administration Revenue.....	1-1
1.2 Federal Transit Administration Revenue.....	1-2
2.0 State Funding Detail	2-1
2.1 Georgia Motor Fuel Tax.....	2-1
2.2 Hotel/Motel Tax.....	2-2
2.3 Heavy Vehicle Annual Impact Fee.....	2-3
2.4 Alternative Fuel Vehicle Tax Credit.....	2-4
2.5 Alternative Fuel Vehicle Fee	2-4
2.6 Georgia General Fund Appropriations	2-5
2.7 Summary of State Funding Sources	2-6
3.0 Local/Other Funding	3-1
3.1 Georgia Transportation Infrastructure Bank Interest Revenue	3-1
3.2 Transportation Investment Act/Regional Transportation Referendum Revenue.....	3-2
3.3 Local Revenues for Highways	3-2
3.4 Local Revenues for Transit.....	3-3
4.0 Debt Service Obligations	4-1
5.0 Federal Matching Requirement	5-1
A. Historical Federal Funds Administered for Highways	A-1
B. Historical Federal Funds for Transit	B-1
C. Historical Motor Fuel Use and Revenues.....	C-1
D. Historical Georgia General Fund Appropriations	D-1
E. Historical Revenues Used by Local Governments for Highways	E-1

List of Tables

Table ES.1	Georgia Transportation Net Revenue Projections, Financially Constrained Forecast 2013 Dollars.....	ES-7
Table ES.2	Summary of Federal and State Revenue Sources	ES-8
Table 1.1	FHWA Gross Fund Projections, All FHWA Programs, Financially Constrained Forecast 2013 Dollars.....	1-2
Table 1.2	FTA Fund Projections, All FTA Programs, Financially Constrained Forecast 2013 Dollars.....	1-3
Table 2.1	Gross Georgia Motor Fuel Tax Revenue Projections, Financially Constrained Forecast 2013 Dollars.....	2-2
Table 2.2	Hotel/Motel Tax Revenue Projections, Financially Constrained Forecast 2013 Dollars.....	2-3
Table 2.3	Heavy Vehicle Fee Revenue Projections, Financially Constrained Forecast 2013 Dollars	2-4
Table 2.4	Alternative Fuel Vehicle Tax Credit Revenue, Financially Constrained Forecast 2013 Dollars	2-4
Table 2.5	Alternative Fuel Vehicle Fee Revenue Projections, Financially Constrained Forecast 2013 Dollars	2-5
Table 2.6	Projections of Georgia General Fund Appropriations, Financially Constrained Forecast 2013 Dollars.....	2-6
Table 2.7	Summary of State Revenue Sources	2-6
Table 3.1	Projections of Georgia Transportation Infrastructure Bank Interest Rate Revenues 2013 Dollars	3-2
Table 3.2	TIA Regional Sales Tax Revenue Projections 2013 Dollars.....	3-2
Table 3.3	Local Revenue Projections for Highway Projects 2013 Dollars.....	3-3
Table 3.4	MARTA Sales Tax and Fare Revenue 2013 Dollars	3-4
Table 3.5	Local/Agency Revenue Projections for Transit 2013 Dollars.....	3-4
Table 4.1	Outstanding Transportation Debt Service Payments 2013 Dollars.....	4-2
Table 5.1	Federal Matching Requirements for FHWA and FTA Projections, Financially Constrained Scenario 2013 Dollars.....	5-1
Table A.1	Historical Federal Funds Administered for Highways Thousands	A-1
Table B.1	Historical Allocations by FTA Programs Thousands	B-2
Table C.1	Historical Motor Fuel Tax Revenues.....	C-1
Table D.1	General Fund Appropriations for Transit	D-1

Table E.1 Historical Revenues Used by Local Governments for Highways
Thousands E-1

Executive Summary

This memorandum provides a detailed summary of the assumptions used to generate transportation revenue projections for the Georgia Department of Transportation (GDOT) Statewide Transportation Plan/Statewide Strategic Transportation Plan (SWTP/SSTP) Update. Revenue forecasts are presented in three programming tiers: 2015-2020, 2021-2030, and 2031-2040.

Revenue forecasts are based on the current Federal funding programs and on state revenue sources to support highway and transit-related investments.¹ On May 4, 2015, the Georgia Transportation Funding Act of 2015 was signed into law. The new transportation bill, effective July 1, 2015, represents new state funding sources specifically for transportation purposes. The new bill introduced the following changes:

- **State Motor Fuel Excise Tax Rates.** The bill eliminated the state sales tax and raised the state excise tax from 7.5 cents-per-gallon to 26 cents-per-gallon for gasoline and to 29 cents-per-gallon for diesel, all starting on July 1, 2015. The new tax rates will annually be indexed to the rising fuel efficiency standards of vehicles. The tax rates will also be indexed for Consumer Price Index (CPI) increases up to fiscal year (FY) 2019, with future indexing being tied only to the fuel efficiencies (e.g., Corporate Average Fuel Economy (CAFE) standards). Motor fuel tax receipts are limited to highway programs and are used to pay for highway-related debt service, operating and maintenance expenditures, capital programs, and matching Federal funds.
- **Hotel/Motel Nightly Fee.** A \$5 per night hotel/motel fee for each calendar day a room, lodging, or accommodations are rented or leased (excludes extended stay rentals).
- **Heavy Vehicle Annual Impact Fee.** Addition of an annual highway impact fee for heavy vehicles at a rate of \$50 for vehicles weighing between 15,500-26,000 pounds and \$100 for vehicles weighing more than 26,001 pounds.
- **Alternative Fuel Vehicle Fees.** Institutes a \$200 noncommercial and a \$300 commercial alternative fuel vehicle annual registration fee.
- **Tax Credits.** Eliminates the \$2,500/\$5,000 tax credits on low/zero emission vehicles, respectively.

Local/other (non-Federal or state) transportation revenues were also projected, but for informational purposes only. These local/other sources included: interest

¹ (Intermodal) revenues to support air, freight/passenger rail, or maritime investments were not included in revenue projections. The SWTP/SSTP Update includes an analysis of these modes and general investment recommendations as drawn from other relevant, mode-specific long-range planning studies.

revenue associated with the Georgia Transportation Infrastructure Bank (GTIB) – these funds are directed back into the revolving loan program and are not available for future long-range expenditures; sales tax resulting from the 2012 Regional Transportation Referendum (RTR) as promulgated through the state Transportation Investment Act (TIA) – these funds are already associated with specific projects within three regional commissions of the state; Metropolitan Atlanta Rapid Transit Authority (MARTA) sales tax and fare revenue – these revenues are directed back to the MARTA system; and locally generated revenues for highways and transit (e.g., SPLOST revenue). Locally generated revenue is projected as a cross-check on the long-term viability of local match for Federal revenue projections. The SWTP/SSTP will not, however, address the specifics of how local funds will be generated nor allocated over the life of the statewide transportation plan.

The SWTP/SSTP revenue forecast is a conservative estimate for use in developing a set of financially constrained investment recommendations for the plan; assumptions reflect current funding policy and revenue that is reasonably expected to be available over the life of the transportation plan. Draft revenue projections were vetted with a core group of the SWTP/SSTP study team in consultation with the Governor’s Office of Planning and Budget, Governor’s Transportation Policy Advisor, and GDOT Office of Financial Management. Three detailed financial revenue workshops were facilitated to present and discuss revenue projections – the first on December 13, 2013, to present assumptions, methodologies and draft projections; the second on February 4, 2014, to present updated projections based on feedback received; and the third on August 10, 2015, to discuss the methodology used to forecast the additional transportation revenue as a result of the Transportation Funding Act of 2015. Updated revenue assumptions to reflect the new state revenue sources were routed through GDOT Office of Planning and Office of Financial Management for review and concurrence.

SUMMARY OF REVENUES

Table ES.1 summarizes the financially constrained revenues estimates for highway and transit transportation expenditures over the life of the transportation plan. All revenues are expressed in 2013 dollars.² **The net funding (after debt obligations are considered) expected to be available from Federal and state sources is estimated at \$64.8 billion.**³ Table ES.2 provides the breakdown by funding source.

² Funding projections in year-of-expenditure dollars (YOE) were discounted assuming an annual inflation rate of 2.4 percent, based on the average inflation of the South Urban region over the past 16 years. Historical inflation was calculated using historical CPI factors from the Bureau of Labor Statistics from 1997 to 2012: <http://www.bls.gov/>.

³ The gross estimate without debt service obligation is \$67.6 billion.

**Table ES.1 Georgia Transportation Net Revenue Projections,
Financially Constrained Forecast
2013 Dollars**

Period	Federal Funds ² (Billions)	State Funds ² (Billions)	Local/Other Funds (Billions) ³	Total Federal and State ² (Billions)
			<i>*For Informational Purposes Only*</i>	
2015-2020	\$6.6	\$7.2	\$11.3	\$13.8
2021-2030	\$10.8	\$15.7	\$18.1	\$26.5
2031-2040	\$9.4	\$15.1	\$19.3	\$24.5
Total	\$26.7	\$38.1	\$48.7	\$64.8

Notes:

¹ Local/Other revenue sources: "Other" in this case refers to revenue sources unique to the Atlanta region or state of Georgia.

² Net revenue (after debt service payments).

³ See Section 3.0 for details.

⁴ Totals may not add up due to rounding.

Table ES.2 Summary of Federal and State Revenue Sources
2013 Dollars

Period	Gross Federal Highway Administration (billions)	Federal Transit Administration (billions)	Gross Motor Fuel Tax Revenues (billions)	Hotel Tax (billions)	Heavy Vehicle Fee (billions)	Alternative Fuel Credit (billions)	Alternative Fuel Fee (billions)	General Funds (billions)	Debt (billions)	Net Revenues (billions)
2015-2020	\$6.30	\$1.00	\$7.60	\$0.80	\$0.02	\$0.07	\$0.02	\$0.020	\$2.00	\$13.8
2021-2030	\$9.40	\$1.40	\$14.90	\$1.34	\$0.04	\$0.12	\$0.05	\$0.020	\$0.77	\$26.5
2031-2040	\$8.20	\$1.20	\$13.90	\$1.06	\$0.03	\$0.10	\$0.08	\$0.020	\$0.03	\$24.6
Total	\$23.90	\$3.60	\$36.30	\$3.20	\$0.09	\$0.29	\$0.16	\$0.058	\$2.80	\$64.8

Notes:

¹ Totals may not add up due to rounding

1.0 Federal Funding Detail

1.1 FEDERAL HIGHWAY ADMINISTRATION REVENUE

Funding allocations for FHWA programs were projected from the apportionments for the state of Georgia authorized for FY 2013 and FY 2014 by MAP-21. This Federal legislation restructured core highway formula programs from its predecessor, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and eliminated earmarks and most discretionary programs. The new core formula programs include:

- National Highway Performance Program (NHPP);
- Surface Transportation Program (STP);
- Congestion Mitigation and Air Quality Improvement Program (CMAQ);
- Highway Safety Improvement Program (HSIP);
- Railway-Highway Crossings (set-aside from HSIP);
- Metropolitan and Statewide Planning; and
- Transportation Alternatives.

MAP-21 funding apportionments for Georgia were discounted by 8 percent, assuming that the Obligation Authority for the state of Georgia is 92 percent, based on historic apportionments.⁴ After FY 2014, revenues in the Financially Constrained Forecast were projected to grow at 1 percent per year, consistent with GDOT policy assumptions and the Congressional Budget Office (CBO) annual growth forecast of the Highway Trust Fund (HTF) over the next ten years. Funds allocated for Metropolitan Planning programs and for State Planning and Research were excluded from revenue projections since these Federal program funds must by law be used for planning and research and cannot be used for capital or maintenance purposes. Total gross FHWA revenues are estimated at \$23.9 billion for the 2015-2040 period (Table 1.1).

⁴ Historical apportionments and obligations between 2001 and 2013 were obtained from the FHWA Highway Statistics database and MAP-21 web site. Years 2009 and 2010 were excluded for the “share” calculation purposes due to the disbursement of ARRA funds, considered an outlier, or “one-time” funding source.

Table 1.1 FHWA Gross Fund Projections, All FHWA Programs, Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$6.3
2021-2030	\$9.4
2031-2040	\$8.2
Total	\$23.9

1.2 FEDERAL TRANSIT ADMINISTRATION REVENUE

MAP-21 also restructured core transit grant programs from its predecessor, SAFETEA-LU. The new act provided significant authority to strengthen the safety of public transportation systems and gave emphasis on restoring and replacing the aging public transportation infrastructure by establishing new needs-based formula programs and new asset management requirements. The new law authorized \$10.6 billion in FY 2013 and \$10.7 billion in FY 2014 for public transportation.

Georgia's FTA funding allocations for FY 2013 were obtained from MAP-21.⁵ Excluding Sections 5303 and 5304 (i.e., Metropolitan and Statewide Planning Program), total grant allocations were \$168 million, which is about 1.6 percent of the total authorized amount for FY 2013 and consistent with historical allocations.⁶ Grant allocations for Georgia in FY 2014 were estimated assuming 1.6 percent of the \$10.7 billion authorized by FTA for FY 2014. An annual growth rate of 1 percent was assumed post-2014, consistent with GDOT policy assumptions and CBO's growth forecast of the HTF. For Section 5309-Fixed Guideway Capital Investment Grants, it is assumed for the Financially Constrained Forecast that no grants will be awarded to Georgia during the 2015-2040 period. The 5309 program awards grants on a competitive basis and is not considered stable revenue for the constrained forecast. Total gross FTA revenues are estimated at \$3.6 billion (Table 1.2).

⁵ MAP-21 apportionments/allocations for FY 2013 are available at http://www.fta.dot.gov/12853_14875.html.

⁶ Grant allocations between FY 2002 and FY 2012, as reported in FTA's web site, show that Georgia has historically received between 1.6 and 1.9 percent of FTA total apportionments. Georgia share excludes Section 5309, New Starts program.

Table 1.2 FTA Fund Projections, All FTA Programs,
Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$1.0
2021-2030	\$1.4
2031-2040	\$1.2
Total	\$3.6

Note: Excludes 5309 New Start Funds.

2.0 State Funding Detail

2.1 GEORGIA MOTOR FUEL TAX

Georgia's primary state funding source for highway projects is from taxes collected on motor fuels. Prior to the Transportation Funding Act of 2015, the State used to collect two types of taxes: 1) a motor fuel excise tax of 7.5 cents-per-gallon (not indexed by inflation) and 2) a 3 percent prepaid Motor Fuel Tax (MFT).⁷ However, the new bill eliminated the state sales tax and raised the state excise tax from 7.5 cents-per-gallon to 26 cents-per-gallon for gasoline and to 29 cents-per-gallon for diesel, effective July 1, 2015. The new tax rates will annually be indexed to the rising fuel efficiency standards of vehicles. In addition, the tax rates will also be indexed for Consumer Price Index (CPI) increases up to fiscal year (FY) 2019, with future indexing being tied only to the fuel efficiencies (e.g., Corporate Average Fuel Economy (CAFE) standards). MFT revenue projections were developed using a methodology that recognizes the following:

1. **The Corporate Average Fuel Economy (CAFE) standards adopted for model years (MY) 2012 through 2025.** The U.S. Energy Information Administration (EIA) provides projections for fuel economy (mpg) for light-duty vehicles (LDV) through year 2040. The *AEO2013* Reference case includes the final CAFE standards for model years 2012 through 2016 (promulgated in March 2010) and the final standards adopted in October 2012 for model years 2017 through 2025, with subsequent CAFE standards for year 2026-2040 vehicles calculated using 2025 levels. An analysis of historical fuel consumption and vehicle-miles traveled in Georgia between 2001 and 2011, as reported in FHWA's Highway Statistics (Table MF-21) show that the average miles traveled per gallon of fuel consumed (i.e., fuel economy) in the state is in line with the national average. Therefore, it is assumed that the fuel efficiency of the entire "on-the-road" fleet of cars and light trucks (not only new vehicles) in Georgia will be consistent with national projections.

Although the CAFE standards apply only to cars and light trucks, the *AEO2013* Reference case also includes fuel efficiency forecasts for freight trucks. The fuel efficiency of the freight fleet in Georgia is assumed to be consistent with the national average forecast, consistent as well with historical data. It is important to note that the implementation of these CAFE standards will have a dampening effect on the growth of motor fuel tax revenue than

⁷ Georgia used to collect a 4-percent sales tax on the average retail price of fuel; however, just 3 percent was dedicated to transportation and the remaining 1 percent was allocated to the state General Fund. Only the 3 percent portion was allocated by statute for transportation purposes.

what would occur if the fuel efficiency of the vehicle fleet remained the same as it is today.

2. **The future growth of VMT projections from the statewide travel demand model.** The forecasts of the Georgia statewide model (SWM) are consistent with vehicle miles traveled in Georgia increasing at an average annual rate of 1 percent through 2040. The model estimates that 91 percent of the projected VMTs will be autos and light-trucks and 9 percent heavy-trucks.
3. **The excise tax rates are indexed to the average fuel economy of vehicles and to changes in the Consumer Price Index.** Beginning on July 1, 2015, the excise tax of gasoline is 26 cents-per-gallon and for diesel 29 cents-per-gallon. Beginning on July 1, 2016, and annually thereafter, the excise tax rates will be indexed by the annual changes in fuel efficiency of vehicles. The resulting rates will additionally be indexed to changes in the Consumer Price Index (CPI) up to FY 2019.
4. **Interest revenue.** The GDOT Division of Finance provided historic data on interest revenues. Since 2007, interest revenue have declined significantly due to the economic recession. In 2007, interest revenue accounted for 6 percent of the base MFT collections but declined to 0.5 percent in 2012. Interest revenues were projected assuming 0.5 percent of the base MFT collections until 2015. Post 2015, incremental increases of 0.5 percent were assumed until reaching 4.9 percent, which is the historic average from 2001 to 2012.

Combining the four elements of the methodology, gross MFT revenues are estimated at \$36.3 billion (Table 2.1). Revenues were lagged by one year to better represent the timing of when revenue will be available.

Table 2.1 Gross Georgia Motor Fuel Tax Revenue Projections, Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$7.6
2021-2030	\$14.9
2031-2040	\$13.9
Total	\$36.3

2.2 HOTEL/MOTEL TAX

Effective July 1, 2015, a \$5 per night fee for each calendar day a room, lodging, or accommodation is rented or leased (excluding extended stay rentals) will be charged to the customer. The fees will be collected via the General Fund, but must be appropriated to transportation purposes, defined as roads, bridges, public transit, rails, buses, airport, and seaports. The Transportation Funding Act of 2015

specifies that revenues shall be appropriated exclusively for transportation purposes and if not appropriated for these purposes during a fiscal year, the amount collected shall be reduced by 50 percent for the next fiscal year and repealed after the subsequent year if not appropriated. For this plan, it is assumed that revenues will be appropriated exclusively for transportation purposes.

A flat revenue estimate of \$180 million per year (in nominal dollars) was assumed as directed by GDOT staff and consistent with the short-term revenue estimates develop by the University of West Georgia.

Total revenues are estimated at \$3.20 billion for the 2015-2040 period (Table 2.2).

Table 2.2 Hotel/Motel Tax Revenue Projections, Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$0.80
2021-2030	\$1.34
2031-2040	\$1.06
Total	\$3.20

2.3 HEAVY VEHICLE ANNUAL IMPACT FEE

The Transportation Funding Act of 2015 implemented an annual highway impact fee for heavy vehicles at a rate of \$50 for vehicles weighing between 15,500-26,000 pounds and of \$100 for vehicles weighing more than 26,001 pounds. As of March 2015, 38,022 vehicles between 15,500 pounds and 26,000 pounds and 32,780 vehicles over 26,000 pounds were registered in Georgia.⁸ A conservative forecast was developed combining the annual impact fees and the current number of heavy vehicles registered in the state. No annual growth is assumed for the number of vehicles and the fees are not indexed. The Transportation Funding Act of 2015 specifies that revenues shall be appropriated exclusively for transportation purposes and if not appropriated for these purposes during a fiscal year, the amount collected shall be reduced by 50 percent for the next fiscal year and repealed after the subsequent year if not appropriated. It is assumed that revenues will be appropriated exclusively for transportation purposes through the life of the plan.

Total revenues are estimated at \$0.09 billion for the 2015-2040 period (Table 2.3).

⁸ Source: GDOT.

Table 2.3 Heavy Vehicle Fee Revenue Projections, Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$0.02
2021-2030	\$0.04
2031-2040	\$0.03
Total	\$0.09

2.4 ALTERNATIVE FUEL VEHICLE TAX CREDIT⁹

The Transportation Funding Act of 2015 repealed the \$2,500/\$5,000 tax credits on low/zero emission vehicles, respectively. A conservative forecast was developed assuming an annual revenue of \$16,400,000 per year in year of expenditure dollars. Total revenues are estimated at \$0.29 billion for the 2015-2040 period (Table 2.4).

Table 2.4 Alternative Fuel Vehicle Tax Credit Revenue, Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$0.072
2021-2030	\$0.122
2031-2040	\$0.096
Total	\$0.291

2.5 ALTERNATIVE FUEL VEHICLE FEE

The Transportation Funding Act of 2015 created a new annual fee for Alternative Fuel Vehicle operating on alternative fuel except for vehicles which operate primarily on compressed natural gas, liquefied natural gas, or liquefied petroleum gas. Flex fuel vehicles (such as ethanol) are also not subject to the alternative fuel vehicle fees. For non-commercial vehicles, the annual fee is \$200. For commercial vehicles, the annual fee is \$300. These fees are in addition to existing license fees and annual ad valorem taxes when applicable. Beginning on July 1, 2016, and annually thereafter, the registration fees will be indexed to the average fuel

⁹ Under the Transportation Funding Act of 2015, Alternative Fuel Vehicles are now defined as vehicles fueled solely by electricity, natural gas, propane, bi-fuel, or dual fuel, including hybrid-electric vehicles. Flex fuel vehicles (e.g., ethanol) are no longer classified as Alternative Fuel Vehicles.

economy of vehicles. The resulting fees will additionally be indexed to changes in the Consumer Price Index (CPI) up to FY 2019.

The historical inventory of alternative-fueled vehicles maintained by the EIA as described in Section 2.4 was applied to support revenue projections. As of 2011, there were approximately 13,100 vehicles fueled by electricity in Georgia. According to EIA projections, electric vehicle sales in the South Atlantic region are projected to increase at an average annual rate of 8.6 percent from 2012 to 2040; however, a conservative growth of 5 percent was assumed.

Total revenues are estimated at \$0.16 billion for the 2015-2040 period (Table 2.5).

Table 2.5 Alternative Fuel Vehicle Fee Revenue Projections, Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$0.02
2021-2030	\$0.05
2031-2040	\$0.08
Total	\$0.16

2.6 GEORGIA GENERAL FUND APPROPRIATIONS

Motor fuel tax receipts are limited to highway and bridge programs and are used to pay for highway-related debt service, operating and maintenance expenditures, capital programs, and matching Federal funds. GDOT has historically received annual appropriations from the state General Fund to support non-highway transportation investment. General Fund allocations are subject to the annual appropriation process. General Fund appropriations were projected using historical data between 2005 and 2013 provided by the GDOT Office of Financial Management. During this period, allocations declined from \$8.7 million in 2005 to \$2.9 million in 2013, an average decrease of 13 percent per year. For planning purposes, a constant annual allocation of \$ 3.1 million in year of expenditures was assumed, equivalent to the average of the last 3 years. General Fund appropriations are estimated at \$0.058 billion (Table 2.6).

Table 2.6 Projections of Georgia General Fund Appropriations,
Financially Constrained Forecast
2013 Dollars

Period	Revenue (billions)
2015-2020	\$0.017
2021-2030	\$0.023
2031-2040	\$0.018
Total	\$0.058

2.7 SUMMARY OF STATE FUNDING SOURCES

Table 2.7 summarizes the financially constrained revenues estimates available from state sources for highway and transit transportation expenditures over the life of the transportation plan. The net funding (after the state share of debt obligations are considered) expected to be available is estimated at \$38.1 billion

Table 2.7 Summary of State Revenue Sources

Period	Motor Fuel Tax (billions)	Hotel Tax (billions)	Heavy Vehicle Fee (billions)	Alternative Fuel Credit (billions)	Alternative Fuel Fee (billions)	General Funds (billions)	Debt (State Share) (billions)	Net Revenues (billions)
2015-2020	\$7.60	\$0.80	\$0.02	\$0.07	\$0.02	\$0.020	-\$1.26	\$7.28
2021-2030	\$14.90	\$1.34	\$0.04	\$0.12	\$0.05	\$0.020	-\$0.73	\$15.74
2031-2040	\$13.90	\$1.06	\$0.03	\$0.10	\$0.08	\$0.020	-\$0.03	\$15.16
Total	\$36.30	\$3.20	\$0.09	\$0.29	\$0.16	\$0.058	-\$2.02	\$38.08

Notes:

¹ Totals may not add up due to rounding.

² See Section 4.0 for debt service payments.

3.0 Local/Other Funding

In this section an overview of revenue projected from local or “other” revenue sources is discussed. “Other” in this case refers to current revenue sources unique to the Atlanta region or state of Georgia. The revenue from these sources is either associated with an approved set of investments already (i.e., regional transportation referendums) or is not under the programming control of GDOT (e.g., locally generated revenue). It is summarized here for informational purposes only. Local/other revenues are not included in revenue projections and were not part of the subsequent funding tradeoff analysis (Task 5) that was conducted to inform plan recommendations for the GDOT SWTP/SSTP.

3.1 GEORGIA TRANSPORTATION INFRASTRUCTURE BANK INTEREST REVENUE

In 2009, the Georgia General Assembly created the Georgia Transportation Infrastructure Bank (GTIB) to serve as a revolving loan fund for local government transportation projects. The bank was originally capitalized with \$33.1 million for local government loans and \$10 million for Community Improvement District (CID) grants. In 2013, an additional \$3.6 million was appropriated to the program by the legislature, without direction on whether it would go to grants or loans. The loan program has not received the interest that was expected and the State Road and Tollway Authority (SRTA) Board transferred funds from the loan program into the grant program. To date, total funding in the loan program stands at \$13.1 million, with \$3.8 million already awarded.¹⁰

For planning purposes, it is assumed that 1) the full amount in the loan program (i.e., \$13.2 million) was disbursed for projects in 2013, 2) that the legislature has not assigned new funds, 3) that interest rate revenues are re-invested in the program, and 4) that there is a 5 year drawdown period, after which repayment begins. A repayment period of 10 years was assumed at an interest rate of 2.4 percent.

Total interest rate revenues are estimated at \$0.0024 billion for the 2015-2040 period (Table 3.1).

¹⁰ State Road and Tollway Authority, January 28, 2014.

Table 3.1 Projections of Georgia Transportation Infrastructure Bank Interest Rate Revenues
2013 Dollars

Period	Revenue (billions)
2015-2020	\$0.0005
2021-2030	\$0.0009
2031-2040	\$0.0010
Total	\$0.0024

3.2 TRANSPORTATION INVESTMENT ACT/REGIONAL TRANSPORTATION REFERENDUM REVENUE

In 2012, a Regional Transportation Referendum was successfully passed by Georgia voters in the regions of Central Savannah River Area, Heart of Georgia, and River Valley. These three regions began collecting a one percent regional sales tax to fund transportation improvements on January 1, 2013. The tax will be collected over a ten-year period, 2013-2022. Funds are collected by the Georgia State Financing and Investment Commission (GSFIC); however, GDOT is responsible for the management of the budget, schedule, execution, and delivery of all projects contained in each region's final investment list.

Revenues from the regional sales tax are assumed to be equivalent to the projections developed by the Georgia State University Fiscal Research Center, as updated in November 2012. Total revenues are estimated at \$1.3 billion for the 2015-2022 period (Table 3.2).

Table 3.2 TIA Regional Sales Tax Revenue Projections
2013 Dollars

Period	Revenue (billions)
2015-2020	\$1.0
2021-2022	\$0.3
Total	\$1.3

3.3 LOCAL REVENUES FOR HIGHWAYS

Local revenue projections for highways were developed as a cross-check of the viability of local revenue needed to match future Federal revenue projections.

Local governments rely mainly on local general fund appropriations and Special Purpose Local Option Sales Taxes (SPLOST) to provide their share for Federal-aid and state projects and for local roadway projects. SPLOSTs are collected for

diverse uses such as education, general fund, and transportation. Projections of local revenues for highway-related expenditures were developed based on historical allocations from the general funds, property taxes and special assessments, SPLOST, and miscellaneous revenues, as reported in FHWA's Highway Statistics (Table LGF-1). For revenue forecasting purposes, the four categories were combined.

The average allocation of local funds for highway expenditures was estimated at \$1.1 billion between FY 2000 and 2010, for an average annual growth rate of 2 percent over that period. Capital outlay expenditures accounted for about 37 percent of all highway-related expenditure over the same period. Assuming \$1.1 billion as the revenue in the base year and the same historical annual growth, local revenues for local highway projects are estimated at \$26.8 billion during the 2015-2040 period (Table 3.3). In aggregate, the local highway revenue estimate seems to be more than adequate to meet the Federal matching requirement, estimated at \$5.7 billion for the 2015-2040 period (Table 5.1).¹¹

Table 3.3 Local Revenue Projections for Highway Projects
2013 Dollars

Period	Revenue (billions)
2015-2020	\$6.4
2021-2030	\$10.4
2031-2040	\$10.0
Total	\$26.8

3.4 LOCAL REVENUES FOR TRANSIT

Local revenue projections for transit were developed as a cross-check of the viability of local revenue needed to match future Federal revenue projections.

Transit services are funded through a variety of Federal, state and local programs, as well as farebox revenue, advertising, and other nongovernmental sources. Most local government funding for urban and rural transit services is provided by general fund revenues of municipalities and/or counties. However, several counties fund their transit projects through special local options sales tax revenue. In Fulton and DeKalb counties, for instance, a 1 percent sales tax supports the operating and capital expenditures of MARTA.

Revenue associated with MARTA sales tax and fares were developed using sales tax and fare projections from the Atlanta Regional Commission's (ARC) latest approved Regional Transportation Plan, PLAN 2040. Based on PLAN 2040, sales

¹¹ The adequacy of revenues does not take into account local debt service.

tax revenues are estimated at \$12.4 billion during the 2015-2040 period and fare revenues at \$5.0 billion.

Table 3.4 MARTA Sales Tax and Fare Revenue
2013 Dollars

Period	Sales Tax Revenue (billions)	Fare Revenue (billions)
2015-2020	\$2.4	\$0.9
2021-2030	\$4.5	\$1.8
2031-2040	\$5.5	\$2.3
Total	\$12.4	\$5.0

The revenue forecast for other urban transit systems in the Atlanta region and small-urban and rural transit systems throughout the rest of the state were projected using the historical local and agency revenues between 2004 and 2011, obtained from the National Transit Database (NTD). Base revenues were assumed to grow at the same rate of inflation. Local revenues are estimated at \$1.3 billion and fare revenues at \$1.9 billion (Table 3.5). The revenue estimates seem sufficient to meet FTA matching requirement, estimated at \$0.9 billion for the 2015-2040 period (Table 5.1).

Table 3.5 Local/Agency Revenue Projections for Transit
2013 Dollars

Period	Local/Agency Revenue (billions)	Fare Revenue (billions)
2015-2020	\$0.3	\$0.3
2021-2030	\$0.5	\$0.6
2031-2040	\$0.5	\$1.0
Total	\$1.3	\$1.9

4.0 Debt Service Obligations

In addition to Federal funds, state motor fuel tax revenues, and State general fund appropriations, GDOT uses bond proceeds to finance its transportation program. The outstanding Guarantee Revenue Bonds (GRB bonds) and all of the GARVEE bonds issued for GDOT are being paid from motor fuel tax revenues and from Federal highway grant revenues.

Outstanding debt service estimates were provided by GDOT. Current debt service payments extend through FY 2034 and it is assumed that no additional bonds are issued during the timeframe of the plan. Outstanding GDOT debt service has been calculated to refine future projected Federal and state revenues. Debt service obligations are subtracted from gross revenue projections for the final (net) financially unconstrained forecast to reflect debt repayment needs as a priority, before additional transportation investments are considered.

According to debt service reports available from the Georgia State Financing and Investment Commission (GSFIC),¹² GDOT has three types of bonds that are pledged with MFT revenues:

- **General Obligation (GO) Bonds** - a portion of the State General obligation debt corresponds to GDOT from the construction and improvement of highways and related infrastructure.
- **Guaranteed Revenue Bonds (GRB)** - There are four series of GRBs currently outstanding:
 - Series 2001 - issued for road projects (refunded in part in 2011);
 - Series 2002 - issued for road projects (refunded in part in 2011);
 - Series 2011A - issued to refund, in part, its series 2001 GRBs; and
 - Series 2011B - issued to refund, in part, its series 2002 GRBs.
- **GARVEE Bonds** - MFT revenues are used to make approximately 20 percent of the GARVEE bonds debt service payments. The remaining 80 percent of the GARVEE bonds are paid with the state obligation of future Federal-aid apportionments.

The outstanding debt service over the life of the transportation plan is \$2.8 billion (Table 4.1). This debt service is subtracted from gross revenue estimates of \$67.6 billion¹³ to produce the total constrained revenue forecast of \$64.8 billion over the life of the plan.

¹² Debt Management Plan, Fiscal Year 2014-2018.

¹³ \$23.9 billion FHWA + \$3.6 billion FTA + \$36.3 billion for GA MFT + \$3.8 billion from other state revenue sources = \$67.6 billion gross revenue

Table 4.1 Outstanding Transportation Debt Service Payments
2013 Dollars

Period	MFT Portion (billions)	Federal Share (billions)	Total (billions)
2015-2020	\$1.26	\$0.74	\$2.00
2021-2030	\$0.73	\$0.05	\$0.77
2031-2040	\$0.03	\$0.00	\$0.03
Total	\$2.02	\$0.79	\$2.80

Source: GDOT.

5.0 Federal Matching Requirement

Federal funding programs require matching funds which are to be non-Federal. In general, the Federal share is 80 percent, while the remaining non-Federal share of 20 percent is either matched by the state completely or partially matched by the state and the local entities. State/Local matching requirements for FHWA funds have been estimated at \$5.7 billion and for FTA funds at \$0.9 billion (Table 5.1). The shares of Federal funding by program were obtained from MAP-21 and these range between 80 and 100 percent, depending on the program requirements. As outlined, projections of local and state revenue are estimated to meet (and exceed, if necessary) Federal matching requirements.

Table 5.1 Federal Matching Requirements for FHWA and FTA Projections, Financially Constrained Scenario
2013 Dollars

Period	FHWA Matching Funds Required (billions)	FTA Matching Funds Required (billions)
2015-2020	\$1.5	\$0.2
2021-2030	\$2.3	\$0.4
2031-2040	\$1.9	\$0.3
Total	\$5.7	\$0.9

A. Historical Federal Funds Administered for Highways

Table A.1 Historical Federal Funds Administered for Highways
Thousands

Year	Obligations	Apportionments
2001	\$889,040	\$1,055,378
2002	\$963,300	\$921,370
2003	\$870,681	\$1,201,369
2004	\$1,044,709	\$1,148,445
2005	\$1,147,380	\$1,109,817
2006	\$1,179,532	\$1,239,104
2007	\$1,061,173	\$1,303,590
2008	\$1,204,716	\$1,251,861
2009	\$1,796,109	\$1,303,829
2010	\$1,664,924	\$1,303,753
2011	\$1,343,218	\$1,339,911

Source: Obligations from Highway Statistics, Table FA-4B; Apportionments from Table FA-4.

B. Historical Federal Funds for Transit

Table B.1 Historical Allocations by FTA Programs
Thousands

Year	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Total
2002	\$53,928	\$23,115	\$7,907	\$132	\$2,600	\$1,914	\$0	\$19,405	\$24,750	\$0	\$0	\$1,074	\$227	\$0	\$135,052
2003	\$62,309	\$24,974	\$8,468	\$131	\$1,202	\$2,283	\$0	\$16,364	\$15,846	\$0	\$0	\$1,558	\$309	\$0	\$133,443
2004	\$67,192	\$26,718	\$8,451	\$131	\$991	\$2,288	\$0	\$30,862	\$2,115	\$0	\$0	\$1,584	\$324	\$0	\$140,657
2005	\$69,163	\$24,819	\$8,846	\$131	\$2,181	\$2,396	\$0	\$13,459	\$263	\$0	\$0	\$1,563	\$309	\$0	\$123,129
2006	\$70,196	\$28,104	\$14,188	\$178	\$3,726	\$2,805	\$2,344	\$15,517	\$980	\$2,268	\$0	\$1,995	\$395	\$1,676	\$144,373
2007	\$71,458	\$31,502	\$15,087	\$206	\$3,928	\$2,969	\$2,201	\$11,063	\$0	\$2,380	\$0	\$2,123	\$421	\$215	\$143,554
2008	\$79,793	\$33,067	\$16,277	\$215	\$4,255	\$3,230	\$2,378	\$15,766	\$0	\$2,587	\$1,519	\$2,274	\$449	\$341	\$162,150
2009	\$83,666	\$36,710	\$17,159	\$227	\$4,994	\$3,466	\$2,741	\$14,002	\$0	\$2,742	\$1,425	\$2,413	\$497	\$0	\$170,042
2010	\$86,061	\$37,690	\$17,120	\$230	\$4,775	\$3,414	\$2,690	\$28,205	\$0	\$840	\$300	\$2,414	\$486	\$870	\$185,095
2011	\$89,534	\$38,809	\$17,151	\$229	\$4,768	\$3,399	\$2,704	\$28,805	\$0	\$0	\$480	\$2,408	\$485	\$0	\$188,771
2012	\$87,570	\$37,543	\$17,062	\$232	\$4,813	\$3,405	\$2,735	\$14,141	\$0	\$3,896	\$0	\$2,413	\$481	\$0	\$174,292

A. Section 5307 and 5340 (UZA)

B. Section 5309 Fixed Guideway Modernization

C. Section 5311 and 5340

D. Rural Transit Assistance Program (RTAP)

E. Job Access and Reverse Commute Program (JARC)

F. Section 5310, Elderly and Disabled

G. Section 5317, New Freedom

H. Section 5309, Bus and Bus Facility

I. New Starts

J. Clean Fuels

K. Alternatives Analysis

L. Section 5303, Metropolitan Planning

M. Section 5304, State Planning

N. Research

C. Historical Motor Fuel Use and Revenues

Table C.1 Historical Motor Fuel Tax Revenues

Year	Prepaid Sales Tax	Excise Tax	Total	Total Interest	Total MFT
2000	\$187,920,677	\$443,409,010	\$631,329,687	\$58,920,507	\$690,250,195
2001	\$222,803,844	\$439,530,593	\$662,334,437	\$64,514,294	\$726,848,731
2002	\$195,534,346	\$452,823,320	\$648,357,666	\$51,588,970	\$699,946,635
2003	\$216,560,421	\$458,675,500	\$675,235,921	\$42,558,064	\$717,793,985
2004	\$234,853,351	\$491,204,057	\$726,057,408	\$28,424,745	\$754,482,153
2005	\$330,537,285	\$485,421,486	\$815,958,771	\$34,981,249	\$850,940,019
2006	\$371,159,976	\$440,152,234	\$811,312,210	\$52,528,795	\$863,841,005
2007	\$468,389,841	\$459,182,803	\$927,572,644	\$55,817,419	\$983,390,062
2008	\$538,155,742	\$452,207,906	\$990,363,648	\$37,166,220	\$1,027,529,868
2009	\$422,825,680	\$454,742,884	\$877,568,564	\$32,852,243	\$910,420,807
2010	\$385,242,172	\$462,535,746	\$847,777,918	\$4,909,599	\$852,687,517
2011	\$479,880,699	\$445,097,904	\$924,978,604	\$9,201,962	\$934,180,566
2012	\$573,047,105	\$435,025,285	\$1,008,072,389	\$5,028,961	\$1,013,101,350

Source: GDOT Office of Finance

D. Historical Georgia General Fund Appropriations

Table D.1 General Fund Appropriations for Transit

Year	General Funds
2005	\$8,737,603
2006	\$4,928,160
2007	\$6,967,660
2008	\$7,499,939
2009	\$6,613,819
2010	\$4,522,596
2011	\$3,721,358
2012	\$2,920,272
2013	\$2,949,962

Source: GDOT, Office of Finance

E. Historical Revenues Used by Local Governments for Highways

Table E.1 Historical Revenues Used by Local Governments for Highways
Thousands

Year	Appropriations from General Funds	Property Taxes and Special Assessments	Other Local Imposts	Miscellaneous	Total
2000	\$328,516	\$1,951	\$664,065	\$62,469	\$1,057,001
2001	\$348,660	\$1,965	\$704,508	\$66,178	\$1,121,311
2002	\$370,267	\$796	\$479,880	\$82,030	\$932,973
2003	\$476,387	\$860	\$518,270	\$13,091	\$1,008,608
2004	\$479,945	\$894	\$409,366	\$13,746	\$903,951
2005	\$506,316	\$100,667	\$234,976	\$77,526	\$919,485
2006	\$552,618	\$106,707	\$251,425	\$83,435	\$994,185
2007	\$552,618	\$106,707	\$251,425	\$83,435	\$994,185
2008	\$786,478	\$20,418	\$170,507	\$7,946	\$985,349
2009	\$1,044,450	\$31,386	\$215,503	\$7,118	\$1,298,457
2010	\$1,080,475	\$32,642	\$224,123	\$7,403	\$1,344,643

Source: Highway Statistics, Table LGF-1.