

CONFORMITY DETERMINATION REPORT AMENDMENT #7

*Atlanta Nonattainment and
Maintenance Area*

In Support of:

The Atlanta Region's Plan

Bartow on the Move

GHMPO

The contents of this report reflect the views of the persons preparing the document and those individuals are responsible for the facts and the accuracy of the data presented herein. The contents of this report do not necessarily reflect the official views or policies of the Department of Transportation of the State of Georgia. This report does not constitute a standard, specification, or regulations.

Table of Contents

Introduction	4
The Region’s Current Attainment Status	4
1997 Ozone Standard	4
2008 Ozone Standard	5
2015 Ozone Standard	5
Statement of Conformity	5
Statement of Conformity – Eight-Hour Ozone Standard	6
Interagency Consultation	6
Public Involvement	7
Fiscal Constraint	7
Latest Planning Assumptions	11
Tolls and Managed Lanes	11
Transit Operating Procedures	11
Fare Changes.....	11
Service Level Changes	11
Future Regional Transit Service	11
Quantitative Analysis	12
Eight-Hour Ozone Standard	12
Results of Analysis - Eight-Hour Ozone Standard.....	12

Attached:

Exhibit 1 – Planning & Modeling Assumptions

Exhibit 2 – Summary of Interagency Meetings

Introduction

This report serves as an addendum to Conformity Determination Report (CDR) for the Atlanta Regional Commission's (ARC) 2016 Atlanta Region's Plan Transportation Element and associated FY 2018-2023 TIP, along with the Cartersville-Bartow County MPO (CBMPO) transportation plan – Bartow on the Move. This document is being updated to reflect changes to emissions as a result of modifications to project timing and scope associated with the seventh amendment of the 2016 Atlanta Region's Plan as well as modifications to Bartow on the Move.

Since the development of the CDR associated with amendment #3, in fall 2017, there have been changes to transportation conformity requirements in the Atlanta region. The region remains a maintenance area for the 2008 eight-hour ozone standard, but also is now a nonattainment area for the 2015 eight-hour ozone standard in 7 counties (Bartow, Clayton, Cobb, DeKalb, Fulton, Gwinnett, and Henry). A February 16, 2018 court ruling (*South Coast Air Quality Management District v. EPA*, No. 15-1115 (D.C. Cir. 2018)), determined that areas like Atlanta are considered partial orphan maintenance areas for the 1997 eight-hour ozone standard as well with transportation conformity required, but according to EPA's *Transportation Conformity Guidance for the South Coast II Court Decision* issued on November 29, 2018, no modeling is required in accordance with 93.109(c).

Appropriate sections of this addendum have been updated to reflect the latest planning assumptions, project information and emissions results. For the full body of text, see the Atlanta Region's Plan documentation available on ARC's website at <http://atlantaregional.org/wp-content/uploads/atlanta-region-s-plan-cdr-full-v3.pdf>. The addendum associated with the 3rd amendment of the CDR can be found here: <http://documents.atlantaregional.com/The-Atlanta-Region-s-Plan/rtp/Conformity-Determination-Report.pdf>

The Region's Current Attainment Status

The following section describes changes to the region's attainment status since the documentation in the full Conformity Determination Report was released in February, 2016.

1997 Ozone Standard

On December 2, 2013, EPA redesignated the Atlanta area as a maintenance area, effective January 2, 2014. When the 2008 eight-hour ozone standard was finalized and designations made, EPA then pursued the revocation of the 1997 eight-hour standard along with conformity requirements pertaining to this standard, through its "2008 Implementation of the 2008 National Ambient Air Quality Standards (NAAQS) for Ozone: State Implementation Plan (SIP) Requirements", which was finalized and effective April 6, 2015. Transportation conformity for the 1997 eight-hour ozone standard was no longer applied. A February 16, 2018 court ruling (*South Coast Air Quality Management District v. EPA*, No. 15-1115 (D.C. Cir. 2018)), vacated the 2008 Implementation Rule with regards to revoking conformity for areas like Atlanta, and required conformity be conducted in those areas not covered by the 2008 and 2015 standards. Pursuant to EPA Guidance released on November 29, 2018 (EPA-420-B-18-050) titled "Transportation Conformity Guidance for the South Coast II Court Decision" emissions modeling (i.e. regional emissions analysis) is not required to demonstrate conformity for the 1997 eight-hour ozone standard (see 40 CFR 93.109(c)). As such, no model planning assumptions are prepared to demonstrate

conformity. Instead, this report states that requirements to meet the 1997 standard are in tandem with the 2008 and 2015 eight-hour ozone standards. This includes the fulfillment by all counties in the 1997 eight-hour ozone NAAQS 20-county maintenance area of conformity requirements through interagency consultation, assessing all projects as exempt or non-exempt, identifying the status of TCMs (also fulfilling planning assumptions), and asserting financial constraint.

2008 Ozone Standard

On May 3, 2016 EPA ruled on a clean data determination for the 2008 ozone standard effective on August 15, 2016. This determination indicated that the Atlanta region had met the 2008 ozone standard for the three summers from 2013-2015. One day later, on May 4, 2016 the region was reclassified from a marginal to a moderate nonattainment area for failure to meet the ozone standard before July 20, 2015.

On July 18, 2016, the Georgia Environmental Protection Division (GA EPD) submitted a Maintenance Plan to USEPA. This document shows the state's plan for continuing to attain the 2008 ozone standard into the future. Effective June 2, 2017, EPA has approved the State's plan and the associated Motor Vehicle Emissions Budgets (MVEBs).¹ This action redesignated the Atlanta region as a maintenance area.

2015 Ozone Standard

On June 4, 2018, EPA designated the Atlanta area as nonattainment for the 2015 eight-hour ozone standard for the following counties: Bartow, Clayton, Cobb, DeKalb, Fulton, Gwinnett, and Henry. The final rule was effective August 3, 2018. As a result a conformity determination was required for the Atlanta area within 12 months and was fulfilled with Amendment #6 where a conformity determination was made.

Statement of Conformity

An updated transportation conformity analysis is required under the eight-hour ozone standard for both MPO RTPs and TIPs as a result of numerous changes to regionally significant projects. ARC, CBMPO, and GHMPO are making changes to the timing and capacity of nonexempt regionally significant projects in this update.

The purpose of this Conformity Determination Report is to document compliance with the relevant elements of the Clean Air Act (Subsections 176(c) (1) (2) and (3)), the Transportation Conformity Rule (40 CFR Parts 51 and 93) and Metropolitan Planning Regulations (23 CFR Part 450) by demonstrating that the Atlanta Region's Plan RTP (including the FY 2018-2023 TIP), Bartow on the Move, and the GHMPO TIP conform to the purpose of the State Implementation Plan (SIP) for the eight-hour ozone standard. ARC has conducted the conformity determination for the entire ozone maintenance area, encompassing both MPOs and part of the state outside the boundary of the MPOs.

The conclusion of the conformity analyses, documented below, indicates that the ARC, CBMPO, and GHMPO TIPs and RTPs support the broad intentions of the Clean Air Act for achieving and maintaining the NAAQS for ozone as outlined in the Atlanta area SIPs.

¹ 82 FR 25523

Statement of Conformity – Eight-Hour Ozone Standard

For the eight-hour ozone conformity analysis the MVEB test is required to demonstrate conformity. The latest approved MVEBs applicable to conformity under the eight-hour ozone standard were established by GA EPD as part of Georgia’s 2008 Ozone Maintenance SIP. These budgets differ from those used in the main body of the CDR and reflect the latest planning assumptions and approved SIPs.

Ozone is not emitted directly by any source; it is formed when NO_x and Volatile Organic Compounds (VOC) combine in the atmosphere in the presence of sunlight. Therefore, air pollution control strategies are aimed at controlling NO_x and VOC. Budgets are established for these two pollutants instead of ozone directly. The transportation conformity analysis for the 2008 15-county eight-hour ozone maintenance area and the 2015 7-county eight-hour ozone nonattainment area was performed with the MVEB Test using the approved budgets outlined in Table 1.

Table 1: Eight-Hour Ozone Standard Conformity Tests

Establishing SIP	Effective Date	Years	MVEBs
Georgia’s 2008 Ozone Maintenance SIP	June 2, 2017	All conformity years prior to 2030	NO _x – 170.15 tons/day VOC – 81.76 tons/day
Georgia’s 2008 Ozone Maintenance SIP	June 2, 2017	All conformity years 2030 and later	NO _x – 58 tons/day VOC – 52 tons/day

The results of the emissions analysis for the Atlanta Region’s Plan RTP and the CBMPO RTP demonstrate adherence to the established MVEBs. The conformity analysis was performed for the years 2020, 2030 and 2040. The analysis years meet the requirements for specific horizon years that the transportation plan must reflect as specified in 93.106(a)(1) of the Transportation Conformity Rule and specific analysis years that the regional emissions analysis must reflect per Section 93.118(b) and 93.118(d)(2).

Upon completion of the technical conformity analysis, ARC staff have determined that the Atlanta Region’s Plan RTP and Bartow on the Move and associated TIPs together demonstrate compliance with the Clean Air Act as amended in 1990 in accordance with all conformity requirements as detailed in 40 CFR Parts 51 and 93 (the Transportation Conformity Rule) and 23 CFR Part 450 (the Metropolitan Planning Regulations as established in MAP-21).

Interagency Consultation

The draft Atlanta Region’s Plan Amendment #7 documents were made available to ARC planning partners through the TCC and the TAQC committees in March 2019, to allow for time to comment prior to formal adoption or publication, in accordance with 93.105(b)(2)(iii) of the Transportation Conformity Rule. Documentation was provided to interagency consultation group via email ahead of the initiation of public comment for ARC, CBMPO, and GHMPO on March 25, 2019. Final Atlanta Region’s Plan RTP/FY 2018-

2023 TIP Amendment #7 documents are anticipated to be provided on May 10, 2019, upon approval of the update, fulfilling the requirements of 40 CFR 93.105(c)(7).

Public Involvement

The official public comment period for the Atlanta Region's Plan RTP Amendment/FY 2018-2023 TIP Update was held between April 4 – April 18, 2019. ARC's public involvement process as detailed in the Regional Community Engagement Plan for TIP amendments includes specific outreach strategies to share project information with the public:

- *14-Day Public Comment Period:* A public review and comment period ran from April 4, 2019 through midnight April 18, 2019. ARC must receive comments during this timeframe in order to be considered in the official record of comments. A summary of all comments received during the period and responses to the comments was presented to ARC's technical and policy committees and the ARC Board for their consideration before taking action on the amendment.
- *Project Summary:* A project summary was prepared to provide the public with a user-friendly explanation of the most important elements of the project and is accessible on the ARC website.
- ARC staff was available for questions, comments and speaking engagements by contacting 470-378-1563 or transportation@atlantaregional.com
- ARC hosted a public hearing at ARC's offices before the Transportation Coordinating Committee on April 5, 2019.
- *Public Comments:* Following completion of the public comment period, ARC prepared a Public Comment Report, which summarizes all stakeholder and public outreach and comments. Any comments received and corresponding responses were posted on the TIP Amendment webpage.

Fiscal Constraint

This amendment was undertaken to accomplish six key outcomes:

1. Reflect programming and financial details from the Major Mobility Investment Program (MMIP)
2. Inclusion of new bridge replacement and intersection projects within the TIP period
3. Modifications or additions to other long range capacity projects
4. Adjust financial information for existing TIP projects that exceed the threshold of processing as an administrative modification
5. Update financial forecasting for federal, state and local fund sources
6. Incorporate changes to the travel demand model coding

The MMIP are 11 interchange and managed lane projects around the state which are being advanced for construction within the next ten years. Nine of those projects are either totally or partially within the Atlanta region. The projects are being advanced largely as a result of additional funding available at the federal level, through the FAST Act which was signed into law in December 2015, and at the state level, courtesy of the Transportation Funding Act of 2015. Both laws increased the amount of transportation funding available to the state and the region. In addition, several local jurisdictions have successfully passed referenda to increase local sales tax to fund additional transportation improvements.

The magnitude of changes to federal, state and local funding levels, combined with corresponding changes to project costs and implementation schedules, requires redemonstrating fiscal constraint for the plan. Tables 2 and 3 below were developed to reflect both revenue and project cost/schedule changes made under this RTP Amendment / TIP Update.

Table 2: FY 2018-2023 Yearly TIP Balances – Federal Highway Administration Funds (\$YOE)

FHWA Program (See Note 4)	2018	2019	2020	2021	2022 See Note 2	2023 See Note 2	LR 2024-2030	LR 2031-2040	Total
(CMAQ)	\$ 16,025,339	\$ 27,201,688	\$ 32,026,376	\$ 28,883,963	\$ 34,163,945	\$ 29,000,000	\$ -	\$ -	\$ 167,301,311
TAP - Urban (>200K) (ARC)	\$ 7,000,000	\$ 7,936,000	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	\$ -	\$ -	\$ 42,936,000
TAP - Statewide (Recreational Trails Program)	\$ 1,000,000	\$ 466,400	\$ 466,400	\$ 466,400	\$ 466,400	\$ 466,400	\$ -	\$ -	\$ 3,332,000
Highway Safety Improvement Program (HSIP)	\$ 85,500,000	\$ 37,288,000	\$ 37,288,000	\$ 37,288,000	\$ 37,288,000	\$ 37,288,000	\$ -	\$ -	\$ 271,940,000
<i>Railway Highway Hazard Elimination Setaside</i>	\$ 4,500,000	\$ 1,864,800	\$ 1,864,800	\$ 1,864,800	\$ 1,864,800	\$ 1,864,800	\$ -	\$ -	\$ 13,824,000
<i>Railway Highway Protective Devices Setaside</i>	\$ 3,600,000	\$ 1,491,200	\$ 1,491,200	\$ 1,491,200	\$ 1,491,200	\$ 1,491,200	\$ -	\$ -	\$ 11,056,000
National Highway Freight Program (NHFP)	\$ 38,354,907	\$ 43,293,257	\$ 40,323,538	\$ 40,726,733	\$ 18,359,670	\$ -	\$ -	\$ -	\$ 181,058,105
National Highway Performance Program (NHPP)	\$ 357,231,973	\$ 291,477,994	\$ 284,322,960	\$ 227,291,778	\$ 316,652,266	\$ 431,025,732	\$ -	\$ -	\$ 1,908,002,703
STBG - Statewide Flexible (GDOT)	\$ 120,437,754	\$ 101,407,165	\$ 114,210,521	\$ 90,097,210	\$ 118,805,155	\$ 98,705,353	\$ -	\$ -	\$ 643,663,158
<i>Enhancements Setaside</i>	\$ 15,200,000	\$ 7,084,800	\$ 7,084,800	\$ 8,154,800	\$ 7,084,800	\$ 7,084,800	\$ -	\$ -	\$ 51,694,000
<i>Off-System Bridge Setaside</i>	\$ 10,095,200	\$ 15,094,064	\$ 9,695,200	\$ 10,450,400	\$ 9,695,200	\$ 17,423,200	\$ -	\$ -	\$ 72,453,264
STBG - Urban (>200K) (ARC)	\$ 79,613,894	\$ 82,475,701	\$ 90,161,893	\$ 80,652,523	\$ 93,121,449	\$ 104,905,799	\$ -	\$ -	\$ 530,931,259
Highway Infrastructure	\$ 2,800,000	\$ 25,340,861	\$ 3,400,000	\$ 4,320,000	\$ -	\$ -	\$ -	\$ -	\$ 35,860,861
General Federal Aid 2024-2040 (Non-MMIP Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,210,812,859	\$ 6,193,192,865	\$ 10,404,005,724
Total Project Costs (Except Long Range MMIP)	\$ 741,359,067	\$ 642,421,930	\$ 629,335,688	\$ 538,687,807	\$ 645,992,885	\$ 736,255,284	\$ 4,210,812,859	\$ 6,193,192,865	\$ 14,338,058,385
Year of Expenditure (YOE) Multiplier	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.1773	1.3860	
Total YOE Project Costs (Except Long Range MMIP)	\$ 741,359,067	\$ 642,421,930	\$ 629,335,688	\$ 538,687,807	\$ 645,992,885	\$ 736,255,284	\$ 4,957,328,048	\$ 8,583,769,396	\$ 17,475,150,105
YOE Long Range MMIP Project Costs See Note 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,204,343,200	\$ 3,047,280,000	\$ 5,251,623,200
Total Project Costs	\$ 741,359,067	\$ 642,421,930	\$ 629,335,688	\$ 538,687,807	\$ 645,992,885	\$ 736,255,284	\$ 7,161,671,248	\$ 11,631,049,396	\$ 22,726,773,305
ESTIMATED AGGREGATE REVENUE (FROM TABLE E.4)									
Estimated FHWA Revenue (YOE) See Note 1	\$ 722,089,681	\$ 766,502,379	\$ 787,663,544	\$ 841,137,612	\$ 894,974,430	\$ 917,844,332	\$ 6,886,134,630	\$ 11,355,585,014	\$ 23,171,931,622
NET REVENUES MINUS COSTS									
Running Total Revenue (YOE) See Note 1	\$ 722,089,681	\$ 1,488,592,060	\$ 2,276,255,603	\$ 3,117,393,215	\$ 4,012,367,645	\$ 4,930,211,977	\$ 11,816,346,607	\$ 23,171,931,622	\$ 23,171,931,622
Running Total Cost (YOE)	\$ 741,359,067	\$ 1,383,780,997	\$ 2,013,116,685	\$ 2,551,804,492	\$ 3,197,797,377	\$ 3,934,052,661	\$ 11,095,723,909	\$ 22,726,773,305	\$ 22,726,773,305
Running Total Balance (YOE)	\$ (19,269,386)	\$ 104,811,063	\$ 263,138,918	\$ 565,588,723	\$ 814,570,268	\$ 996,159,316	\$ 720,622,698	\$ 445,158,317	\$ 445,158,317

(1) Note that all revenue estimates are based on assumptions about the average share of statewide revenues which will be directed to programs and projects in the Atlanta region. Actual amounts in any given year will fluctuate from these averages, as evidenced by the cost of projects programmed within the TIP period. GDOT has reviewed all TIP project commitments and confirms that financial resources are available to ensure no shortfall actually occurs within any individual fiscal year. Over the four year federally required TIP period (FY 2018-2021), the program is balanced and is less than revenue estimates.

(2) Fiscal years 2022 and 2023 are not considered to be part of the federally required four year TIP. For financial constraint purposes, project costs and revenue estimates are presented for information purposes only.

(3) For purposes of developing financing packages for negotiations with private sector partners, GDOT assumes a 3% to 4% annual cost inflation factor for MMIP projects, which is higher than the 2.2% long range inflation rate used for other RTP projects. For MMIP projects only, the long-range project list shows YOE costs rather than current year costs.

(4) Italicized programs denote those which are funded from setasides established by GDOT at the statewide level. The amounts shown are in addition to commitments made from the original source program as listed above the setaside line items.

Table 3: FY 2018-2023 Yearly TIP Balances – Federal Transit Administration (\$YOE)

FTA Program	2018	2019	2020	2021	2022 <i>See Note 2</i>	2023 <i>See Note 2</i>	LR 2024-2030	LR 2031-2040	Total
Bus - New (80/20)	\$ 1,550,000	\$ 1,550,000	\$ -	\$ -	\$ -	\$ -	\$ 10,850,000	\$ 15,500,000	\$ 29,450,000
Bus and Bus Facilities Program	\$ 18,294,866	\$ 8,124,104	\$ 5,415,512	\$ 4,541,343	\$ 4,541,343	\$ 4,541,343	\$ 31,789,401	\$ 54,160,000	\$ 131,407,912
Clean Fuels Formula Program	\$ 3,700,000	\$ 3,700,000	\$ -	\$ -	\$ -	\$ -	\$ 25,900,000	\$ 37,000,000	\$ 70,300,000
Enhanced Mobility of Seniors and Individuals with Disabilities	\$ 3,131,351	\$ 1,220,796	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000	\$ 8,400,000	\$ 12,000,000	\$ 29,552,147
New Starts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 163,188,000	\$ 2,877,171,161	\$ 3,040,359,161
State of Good Repair Grants	\$ 62,024,120	\$ 53,011,055	\$ 48,591,797	\$ 48,591,797	\$ 48,591,797	\$ 48,591,797	\$ 437,373,000	\$ 485,970,000	\$ 1,232,745,363
Transit Nonurbanized Area Formula	\$ 1,838,321	\$ 760,000	\$ 760,000	\$ 760,000	\$ 760,000	\$ 760,000	\$ 10,320,000	\$ 7,600,000	\$ 23,558,321
Transit Urbanized Area Formula Program	\$ 66,997,301	\$ 69,047,037	\$ 62,686,800	\$ 62,686,800	\$ 62,686,800	\$ 62,686,800	\$ 438,807,600	\$ 650,000,000	\$ 1,475,599,138
Total Project Costs (CY)	\$ 157,535,959	\$ 137,412,992	\$ 118,654,109	\$ 117,779,940	\$ 117,779,940	\$ 117,779,940	\$ 1,126,628,001	\$ 4,139,401,161	\$ 6,032,972,042
Year of Expenditure Multiplier (Formula Programs)	1.0000	1.0000	1.0140	1.0282	1.0426	1.0572	1.1099	1.2319	
Year of Expenditure Multiplier (New Starts Capital)	N/A	N/A	N/A	N/A	N/A	N/A	1.1773	1.3860	
Formula Program Costs (YOE)	\$ 157,535,959	\$ 137,412,992	\$ 120,315,267	\$ 121,100,863	\$ 122,796,275	\$ 124,515,423	\$ 1,069,324,054	\$ 1,554,919,188	\$ 3,407,920,022
New Starts Capital Project Costs (YOE)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 192,118,832	\$ 3,987,761,127	\$ 4,179,879,959
Total Project Costs (YOE)	\$ 157,535,959	\$ 137,412,992	\$ 120,315,267	\$ 121,100,863	\$ 122,796,275	\$ 124,515,423	\$ 1,261,442,886	\$ 5,542,680,316	\$ 7,587,799,981

ESTIMATED AGGREGATE REVENUE (FROM TABLES E.5 AND E.6)

Estimated FTA Formula Revenue (YOE) <i>See Note 1</i>	\$ 131,681,004	\$ 133,524,538	\$ 135,393,882	\$ 137,289,396	\$ 139,211,447	\$ 141,160,408	\$ 1,045,034,530	\$ 1,680,867,804	\$ 3,544,163,008
Estimated FTA New Starts Revenue (YOE) <i>See Note 1</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000,000	\$ 4,200,616,082	\$ 4,400,616,082
Estimated Total FTA Revenue (YOE)	\$ 131,681,004	\$ 133,524,538	\$ 135,393,882	\$ 137,289,396	\$ 139,211,447	\$ 141,160,408	\$ 1,245,034,530	\$ 5,881,483,886	\$ 7,944,779,090

NET REVENUES MINUS COSTS

Running Total Revenue (YOE)	\$ 131,681,004	\$ 265,205,542	\$ 400,599,423	\$ 537,888,819	\$ 677,100,267	\$ 818,260,674	\$ 2,063,295,204	\$ 7,944,779,090	\$ 7,944,779,090
Running Total Cost (YOE)	\$ 157,535,959	\$ 294,948,951	\$ 415,264,218	\$ 536,365,081	\$ 659,161,356	\$ 783,676,779	\$ 2,045,119,666	\$ 7,587,799,981	\$ 7,587,799,981
Running Total Balance (YOE)	\$ (25,854,955)	\$ (29,743,409)	\$ (14,664,794)	\$ 1,523,739	\$ 17,938,911	\$ 34,583,895	\$ 18,175,539	\$ 356,979,109	\$ 356,979,109

(1) May not match data from Table E.5. Project and program expenditures by transit agency recipients are estimates based on historical spending levels and previously encumbered commitments. Line items will be adjusted periodically via future amendment processes to match actual allocation amounts each year. Over the four year federally required TIP period (FY 2018-2021), the program is balanced.

(2) Fiscal years 2022 and 2023 are not considered to be part of the federally required four year TIP. For financial constraint purposes, project costs and revenue estimates are presented for information purposes only.

(3) Initial years of the TIP period may reflect carryover balances from previous years which were not obligated in grants during the year of apportionment. This will inflate costs assigned to that year and may result in the appearance of a funding shortfall since revenues include that year's actual apportionment. Refer to Appendix C of the RTP documentation for more information on how carryover balances are managed.

Latest Planning Assumptions

ARC updates planning assumptions including (but not limited to) population, employment, socioeconomic variables, and vehicle miles traveled (VMT) on a recurring basis. A detailed listing of the planning assumptions for this conformity analysis is outlined in Exhibit 1. These documents were submitted to the interagency consultation group in accordance with Section 93.105(c)(1)(i) of the Transportation Conformity Rule which requires interagency review of the model(s) and associated methods and assumptions used in the regional emissions analysis. Final interagency approval was granted on February 1, 2018.

Tolls and Managed Lanes

There are no programmed changes to tolled or managed facilities are part of this amendment. A system of managed tolled lanes is programmed throughout the region by the year 2040.

Transit Operating Procedures

Since the adoption of The Atlanta Region's Plan FY 2018-2023 Transportation Improvement Program (TIP) Amendment #5 in May 2018, there were changes to the anticipated service levels of transit in the region. Those changes are outlined below.

Fare Changes

No changes to transit fares in the region are incorporated into this amendment.

Service Level Changes

MARTA implemented three service modifications over the past year with changes to service levels and routing to over half of MARTA's bus routes. Some of the bus service enhancements outlined in More MARTA, which was passed by the City of Atlanta voters in November 2016, was implemented during 2018. Over a dozen routes were branded Community Circulators as well as improved service on existing routes. Overall, there was a net gain of seven MARTA bus routes during 2018. The XPRESS program expanded by two routes in 2018 with the addition of service between Town Center and Sugarloaf Mills to Perimeter Center. In late 2018, CobbLinc changed the routing and headways of the Cumberland Circulators in addition to dropping the fare. In June 2018, GCT added a new local bus route that services the Georgia Gwinnett College in Lawrenceville. Henry County began fixed route service in 2018 that connects the northern part of the county with the XPRESS Park and Rides in Stockbridge.

Future Regional Transit Service

MARTA was awarded a 2017 TIGER Grant for the Summerhill BRT which was proposed to run from the Georgia State Stadium to the Arts Center MARTA rail station.

Quantitative Analysis

The regional emissions analysis used to demonstrate conformity for the eight-hour ozone standard relies on a methodology which utilizes ARC's 20-county regional activity-based travel demand model. Updated travel model networks were created for each analysis year (2020, 2030 and 2040) to reflect projects as listed in the Atlanta Region's Plan Amendment #7 and the Bartow on the Move RTP/TIP update.

Eight-Hour Ozone Standard

Results of Analysis - Eight-Hour Ozone Standard

The results of the emissions analysis for the eight-hour ozone maintenance area demonstrate adherence to the level of emissions necessary to meet the MVEBs contained in Georgia's 2008 Ozone Maintenance SIP. Table 4 and Figure 1 document the VOC and NO_x emissions for each analysis year, as compared to the applicable MVEBs.

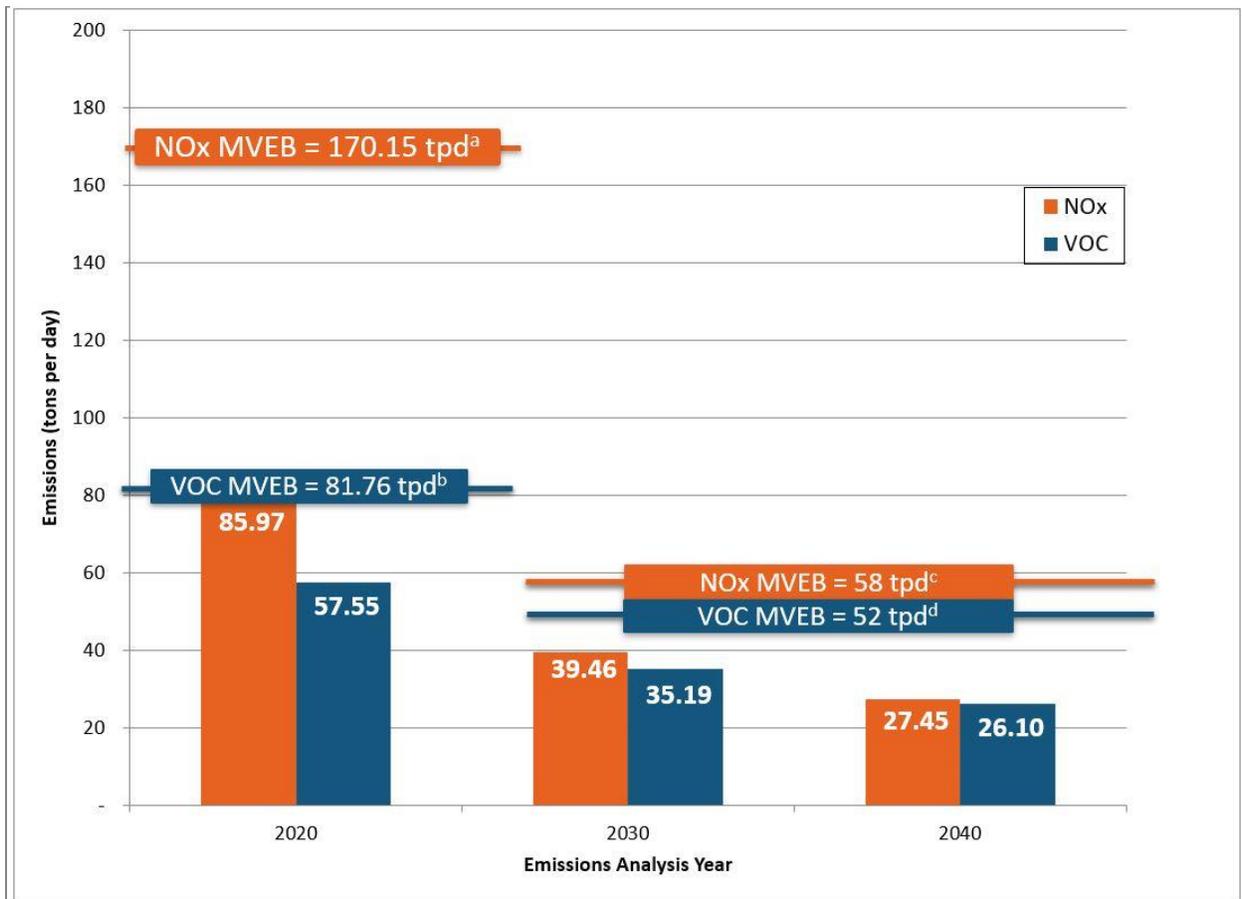
To maintain consistency between procedures used to estimate the motor vehicle emission budgets included in the ozone SIPs and the conformity analysis, ARC in consultation with GA EPD applies an off-model adjustment to emission results for the 13-county area to reflect an emissions debit resulting from a program to exempt senior citizens from the Inspection and Maintenance (I/M) program. This program was initiated by the Georgia General Assembly in 1996 (O.C.G.A Section 12-9). It exempts from emission testing vehicles ten years old or older driven fewer than 5,000 miles per year and owned by persons 65 years of age or older.

It was estimated that this senior I/M exemption increased VOC and NO_x emissions by 0.05 and 0.03 tons per day respectively. These amounts are reflected in Table 6. This off-model adjustment is conservatively high and was applied to the emission results for VOC and NO_x to produce final emission results for each analysis year in the 13-county area where the I/M program is in place. The same credit loss is assumed for each analysis year.

Table 4: 15-County Motor Vehicle Emissions Budget Test – Eight-Hour Ozone Standard

Conformity Year / MVEB Plan	NO _x (tons/day)	VOC (tons/day)
Georgia's 2008 Ozone Maintenance SIP Budgets for years before 2030	170.15	81.76
2020 Emissions Total	87.02	59.57
Georgia's 2008 Ozone Maintenance SIP Budgets for years 2030 or later	58	52
2030 Emissions Total	39.46	35.78
2040 Emissions Total	27.43	26.60

Figure 1: 15-County Motor Vehicle Emissions Budget Test – Eight-Hour Ozone Standard



- a – Georgia’s 2008 Ozone Maintenance SIP Budgets for years before 2030 NO_x Budget
- b – Georgia’s 2008 Ozone Maintenance SIP Budgets for years before 2030 VOC Budget
- c – Georgia’s 2008 Ozone Maintenance SIP Budgets for years 2030 or later NO_x Budget
- d – Georgia’s 2008 Ozone Maintenance SIP Budgets for years 2030 or later VOC Budget

EXHIBIT 1
PLANNING ASSUMPTIONS

2015 EIGHT-HOUR OZONE STANDARD PLANNING ASSUMPTIONS & MODELING INPUTS

As mentioned in the Conformity Determination Report Amendment #7, ARC satisfied the trigger to demonstrate conformity for the 2015 eight-hour ozone NAAQS by August 3, 2019 with U.S. DOT approval of Amendment #6 in June 2018. Since the 2015 ozone NAAQS nonattainment area shrank in size, pursuant to §93.109(c)(2)(ii)(B) a demonstration of conformity to the older standard with a larger geography meets the requirement for the smaller nonattainment area until such a time that new budgets are established.

2008 EIGHT-HOUR OZONE STANDARD PLANNING ASSUMPTIONS & MODELING INPUTS

General Methods and Assumptions

- 1) Modeling Methodology: Use the MOVES model in inventory mode to determine the total NO_x and VOC emissions in the 15-county maintenance area.
- 2) Analysis Years: 2020, 2030, 2040
- 3) Conformity Test
 - a. Motor Vehicle Emission Budget (MVEB) Test¹
 - i. For years prior to 2030, 2014 MVEBs are used:
 1. NO_x: 170.15 tpd
 2. VOC: 81.76 tpd
 - ii. For years 2030 and later, 2030 MVEBs are used:
 1. NO_x: 58 tpd
 2. VOC: 52 tpd
- 4) Modeling Start Date: January 2019. This start date is defined by the ARC as the initiation of the first model run for plan amendment/update.

Travel Demand Modeling Assumptions

- 1) Calibration Year: 2010 (with some 2015 interim validations and benchmarking thereafter)
 - a. Model validated to the year 2010 using a comparison between estimated volumes and observed counts. See Appendix A for validation/calibration information.
- 2) Social/Economic Data: Same as used for the Atlanta Region's Plan update. See Appendix B.
- 3) ARC's Activity-Based Travel Model (ABM) is the basis for these runs. See Appendix C for an overview of ABM specifications.

Emissions Modeling Assumptions

- 1) Emissions Model: MOVES2014a – Database: movesdb20151028
 - a. Emissions Process – use MOVES in inventory mode for a July weekday
 - i. For the years 2020, 2030 and 2040 modeled travel data is used to calculate emissions

¹ 2014 and 2030 MVEBs established as part of Georgia's 2008 Ozone Maintenance State Implementation Plan for the Atlanta 8-Hour Ozone Nonattainment Area, effective June 2, 2017

-
- b. Run separately for the 13-county and 2-county portions of the nonattainment area²
 - i. 13-county area activity, vehicle population and other inputs are assigned to Fulton County while running MOVES
 - ii. 2-county area activity, vehicle population and other inputs are assigned to Bartow County while running MOVES
- 2) MOVES Inputs
- a. Road Type Distribution – Processed from the travel demand model, GDOT HPMS counts and MOVES defaults. Summarizes VMT fraction by road type and source type for the 13 and 2 counties separately.
 - b. Source Type Population
 - i. Started with 2017 R.L. Polk & Co. registration data for the Atlanta nonattainment counties
 - ii. Future analysis year data is grown from 2017 based on the ratio of MPO population estimates
 - iii. Since the population of vehicle type 62 (combination long-haul trucks) can easily be underrepresented in areas with lots of through traffic, the vehicle population for MOVES source type 62 was revised using MOVES default VMT/VPOP ratios and VMT for HPMS type 60 data
 - c. Vehicle Type VMT
 - i. HPMS VTypeYear - Processed from the travel demand model, GDOT HPMS Counts, and an EPA daily to annual VMT converter. Assigns total annual VMT by HPMS vehicle type.
 - ii. Month VMT Fraction: MOVES defaults
 - iii. Day VMT Fraction: MOVES defaults
 - iv. Hour VMT Fraction: Derived from the travel demand model by source and road type. The fractions are determined separately for the 13 and 2 county areas.
 - d. I/M Programs – Applied to the 13-county area only (See Appendix D)
 - e. Age Distribution – Age data was derived from 2017 R.L. Polk & Co. registration data for the 13 and 2 counties separately for all vehicle types, except HDV8b (Source type 62) where MOVES defaults were used
 - f. Average Speed Distribution – Processed from the travel demand model with HPMS VMT adjustment factors applied. Calculates VHT by hour by speed bin by source. The distribution is determined separately for the 13 and 2 county areas.
 - g. Ramp Fraction – Processed from the travel demand model. Calculates VHT by freeway and ramps by area type. The fraction is determined separately for the 13 and 2 county areas.

² For the 2008 eight-hour ozone NAAQS there are two sets of MOVES input files, one for the 13 counties that make up the former one-hour ozone nonattainment area in which a specific set of emission control measures is in place, and one for the 2 remaining ring counties

-
- h. Fuel – MOVES2014 defaults after 2015 do not match local fuel due to the removal/modification of Georgia summer fuel in the 45 county Atlanta region effective Oct 1, 2015
 - i. Tier 3 Low Sulfur fuel (10ppm, 80ppm refinery gate and 95ppm downstream cap) for all counties
 - ii. Summer Fuel reclassification
 - 1. 13 counties –
 - a. Low Federal RVP summer requirements (June 1-Sept 15) for “designated volatility nonattainment areas” (40 CFR 80.27(a)(2)(ii))
 - b. Fuel region ID 170000000 kept but fuel formulations reflect region 178000000 for any model years after 2015
 - 2. 2 counties –
 - a. Standard Federal RVP summer requirements (June 1-Sept 15) for “designated volatility attainment areas” (40 CFR 80.27(a)(2)(i))
 - b. Fuel region ID 170000000 kept but fuel formulations reflect region 100000000 for any model years after 2015
 - iii. Ethanol – The current assumption is an increasing percentage of ethanol fuel
 - 1. 2% in 2014, 28% in 2030 and 21% in 2040
 - 2. The rest of the gasoline blends with a larger percent of E15 with time:
 - a. 0.8% in 2014, 19% in 2030 and 23% in 2050
 - 3. Remainder is E10
 - iv. Volatility waiver for E10 allows 1.0 psi RVP increase, but not in E15
 - i. Meteorology – July 2014 weather for Hartsfield-Jackson Atlanta International Airport was used for this analysis consistent with the 2008 Eight Hour Ozone Maintenance SIP
 - j. Starts – The regional travel demand model determines the number of trip starts in each of the 13 and 2 county areas. Applies only to the trips per day input. Defaults used for the rest of the start inputs.
 - k. Hotelling – MOVES defaults
- 3) VMT HPMS Adjustment Factors
 - a. Calculated for the year 2010 (See Appendix E)
 - b. HPMS adjustment in base year of calibration in accordance with Section 93.122(b)(3) of the Transportation Conformity Rule which recommends that HPMS adjustment factors be developed to reconcile travel model estimates of VMT in base year of validation to HPMS estimates for the same period
 - c. Summer (seasonal) adjustment to convert from average annual VMT to summer-season VMT³
 - d. Factors applied to VMT estimates generated by ARC travel demand model for 13-county portion and 2-county portion of 20-county modeling domain, separately

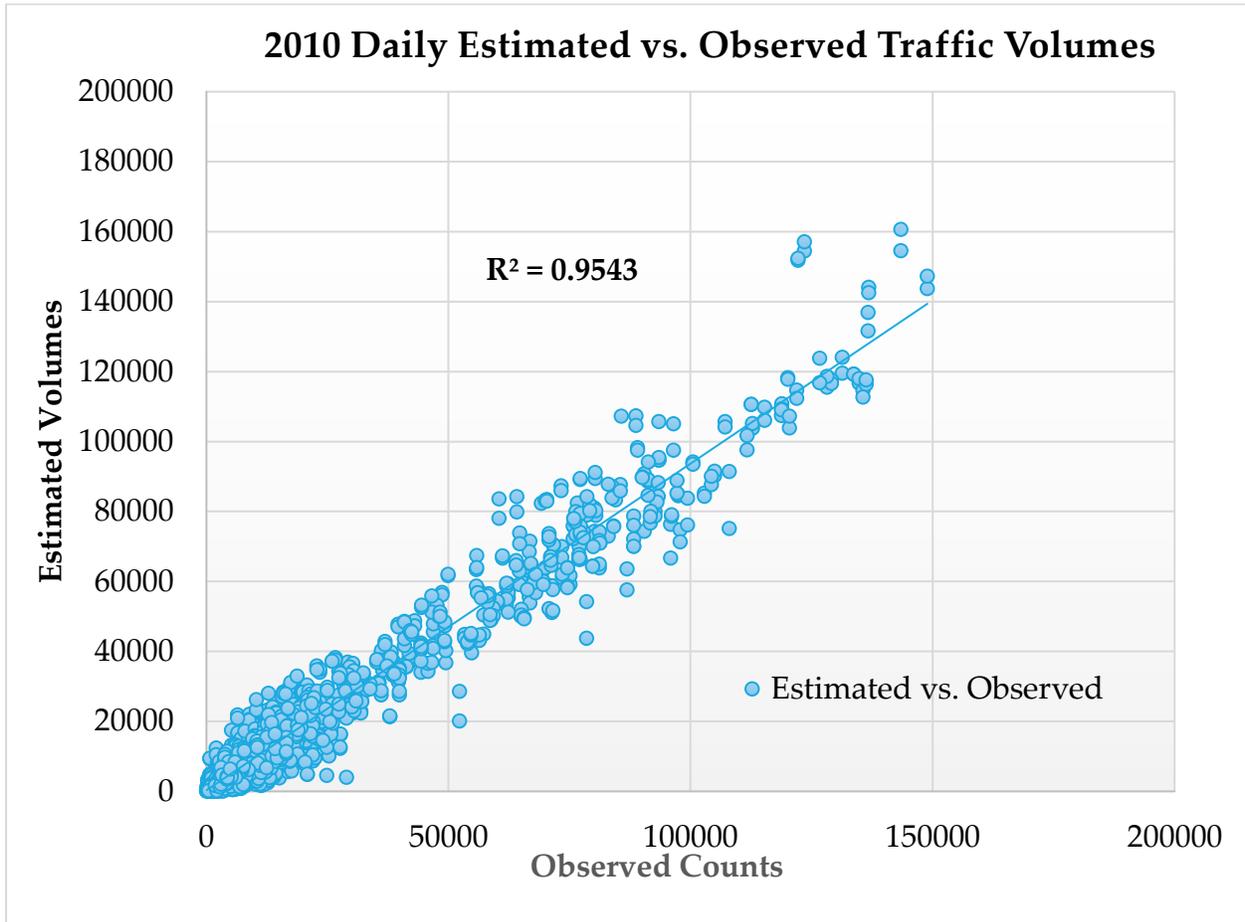
³ *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources*, Section 3.4.2.6, EPA420-R-92-009, USEPA Office of Air and Radiation, Office of Mobile Sources, 1992.

-
- e. Factors aggregated up to MOVES road types from base HPMS functional classifications
 - 4) Off-Model Calculations
 - a. Senior I/M Exemption (emissions debit)
 - i. The Senior I/M Exemption calculated for year 2002 is conservatively high and will be added to the regional emission inventories for each analysis year
 - 5) TCMs
 - a. No additional credit is taken in the emissions modeling process for SIP TCMs
 - b. A full list of implemented TCMs is attached as Appendix F

1997 EIGHT-HOUR OZONE STANDARD PLANNING ASSUMPTIONS & MODELING INPUTS

Pursuant to EPA Guidance released on November 29, 2018 (EPA-420-B-18-050) titled “Transportation Conformity Guidance for the *South Coast II* Court Decision” emissions modeling (i.e. regional emissions analysis) is not required to demonstrate conformity for the 1997 eight-hour ozone standard (see 40 CFR 93.109(c)). As such, no planning assumptions are prepared to demonstrate conformity. Instead, the Conformity Determination Report will document the requirements to meet the 1997 standard in tandem with the 2008 and 2015 eight-hour ozone standards.

APPENDIX A – Model Validation



APPENDIX B – Socioeconomic Data for the Travel Model

ARC periodically revises its population and employment forecasts based on best available current information. Each revision is a multi-step process. First, new region-level forecasts are produced, followed by county-level forecasts. These then become region-level controls for census tract and traffic analysis zone (TAZ) forecasts.

The most current region-level control forecasts will serve as a foundation for The Region's Plan, adopted in spring of 2016. The regional series, known as Series 15.0, was completed in late spring of 2015. The charts at the end of this section summarize the new updated population and employment controls for the 20-county study area.

Development of the most current draft regional forecast began in January of 2015. This forecast was developed from a calibration of a standard forecast for the 20-County Area by the Regional Econometric Models Inc. (REMI) econometric model, build 3.6.5R. This model was released by REMI in October 2014, and included 21 specific regions consisting of the 20 counties in ARC's MPO, plus the rest of the state of Georgia. Forecasts are produced for over 6,000 economic and demographic variables.

ARC staff was assisted in the development of these regional forecasts by a Technical Advisory Committee (TAC) of nationally known, local experts on the Atlanta Regional Economy. The committee met three times in late winter and early spring of 2015. TAC members advised staff on REMI model calibration, policy variable development, and related iterative revisions to model runs. The TAC then recommended the final regional forecasts for use in the Region's Plan forecasts.

In February of 2015 (in parallel to the TAC process), Research and Analytics division staff began a series of 23 meetings to meet with MPO member jurisdictions to collect "local expert" information that would be used in assessment of the draft regional forecasts and refinement of the county and subcounty forecasts of population and employment making up the entirety of series 15.0. These 'local outreach' meetings directly reviewed a previous series of forecasts (the 'Needs Assessment' or series 14.0) of households and total employment. These meetings also refined the region's Unified Growth Policy Map (UGPM), which is a key input to the generalized zoning that influences land development in the small area allocation model.

A subsequent step in The Region's Plan forecast process was development of county-level control totals. Regression analysis, third-party datasets, and input from the outreach meetings were core resources in arriving at these county control totals. The REMI model's regional forecast was then recalibrated to mirror/reflect the county control totals. The county level controls for series 15.0 were finalized in mid-summer, 2015.

The final step in the forecasting process uses mathematical models to disaggregate the region-level/county-level control population and employment forecasts to "small areas": the superdistrict, census tract and traffic analysis zone (TAZ) level. TAZs are nested within census tracts. Census tracts nest within superdistricts. The mathematical models underlying the region-level controls have evolved and become more complex, but ARC's basic approach is the same today as in 1975.

The Production, Exchange, Consumption, and Allocation System (PECAS) model is being used as part of The Region's Plan disaggregation of regional and county controls to small areas. This PECAS model runs annually and iteratively to produce not only a small-area allocation of population and households, but

labor dollars by industry, that serve as direct inputs to the travel model sets. Further, REMI model output at the county level provided detailed age distribution data that served as direct input to the travel model's population synthesizer. The process is integrated with the ARC travel demand model, as impedances (travel costs) from the travel model are a significant influence on small-area allocation of population and job growth.

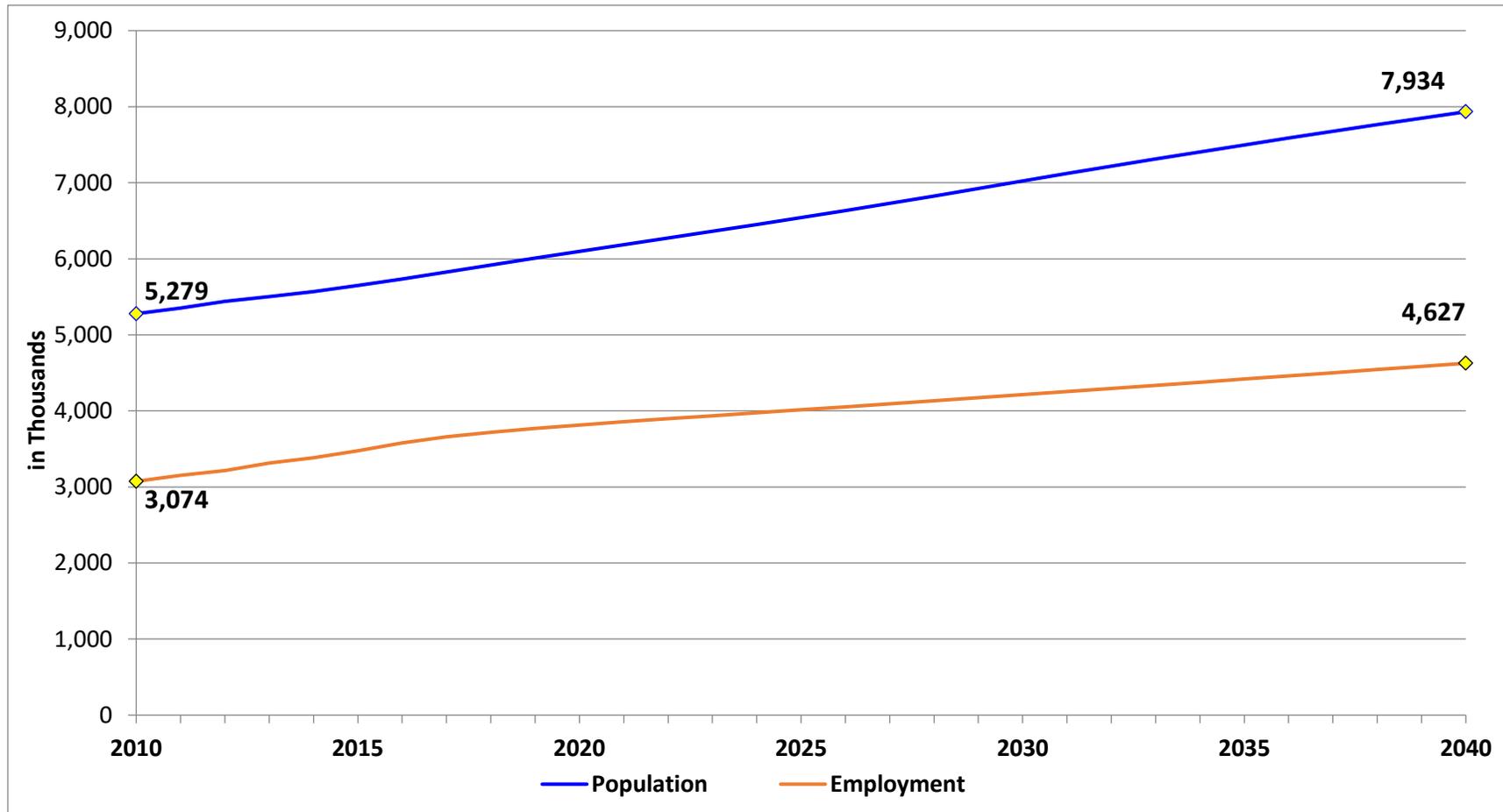
Population and job levels from each successive single-year forecast become the base for forecasts in the next model year. First, the Activity-Based Model (ABM) analyzes base year traffic patterns and produces accessibility measures (impedances or travel costs) within the 20-county forecasted area. Then, the PECAS model develops socioeconomic forecasts using the previous year's composite impedances from the travel demand model; the economic activity forecast by its Activity Allocation (AA) module, and resultant built space produced in response to that economic activity (and construction prices/ rents) by its Spatial Development (SD) module. The PECAS output is translated into household income by size and job by sector forecasts at the TAZ level, which then become the input used by the ABM to produce the impedance(s) measure that drives the next iteration of the integrated model run.

All these models are carefully calibrated based on the best and most current data available. Data used in the current small-area modeling effort include 2010 United States Census results, economic data from IMPLAN and REMI, parcel level datasets from local jurisdictions, joined assessor's data, third-party datasets on real estate development and construction costs, ARC annual major jurisdiction estimates of population (using a hybrid method involving building permit information, birth and death data, and American Community Survey data), and ARC semi-annual estimates of employment by industry for counties, superdistricts, tracts and TAZs/blockgroups from the state of Georgia unemployment insurance base file. National forecasts of employment and population were derived from the REMI TranSight model. The results of ARC travel surveys (including the 2011 Household Travel survey, the 2009-2010 Transit On-Board survey, the 2010 Hartsfield air passenger survey, travel time studies, speed studies, and others) shape travel model parameters. Highway projects and the schedule for their completion (primary inputs to the ABM model networks) are developed as part of an extensive discussion between ARC staff, local planners, Georgia Department of Transportation and various federal agencies. Likewise, ARC staff coordinates with local transit and shuttle providers (such as MARTA, GRTA, CCT, GCT, etc) to update and maintain transit networks and schedules.

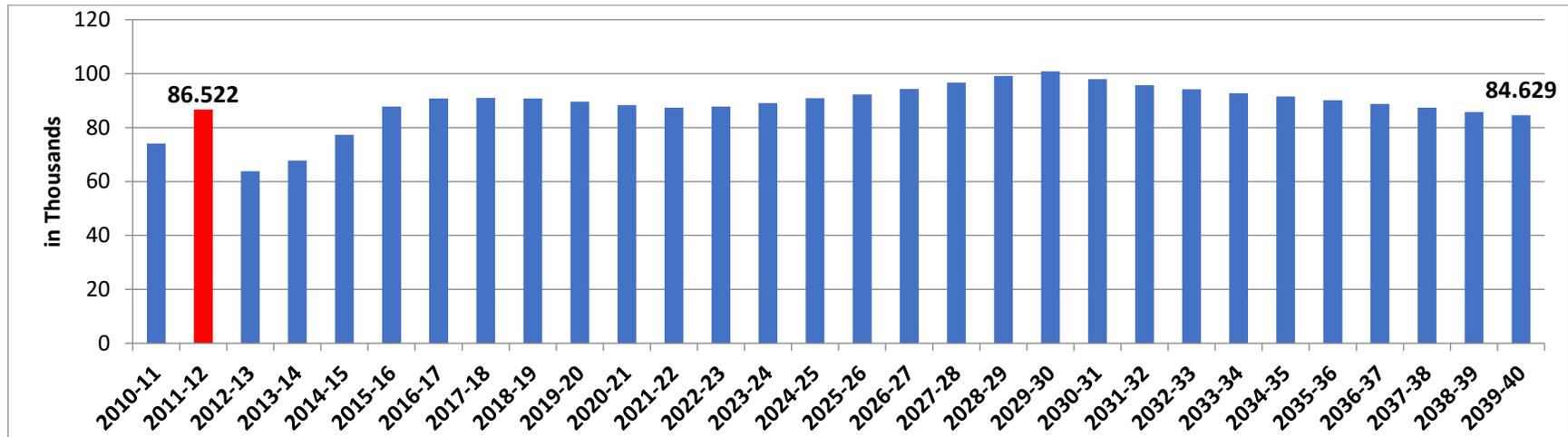
The area modeled by ARC for transportation/air quality purposes expanded from ten (10) to twenty (20) counties over the last 15 years. To meet current and future data needs, ARC produced employment estimates by county and census block group for the state of Georgia beginning in 2008, and continues to produce these estimates on a semi-annual basis. The county coverage by land-use data produced in the LandPro program expands as needed. Going forward, ARC's population forecast program area will be expanded as required from the current 20 counties, using the decennial and intercensal Census estimates, as well as other available information, as data baselines.

Post-processing adjustments are made to the ARC forecasts to account for expected large scale changes and policy priorities that would not be reflected in model output driven by historical data. Events such as expected construction of a new highway or policy input restricting development within the region are accounted for directly in the PECAS model with parameter changes to the AA module. Factors such as expected job and household growth from the completion of known major development projects (e.g. Atlantic Station) or transit-oriented development are incorporated as post processing adjustments to the model output or via specific site development changes to the parcel layers in the SD module.

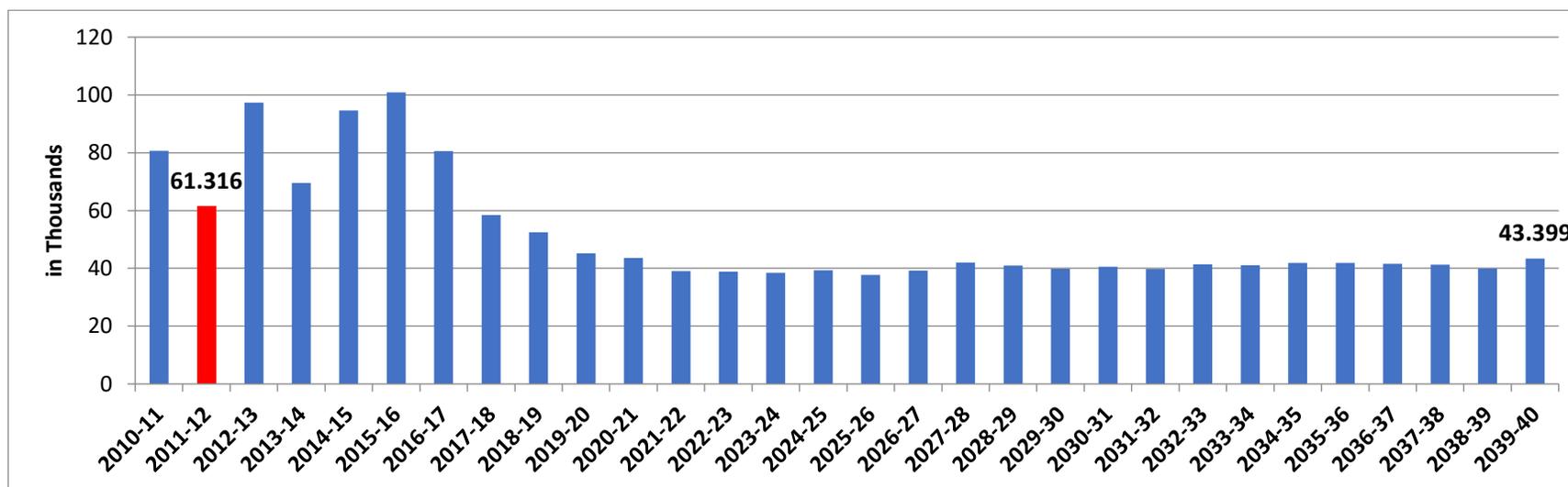
Projected Population and Employment Growth for the 20-County Area



Projected Annual Population Change for the 20-County Area



Projected Annual Employment Change for the 20-County Area



APPENDIX C – Model Inputs

In 2016, ARC switched from its 4-step trip-based aggregate regional travel demand model to its newly developed, and recently calibrated disaggregate activity-based model (ABM). The ABM now serves as the major travel forecasting tool in the ARC region. This model has been developed to ensure that the regional transportation planning process can rely on forecasting tools that will be adequate for new socioeconomic environments and emerging planning challenges. It is equally suitable for conventional highway projects, transit projects, and various policy studies such as highway pricing and HOV / HOT analysis. The ARC ABM is based on the CT-RAMP (Coordinated Travel Regional Activity-Based Modeling Platform) family of Activity-Based Models. This model system is an advanced, but operational, AB model that fits the needs and planning processes of ARC.

The ABM has been tailored specifically to meet ARC planning needs, considering current and future projects and policies and also taking into account the special market segments that exist in the Atlanta region. The model system addresses requirements of the metropolitan planning process, relevant federal requirements, and provides support to ARC member agencies and other stakeholders.

- 1) Calibration Year: 2010 (with some 2015 interim validations and benchmarking thereafter)
- 2) Project Listing: Project listings will be provided in electronic format to Interagency Consultation Group for review in December 2018 and include:
 - a. Regionally Significant and Federally Funded
 - b. Regionally Significant and Non-Federally Funded
- 3) Demographic Data: Provided as separate attachment
- 4) Speed Data: Free-flow Speed by Area Type and Facility Type⁴

FACTYPE	ABM Area Type							
	CB D	Urban Commercial	Urban Residential	Suburban Commercial	Suburban Residential	Exurban	Rural	Facility Type
1	62	63	63	63	64	65	66	interstate/freeway
2	43	46	49	52	55	58	61	expressway
3	43	46	49	52	55	58	61	parkway
4	64	65	65	65	66	67	68	freeway HOV (concurrent)

⁴ Within the ARC travel demand and emission modeling process, free flow speeds are adjusted to reflect the increase in delay and travel time on a roadway segment as traffic volumes build and congestion levels increase. Link-level congested flow speeds are used to estimate NOx and VOC emissions as required by Sections 93.122(b)(i)-(iv) and 93.122(b)(2) of the Transportation Conformity Rule.

FACTYPE	ABM Area Type							
	CB D	Urban Commercia l	Urban Residentia l	Suburban Commercia l	Suburban Residentia l	Exurba n	Rura l	Facility Type
5	64	65	65	65	66	67	68	freeway HOV (barrier)
6	62	63	63	63	64	65	66	freeway truck only
7	50	50	50	55	55	55	55	system to system ramp
8	50	50	50	50	50	50	50	exit ramp
9	45	45	45	50	50	50	50	entrance ramp
10	23	26	31	35	41	48	53	principal arterial
11	21	26	29	33	38	43	48	minor arterial
12	21	26	29	33	38	43	48	arterial HOV
13	21	26	29	33	38	43	48	arterial truck only
14	17	23	24	26	30	35	45	collector

5) Transit Modeling

- a. Model recalibrated to 2010 transit ridership estimates, provided by transit operators
- b. Reflects results from the 2009-2010 Transit On-Board Survey
- c. Routes updated to reflect current operating plans
- d. Transit mode split is estimated using the mode choice model
 - i. Estimates individual modal trips from the person trip movements developed in the trip distribution model
 - ii. Composed of 15 modes, including auto by occupancy and toll/non-toll choice, walk and bike non-motorized modes, and walk and drive access to different transit line-haul modes:
 1. Auto SOV (Free)
 2. Auto SOV (Pay)
 3. Auto 2-Person (Free)
 4. Auto 2-Person (Pay)
 5. Auto 3+ Person (Free)
 6. Auto 3+ Person (Pay)
 7. Walk
 8. Bike

-
9. Walk-All-Transit
 10. Walk-Premium-Only
 11. PNR-All-Transit (PNR = Park and Ride)
 12. PNR-Premium-Only
 13. KNR-All-Transit (KNR = Kiss and Ride)
 14. KNR-Premium-Only
 15. School Bus
- iii. The mode choice model is organized in terms of seven characteristics:
 1. Mathematical structure;
 2. Trip purposes and choice sets;
 3. Limitations on choice sets;
 4. Analysis of transit access;
 5. Treatment of HOV lanes;
 6. Stratification by income groups; and
 7. Analysis of alternative transit paths.
- e. Transit Fare Modeling
 - i. Transit fares are based on information provided by the local transit operators throughout the Atlanta region
 - ii. The base year for the travel demand model is year 2010; therefore, any costs of traveling incurred within the model are representative of year 2010 dollars
 1. The base year calibration utilized transit fares that were in place in 2010; however the majority of local operators have implemented a fare increase since 2010. To reflect these fare increases while maintaining year 2010 dollars, the year 2015 fares were adjusted using the Consumer Price Index (CPI) online calculator⁵ which accounts for inflation to calculate the cost of goods.⁶
 - iii. A CPI adjustment was applied to all the operator fares and is carried forward for all model years from 2015 and beyond
 - iv. The current ARC transit coding approach enables fares to be coded by mode and operator (cases where an operator has a different fare for different modes).
 - v. The transit fare structure includes additional fares incurred from transferring from one operator to another
 - vi. The fare structure results in a fare matrix which includes the total fare of the trip on a zone-to-zone level
 - f. 2009-2010 Transit On Board Survey Calibration
 - i. Update of regional transit travel targets based on expansion of the on-board survey data
 1. Modifications to express bus and BRT transfer constants
 2. Modifications to travel demand model estimates of zero-car transit work trips

⁵ <http://data.bls.gov/cgi-bin/cpicalc.pl>

⁶ For example, the current year 2015 one-way MARTA fare of \$2.50 translates to approximately \$2.30 in year 2010 dollars. In other words, the MARTA fare increase from \$2.00 to \$2.50 outpaces inflation. So, using the consumer price index calculator, the 2015 MARTA fare in year 2010 dollars is \$2.30.

-
3. Modifications to travel demand model estimates of kiss-and-ride passenger access and use of transit system
 4. Overall evaluation of all modal constants
 5. Refinement to park-and-ride lot assumptions
 6. Updated walk connector and percent walk procedures
- ii. Modified transit skimming procedures
 - iii. Re-calibrated air passenger model
 - iv. Assessment of travel demand model understanding of market segments and travel patterns relative to the on-board survey records

Appendix D – I/M Program

- Exhaust and Evaporative (OBD and gas cap pressure test) for 1996 and newer vehicles
 - Annual inspection required
 - Computerized test and repair OBD – Exhaust
 - Computerized test and repair OBD & GC - Evaporative
 - Applies to all LDG vehicle types
 - Three year grace period
 - 3% waiver rate for all vehicles – Exhaust test
 - 0% waiver rate for all vehicles – Evaporative test
 - 97% compliance rate
- Exhaust and Evaporative test for 1975 – 1995 vehicles
 - Annual inspection required
 - Computerized test and repair ASM 2525/5015 Phase-in – Exhaust
 - Computerized test and repair GC – Evaporative
 - Applies to all LDG vehicle types
 - 3% waiver rate for all vehicles – Exhaust
 - 0% waiver rate for all vehicles – Evaporative
 - 97% compliance rate
 - 25 year and older model years are exempt

Appendix E – VMT Adjustment Factors**Ozone VMT Adjustment Factors**

Functional Class Name	Functional Classifications	Factor for 13 County Area	Factor for 7 County Area
Interstates / Freeways	1, 11, 12	0.99	0.83
Arterials	2, 14	1.02	0.90
Collectors	6, 7, 8, 16, 17	0.84	1.18
Local	9, 19	1.83	2.26

Appendix F – TCMs Implemented in the Atlanta SIP

Description	ARC Project #	GDOT PI #	TIP	Status
HOV LANES Sponsor – GDOT	AR 073B	713760	98-00, 99-01	Implemented
I-85N from Chamblee-Tucker Rd to SR 316 (HOT Lanes), I-85 @ SR 316, Interchange Reconstruction	GW-AR 053A GW-AR 053B	110530	01-03 02-04 03-05 05-10	Implemented Implemented
ALTERNATIVE FUEL STATION Sponsor – Douglas County	DO-AR 211	771035	98-00 99-01 00-02 01-03 02-04	TCM removed from SIP on 11/28/2006 (71 FR 68740, November 28, 2006)
ATLANTIC STATION, 17 th STREET BRIDGE Sponsor – City of Atlanta A – Bridge and Southbound off ramps C – Northside Dr over Norfolk Southern Railroad to Atlantic Station D – Northbound off ramp to 17 th Street Bridge, Williams St Relocation	AT-AR 224A AT-AR 224C AT-AR 224D	714190 0001297 0001298	00-02 01-03 02-04 03-05 05-10	A – Implemented C – Implemented D – Implemented
CLEAN FUEL BUSES Sponsors – MARTA and CCT	M-AR 232	N/A	94-95	Implemented
EXPRESS BUS ROUTES Sponsor – MARTA	M-R 160 M-R 162	770632 770632	94-96	Implemented
IMPROVE / EXPAND BUS SERVICE Sponsor – MARTA	M-R 161	770633	96-98	Implemented
INTERSECTION UPGRADE, COORDINATION & COMPUTERIZATION Sponsor(s) – GDOT in partnership with local Jurisdictions	AT 089	04Y108	93-95	Implemented
	CL 094	770600	94-96	Implemented
	CO 249	770601	94-96	Implemented
	DK 118	770603	94-96	Implemented
	FN 086	770605	94-96	Implemented
	FS 068	770605	94-96	Implemented
	GW 135	170950	94-96	Implemented
	R 098	04418	93-95	Implemented
ITS – ADVANCED TRAFFIC MANAGEMENT SYSTEM / INCIDENT MANAGEMENT PROGRAM Sponsor – GDOT I-75/I-85 within I-285, Northern portion of I- 285 between I-75 and I-85	R 098	770391	94-96	Implemented
CLEAN FUELS REVOLVING LOAN PROGRAM Sponsor – GEFA	R 195	770790, 770795	96-98	Implemented
HOV LANES Sponsor – GDOT I-75 and I-85 within I-285	R 174	320H94	94-96	Implemented

Description	ARC Project #	GDOT PI #	TIP	Status
PARK & RIDE LOTS Sponsor(s) – Douglas & Rockdale Counties Douglas County – Chapel Hill @ I-20, Rockdale County – Sigman @ I-20	DO 211C		94-96	Implemented
REGIONAL COMMUTE OPTIONS & HOV MARKETING PROGRAMS Sponsor(s) – GDOT	R 159	770631	94-96	Implemented
SIGNAL PREEMPTION Sponsor – MARTA	M-R 164	770636	94-96	Implemented
TRANSIT INCENTIVES PROGRAM Sponsor - MARTA	M-AR 231A M-AR 231B	771031 771119	98-00 99-01 00-02	Implemented
TRANSPORTATION MANAGEMENT ASSOCIATIONS Sponsor – ARC	AR 221A AR 221B AR 221C AR 221E AR 221F	771033 771140 771141 0000570 0000571	98-00 99-01 00-02 01-03	Implemented
UNIVERSITY RIDESHARE PROGRAM Sponsor - ARC	AR 220A AR 220B AR 220C AR 220D AR 200E	771032 771113 0000351 0000567 0000568	98-00 99-01 00-02 01-03 02-04	Implemented

EXHIBIT 2

INTERAGENCY MEETING SUMMARIES

Interagency Consultation Group
October 23, 2018

MEETING SUMMARY

Attendees	
ARC	David D’Onofrio, David Haynes, Kyung-Hwa Kim, Patrick Bradshaw, Kofi Wakhisi, Jean Hee Barrett, John Orr
CBMPO	
Cobb	
Douglas	
EPA	
EPD	Gil Grodzinsky
FHWA	Tamara Christion
FTA	
GDOT	Daniel Dolder, Johnathan McLoyd, Habte Kassa
GHMPO	Sam Baker
GRTA/SRTA	Jamie Fischer
Gwinnett	
MARTA	
Other	

1. Welcome & Review of 8/28/18 Meeting Summary

David D’Onofrio, ARC, called the meeting to order. He noted that the draft August 28th meeting summary was distributed for review. There were no modifications and the summary was accepted.

2. Transportation Planning Updates

a. ARC

i. Amendment #6

Patrick Bradshaw, ARC, updated the committee on the status of TIP Amendment #6. Public comment for the amendment closes on October 24th. ARC’s committees are scheduled to act in November. A public hearing was held as part of October’s TAQC meeting. No comment was provided at that time.

ii. Amendment #7

Next Bradshaw outlined ARC’s plan for TIP Amendment #7. This amendment will include a new emissions analysis as part of the conformity determination. ARC expects there to be some changes to the state’s MMIP program, possibly some SPLOST project changes and the addition of MARTA’s BRT TIGER grant. In addition, there will be some financial changes for projects in 2019 and 2020. ARC staff expect this amendment to be the last before the major RTP/TIP update in 2020, which will extend the horizon year of the RTP to 2050.

ARC staff are finalizing the schedule for Amendment #7. Over the next month staff will finalize a coding list for the modelers. Travel model coding is expected to occur in the first quarter of 2019. IAC should expect planning assumptions for review ahead of the initialization of modeling. A 15-day public comment period is planned for some time in April with approvals likely in May, 2019. ARC staff requested that any changes to projects in CBMPO or GHMPO be provided to ARC shortly to incorporate into the model coding.

iii. 2020 RTP Update

David Haynes, ARC, provided a brief overview of ongoing work to develop ARC's next full RTP update in early 2020. ARC staff is polishing up schedules for the work and have had a lot of activities going on in the background. This plan will not require a wholesale change due to the extensive work ARC has undertaken over the past few years in updating content along with major amendments to the RTP/TIP. Ongoing work this year includes updating land use forecasts, revisiting the policy framework and updating financial forecasts. ARC staff are still working with stakeholders to ensure that projects will be coded correctly, and everything will be accounted for in the updated assumptions for the plan.

b. CBMPO

No update.

c. GHMPO

Sam Baker, GHMPO, updated the committee on happenings in Hall County. GHMPO is taking its TIP Amendment #2 through approvals in November and are requesting concurrence from CBMPO and ARC. This amendment required a conformity short form that they provided to Interagency. Baker noted that GHMPO staff is still aware of the need to provide ARC with projects for their 2020 RTP update by September 30, 2019.

3. Air Quality Updates

a. FHWA Interim Conformity Guidance

Tamara Christion, FHWA, gave an overview of a memo provided to division offices on how to deal with conformity post-South Coast II court ruling. Areas have until February 16, 2019 to begin accounting for conformity, if necessary, under the 1997 ozone standard. The way ARC integrated the 1997 standard back into the process meets the requirements. More guidance from EPA is expected soon.

The committee also briefly discussed other ramifications of the court ruling, including implications for Macon and Murray County as well as SIP requirements. In the Atlanta region, no new SIPs are required until 2022 (the 2nd maintenance plan for 1997 ozone standard).

b. Other Air Quality Updates

Gil Grodzinsky, EPD, updated the group on work at the state. A SIP revision to adjust the required Reid Vapor pressure is currently moving through the chain at EPA. Grodzinsky also explained that the TCM removal work is moving through an in-house review. He expects to share more information about that early in 2019. Finally, Grodzinsky noted that EPA will be starting their ozone standard review shortly, as part of the five-year review requirement outlined in the Clean Air Act.

4. New Business/Announcements

- D’Onofrio noted that ARC will be releasing an RFP later in the year to update the CMAQ calculator
- John Orr, ARC, announced that ARC staff is working on recalibrating and updating the regional travel model to push out to the year 2050, the horizon year of the upcoming RTP update
- Orr also announced that ARC is entering procurement for the transit on-board travel survey, which will occur in 2019. Some people on IAC may be asked to participate on the RFP review committee. The \$1.7M survey will update travel modeling assumptions with characteristics of transit users. ARC is targeting 40,000 surveys across all routes in the Atlanta region. Following this survey, in 2020 or 2021, ARC will also bid out a full regional travel survey.
- Jamie Fischer, SRTA/GRTA, informed the group that she would be preparing the annual air quality update for her organization. She may reach out to ARC and GA EPD for information.

Interagency Consultation Group
January 22, 2019

MEETING SUMMARY

Attendees	
ARC	David D’Onofrio, David Haynes, Kyung-Hwa Kim, Patrick Bradshaw, Kofi Wakhisi, John Orr
CBMPO	Tom Sills
Cobb	
Douglas	
EPA	
EPD	Gil Grodzinsky
FHWA	Tamara Christion
FTA	
GDOT	Daniel Dolder, Habte Kassa, Spencer Pucci, Megan Weiss
GHMPO	Sam Baker
GRTA/SRTA	Parker Martin
Gwinnett	
MARTA	
Other	

5. Welcome & Review of 10/23/18 Meeting Summary

David D’Onofrio, ARC, called the meeting to order. He noted that the draft October 23rd meeting summary was distributed for review. There were no modifications and the summary was accepted.

6. Transportation Planning Updates

b. ARC

i. Amendment #7

Patrick Bradshaw, ARC, reminded the group that the main reason for amendment #7 is to make changes to regionally significant projects. Many managed lanes projects are being modified, and a new BRT route in Atlanta is being incorporated into the TIP.

Interagency concurred with planning assumptions on January 4th. Staff have started modeling, which will be completed by March. Staff will distribute a draft CDR to Interagency by the end of March with emission analysis results. The final CDR and amendment documentation will go to a 15-day public comment period on April 4th. Approvals for the plan are scheduled for May before an expected conformity determination in June.

ii. 2020 RTP Update

David Haynes, ARC, provided a brief overview of ongoing work to develop ARC’s next full RTP update in early 2020. During the last regularly scheduled ARC committee day, staff held a kick-off meeting with policy makers from both the transportation and land use

committees. ARC staff are now working on finalizing any changes to the plan's policy framework while concurrently developing land use and transportation model estimates and assumptions. The plan horizon year is being pushed out to 2050.

Over the next few months ARC staff will be meeting with local governments to prioritize transportation needs and receive feedback to help develop the 2020 RTP update. ARC staff will bring more information about this work to Interagency throughout 2019.

d. CBMPO

Tom Sills, CBMPO, updated the committee on planning work in Bartow County. Staff have been working on developing land use data to provide to GDOT for travel modeling for their 2020 RTP update. Currently, there is an RFQ out to select a consultant to develop a project list. Apart from 2020 RTP development, staff are working on a railroad bridge feasibility study and several studies or projects on Cass-White Road and SR 411.

e. GHMPO

Sam Baker, GHMPO, updated the committee on happenings in Hall County. GHMPO kicked-off plan development for their next RTP. They selected a consultant and will provide a project list to ARC by September 30. GHMPO is also working on a micro-transit study to look at the feasibility of services like Uber supplementing public transit. Finally, Baker informed the group that Hall County was selected as a location for an inland port, GHMPO staff is looking for money to study the impacts that will have on their transportation system.

7. Air Quality Updates

a. EPA's South Coast II Guidance

D'Onofrio provided a brief update on guidance EPA released last November to address conformity after the South Coast II court ruling in February 2018. The guidance indicates that regional emissions analyses are not required in orphan counties for the 1997 ozone standard. Conformity can be met in these areas through tracking new projects as exempt and non-exempt, interagency consultation, and documenting the TCMs if there are any in the region. This guidance adjusts the way ARC will perform conformity determinations, removing a model network year and streamlining the process.

b. Other Air Quality Updates

Grodzinsky updated the group on work at the state. EPD is looking for strategies to reduce ozone below the 2015 standard's 70 ppb. Staff have been more involved with stakeholders and have participated in conversations with regional organizations and groups on how to continue to improve air quality.

The state is preparing to release information to Interagency on the removal of TCMs in the SIP and the adjustment of summer fuel in the 13-county area to match the rest of the state. With EPA staff on furlough due to the shutdown, the timeline for some of this work has been adjusted; but in short, the state is planning on removing all but one TCM from the SIP and hopes to have that task completed, along with the fuel requirement changes, this year.

8. New Business/Announcements

-
- John Orr, ARC, announced that this would be D’Onofrio’s last meeting at ARC. D’Onofrio has accepted a job with FHWA’s Resource Center. David Haynes will chair the committee in the interim until a permanent replacement is identified.

Interagency Consultation Group
February 26, 2019

MEETING SUMMARY

Attendees	
ARC	David Haynes, Jean Hee Barrett, Guy Rousseau, Abby Marinelli, Aileen Daney, John Orr
CBMPO	Tom Sills (by phone)
Cobb	
Douglas	
EPA	Dianna Myers (by phone)
EPD	Gil Grodzinsky, Deb Basnight
FHWA	Tamara Christion (by phone)
FTA	
GDOT	Daniel Dolder, Habte Kassa, Charles Robinson, Megan Weiss
GHMPO	Sam Baker
GRTA/SRTA	George McDonald
Gwinnett	
MARTA	
Other	

9. Welcome & Review of 01/22/19 Meeting Summary

David Haynes, ARC, called the meeting to order. He noted that the draft January 22nd meeting summary was distributed for review. Two modifications were suggested by EPD, one of which was a typo. The other change regarded how “orphan” and “non-orphan” counties need to be addressed in the regional emissions analysis related to the 1997 ozone standard. The modifications were accepted and the meeting notes were subsequently approved.

2. TCM Removal SIP

Gil Grodzinsky, EPD, discussed proposed changes to MOVES emissions modeling inputs related to the 2008 eight-hour ozone standards. The changes are highlighted under Emissions Modeling Assumptions > MOVES Inputs > Fuel > Summer Fuel Reclassification on the attached document at the end of this summary. EPD is proposing that fuel input values be revised to reflect the phase out of summer fuel requirements in the 45 county Atlanta region. The recommendations are to maintain inputs reflecting fuels with a stricter volatility level for all model runs before 2020, but switch to a different formulation input value for 2020 and later.

EPD intends to show the calculations related to these changes at the Interagency meeting in either March or April. Following presentations to TCC and TAQC at dates to be determined, and a public comment period, a final draft of the TCM Removal SIP will be submitted to EPA with eventual publication of the new rule and effective date to be determined. The changes will then be made in CDR documentation and planning assumptions at the next available opportunity.

3. Special Studies Updates

a. FHWA Resiliency Study

Aileen Daney, ARC, provided a status update on a new initiative involving the development of multiple deliverables to be used in informing a regional transportation system vulnerability and high-level risk assessment. These include the deployment of a tool to assess hydrological and thermal vulnerabilities, as well as information necessary to assess asset criticality and system vulnerability and risk. This work is funded through a \$175,000 FHWA grant and ARC recently contracted with Atkins, Inc. to provide consultant services. Work will continue throughout 2019 and ARC will provide periodic updates to Interagency at key milestones, as warranted.

b. On-Board Transit Survey

Guy Rousseau, ARC, updated the group on a major transit usage survey necessary to calibrate the regional travel demand model. The last similar study was conducted approximately a decade ago. The goal is to capture 10% of the total transit ridership, with most data collection to occur in and around October 2019. ARC anticipates a completion by spring 2020. Total funding for the survey is \$1.75 million, with MARTA being a local funding partner for the required match. ETC Institute is the consultant for the work.

4. Transportation Planning Updates

c. ARC

i. Amendment #7

Jean Hee Barrett, ARC, provided an update about ongoing work activities related to an amendment to the FY 2018-2023 TIP and the 2040 RTP. Staff are continuing with modeling work, which will be completed by March. A modified list of changes, reflecting edits to GDOT's Major Mobility Investment Program, will be provided to Interagency within the next several days. A draft CDR will be distributed to Interagency by the end of March with emission analysis results and financial constraint details. The final CDR and amendment documentation will go to a 15-day public comment period on April 4th. Approvals for the plan are scheduled for May before an expected conformity determination in June. GHMPO and CBMPO were reminded that concurrence resolutions were required from them since this amendment involves conducting a new emissions analysis.

ii. 2020 RTP Update

David Haynes, ARC, provided an update on ongoing work to develop ARC's next full RTP update in early 2020. Over the past month, ARC staff have been meeting with local governments to prioritize transportation needs and receive feedback to help develop a revised project list. The plan horizon will be extended to 2050 as part of the update. ARC conducted a test for that year using new forecasts to ensure meeting air quality conformity requirements would not be a problem. ARC staff will bring more information about this work to Interagency throughout 2019.

f. CBMPO

Tom Sills, CBMPO, updated the committee on planning work in Bartow County. Staff have been working on developing land use data to provide to GDOT for travel modeling for their RTP update. A consultant should be selected by mid-March to assist with the update. Apart from

2020 RTP development, staff conducted a public information open house this month for a project on Cass-White Road.

g. GHMPO

Sam Baker, GHMPO, updated the committee on planning work in Hall County and the portion of Jackson County within their MPO area. GHMPO has selected a consultant and will provide a project list to ARC by September 30, with all work on the RTP update complete by June 2020. Forecasts for 2050 for Jackson County have been prepared and GDOT will provide base year data for Hall County this spring.

As reported in January, Hall County was selected as a location for an inland port and GHMPO is studying the impacts that will have on their transportation system, most notably the need for a new interchange at I-985 and SR 365. A micro-transit study has been completed, which included recommendations to eliminate three of six fixed routes and dial-a-ride services with new on-demand micro-transit services. GHMPO is now seeking bids to provide the recommended services.

5. Air Quality Updates

There was no new information to report.

6. New Business/Announcements

None. The meeting was subsequently adjourned. The next scheduled meeting is March 26.