Atlanta Regional Commission

VOLUME III

CONFORMITY DETERMINATION REPORT

ATLANTA REGIONAL COMMISSION | ATLANTA METROPOLITAN TRANSPORTATION PLAN | FEBRUARY 2024

Vision

ONE great REGION

Atlanta Regional Commission

229 Peachtree Street, NE
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atlantaregional.org

Mission

Foster thriving communities for all within the Atlanta region through collaborative, data-informed planning and investments

Goals

Healthy, safe, livable communities in the Atlanta Metro area.

Strategic investments in people, infrastructure, mobility, and preserving natural resources.

Regional services delivered with **operational excellence** and **efficiency**.

Diverse stakeholders engage and take a regional approach to solve local issues.

A competitive economy that is inclusive, innovative, and resilient.

Values

Excellence - A commitment to doing our best and going above and beyond in every facet of our work allowing for innovative practices and actions to be created while ensuring our agency"s and our colleague's success.

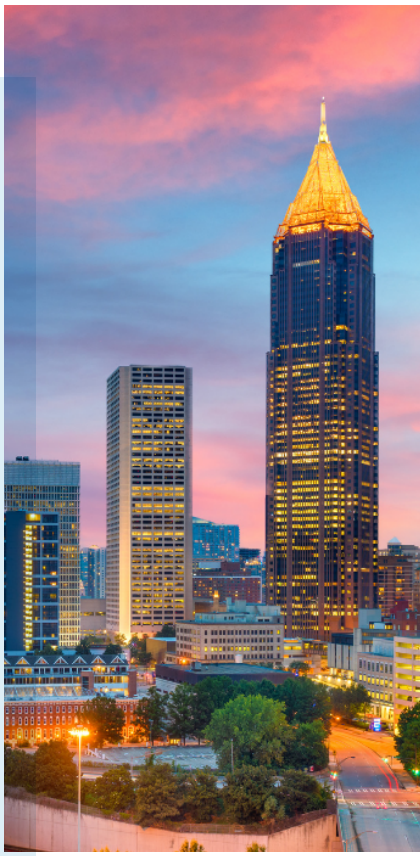
Integrity - In our conduct, communication, and collaboration with each other and the region's residents, we will act with consistency, honesty, transparency, fairness and accountability within and across each of our responsibilities and functions.

Equity - We represent a belief that there are some things which people should have, that there are basic needs that should be fulfilled, that burdens and rewards should not be spread too divergently across the community, and that policy should be directed with impartiality, fairness and justice towards these ends.

Title VI of the Civil Rights Act prohibits discrimination by federal-aid recipients on the basis of race, color and national origin. Other federal and state authorities provide protection from discrimination based upon sex, age, disability, income and family status. As a federal funding recipient, the Atlanta Regional Commission (ARC) takes its civil rights responsibilities seriously and will not exclude from participation in, deny benefits to or subject anyone to discrimination based on membership in any of the above classifications. Moreover, ARC regularly reviews its policies, plans and programs to ensure they are both free from discrimination and promote equitable distribution of MPO services.

If any person believes they have been discriminated against regarding the receipt of benefits or services because of race, color, or national origin, they have the right to file a complaint with ARC. More information is available on our website at atlantaregional.org/titlevi or by contacting the Title VI Officer, Brittany Zwald at bzwald@atlantaregional.org. Individuals with a hearing impairment may also contact ARC at 800.255.0056.

The contents of this plan 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 Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Georgia Department of Transportation (GDOT), and other transportation planning, implementation and/or service delivery agencies. This report does not constitute a standard, specification, or regulation.



AMENDMENT AND ADMINISTRATIVE MODIFICATION HISTORY

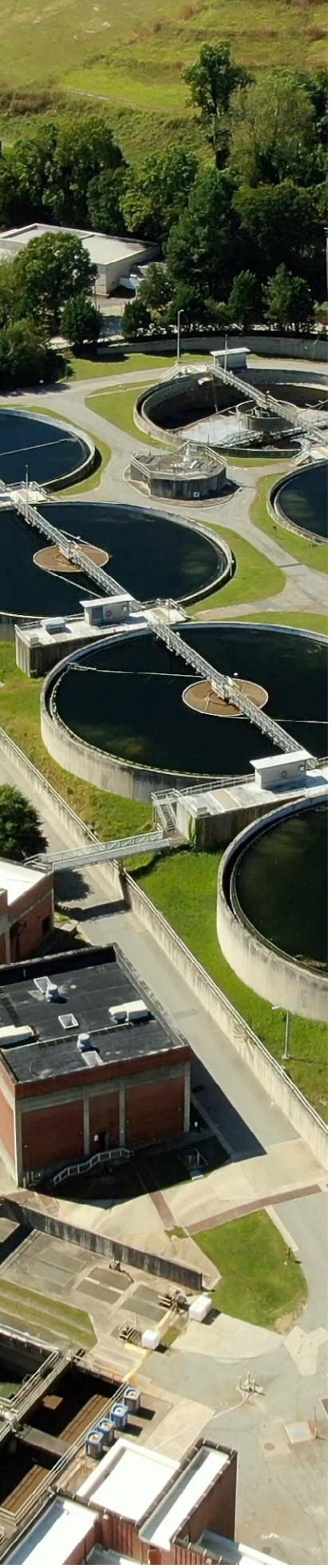
Federal law requires that the MTP and TIP be comprehensively updated at least every four years in air quality nonattainment and maintenance areas. This plan was most recently updated in February 2024. As time passes, incremental changes will need to be made as project scopes, schedules and budgets are refined. These changes can be made between major updates either through administrative modifications, which are relatively minor in nature, or through amendments, which are more significant and require a more formal process. Administrative modifications are made on a quarterly basis, while amendments are typically conducted only once or twice a year.

PARTICIPATION PLAN

Refer to the Participation Plan for more information on the types of changes which are made under each process and the procedures which ARC follows in conducting them.

Below is a timeline of when the project list and related information in this and related documents have been modified since the plan's original adoption date. For an accounting of key changes to each of the four volumes comprising the 2050 MTP and FY 2024-2027 TIP, refer to **Appendix 2**.

ACTION	DATE
Major MTP/TIP Update	February 2024



GLOSSARY OF ACRONYMS

ARC	Atlanta Regional Commission
BIL	Bipartisan Infrastructure Law (officially known as IIJA)
CBMPO	Cartersville-Bartow County Metropolitan Planning Organization
CDR	Conformity Determination Report
CFR	Code of Federal Regulations
DCA	Department of Community Affairs
FHWA	Federal Highway Administration
FTA	Federal Transit Authority
GA EPD	Georgia Environmental Protection Division
GDOT	Georgia Department of Transportation
GHMPO	Gainesville-Hall County Metropolitan Planning Organization
HOT	High-Occupancy Toll
HOV	High-Occupancy Vehicle
HPMS	Highway Performance Monitoring System
I/M	Inspection and Maintenance Program
IIJA Act	Infrastructure Investment and Jobs Act (also referred to as BIL)
MARTA	Metropolitan Atlanta Rapid Transit Authority
MTP	Metropolitan Transportation Plan
MOVES	Motor Vehicle Emission Simulator
MPO	Metropolitan Planning Organization
MVEB	Motor Vehicle Emission Budget
NAAQS	National Ambient Air Quality Standard
NOX	Nitrogen Oxide
O3	Ozone
SIP	State Implementation Plan
SOV	Single-Occupancy Vehicle
TAC	Technical Advisory Committee
TCM	Transportation Control Measure
TIP	Transportation Improvement Program
USDOT	United States Department of Transportation
US EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

VOLUME III

CONTENTS

INTRODUCTION

This report documents the transportation conformity requirements for the Atlanta air quality maintenance areas. This area is comprised of three Metropolitan Planning Organizations (MPOs) with three distinct plans and policy committees.

The three plans covered by this report are listed below and comprise the latest updates to the horizon year of the Metropolitan Transportation Plans (MTPs) and Transportation Improvement Programs (TIPs) within the maintenance area:

1. Atlanta Regional Commission (ARC): 2050 MTP (2024) and FY 2024-2027 TIP
2. Gainesville-Hall County MPO (GHMPO): 2050 MTP and FY 2024-2027 TIP
3. Cartersville-Bartow County MPO (CBMPO): 2050 MTP and FY 2024-2027 TIP

Together, these three plans demonstrate conformity to the 1997, 2008, and 2015 8-hr. ozone standards. The conformity analysis for the 8-hr. ozone standards is documented in full in this Conformity Determination Report (CDR).

THE CLEAN AIR ACT & TRANSPORTATION CONFORMITY

The Clean Air Act requires the United States Environmental Protection Agency (US EPA) to set limits on how much of a particular pollutant can be in the air anywhere in the United States. National Ambient Air Quality Standards (NAAQS) are the pollutant limits set by the US EPA; they define the allowable concentration of six different pollutants: carbon monoxide, lead, nitrogen dioxide, fine and coarse particulate matter, ozone, and sulfur dioxide.

The Clean Air Act specifies how areas within the country are designated as either in attainment or nonattainment of an air quality standard and provides US EPA the authority to define the boundaries of nonattainment areas. For areas designated as nonattainment for one or more NAAQS, the Clean Air Act defines a specific timetable to attain the standard and requires that nonattainment areas demonstrate reasonable and steady progress in reducing air pollution emissions until such time that an area can demonstrate attainment. Each state must develop and submit a State Implementation Plan (SIP) that addresses each pollutant for which it fails to meet the NAAQS. Individual state air quality agencies are responsible for defining the overall regional plan to reduce air pollution emissions to levels that will enable attainment and maintenance of the NAAQS. This strategy is articulated through the SIP.

In Georgia, the agency responsible for SIP development is the Georgia Environmental Protection Division (GA EPD).

The delineation and implementation of strategies to control emissions from on-road mobile sources is a significant element of the state plan to improve air quality, thereby creating a direct link between transportation and air quality planning activities within nonattainment areas. The process of ensuring that a region's transportation planning activities contribute to attainment of the NAAQS, or conform to the purposes of the SIP, is referred to as transportation conformity. To receive federal transportation funds within a nonattainment or maintenance area, the area must demonstrate through a federally mandated transportation conformity process that the transportation investments, strategies, and programs, taken as a whole, contribute to the air quality goals defined in all applicable SIPs.

To ensure that transportation conformity requirements are met, Section 176(c) of the Clean Air Act authorizes the US EPA Administrator to "promulgate criteria and procedures for demonstrating and assuring conformity in the case of transportation plans, programs, and projects." This is accomplished through the Transportation Conformity Rule[1], developed by the US EPA to outline all federal requirements associated with transportation conformity. The Transportation Conformity Rule, in conjunction with the Metropolitan Planning Regulations[2], direct transportation plan and program development as well as the transportation conformity process. The final Conformity Rule incorporates revisions resulting from the passage of the FAST Act, the current federal transportation funding legislation which specifies the process for the development of metropolitan transportation plans and programs for urbanized areas.

ARC is the federally designated MPO for all or portions of 20 counties in northern Georgia. ARC is directly responsible for developing a long-range MTP outlined in the Metropolitan Planning Regulations and Transportation Conformity Rule.

Portions of the Atlanta urbanized area extend into Bartow, Hall, and Jackson counties. Via interagency agreement, CBMPO and GHMPO plan for those portions of the Atlanta urbanized area within their boundary. ARC performs the planning and technical work required by the Transportation Conformity Rule, including, by agreement with CBMPO and GHMPO, the emissions modeling for Bartow and Hall counties. ARC documents the analysis in a combined CDR for all three MPOs. The USDOT approves or disapproves the conformity analysis in consultation with the US EPA. A positive conformity determination is required for the MTPs and TIPs to advance in all three MPOs.

If transportation plans and programs do not conform to the air quality goals established in the SIP, the transportation planning process will be delayed. Project implementation may be jeopardized through the imposition of transportation funding restrictions that direct how federal transportation funds can be applied. This situation is referred to as a conformity lapse, during which all federal transportation funds and approvals are restricted to projects that meet certain very specific criteria.

1 40 CFR 93: Determining Conformity of Federal Actions to State or Federal Implementation Plans (EPA)
2 23 CFR 450: Planning Assistance and Standards (FHWA)

CURRENT ATTAINMENT STATUS

8-HOUR OZONE STANDARD

The Atlanta region is currently subject to three NAAQS for 8-hr. ozone pollution: (1) the 1997 standard of 0.08 ppm, (2) the 2008 standard of 0.075 ppm, and (3) the 2015 standard of 0.070 ppm.

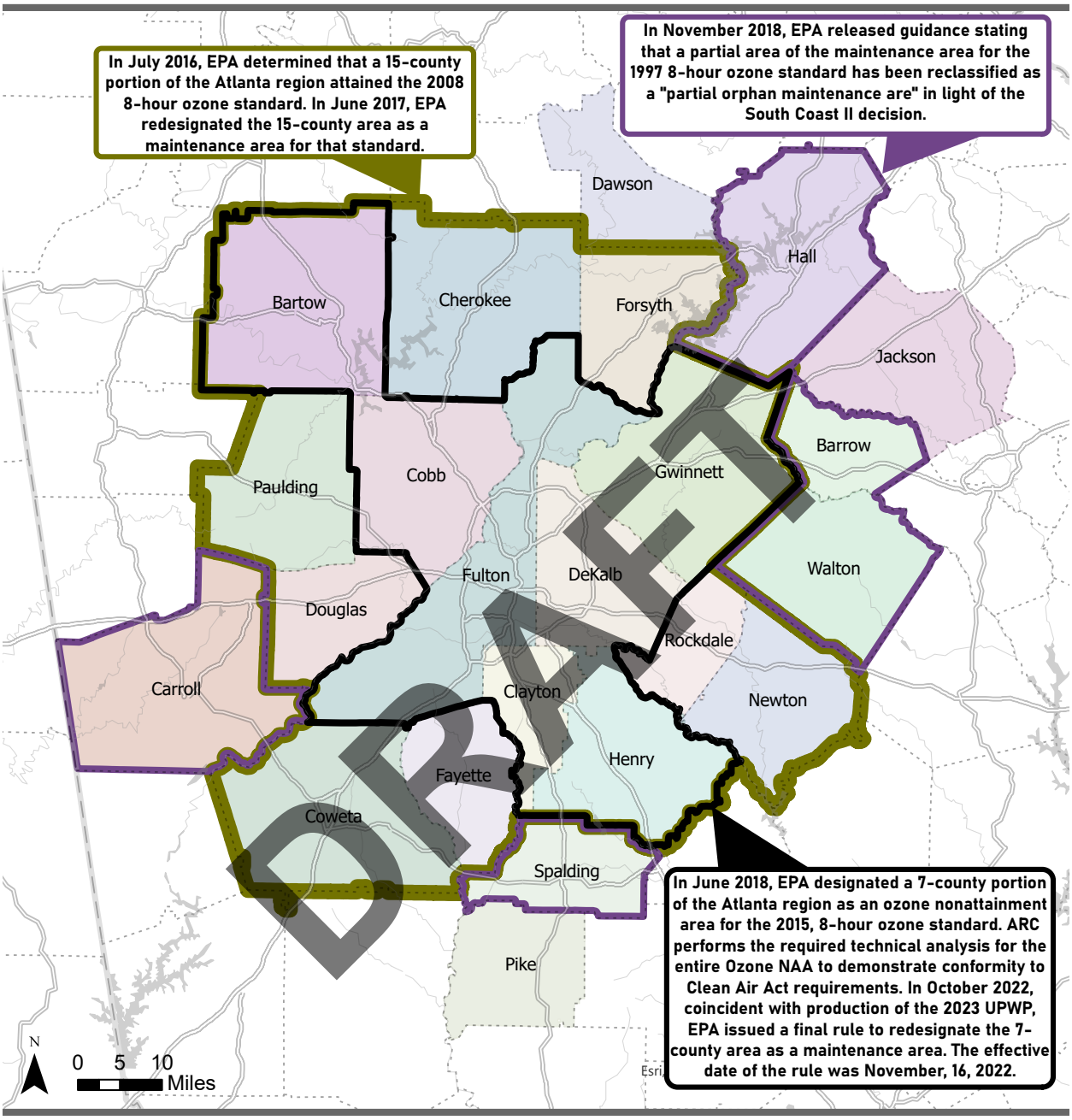
1997 Standard

The 1997 standard was set to 0.08 ppm and 20 counties in the Atlanta region were designated as marginal nonattainment in 2004 (69 FR 23857): Barrow, Bartow, Carroll, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Hall, Henry, Newton, Paulding, Rockdale, Spalding, and Walton. In 2008, the Atlanta area was redesignated as moderate nonattainment.

On December 2, 2013, EPA redesignated the Atlanta area as a maintenance area, effective January 2, 2014 (78 FR 72040). When the 2008 8-hr. ozone standard was finalized and designations made, EPA then pursued the revocation of the 1997 8-hr. 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 (80 FR 12263). Transportation conformity for the 1997 8-hr. ozone standard was no longer applied. On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in South Coast Air Quality Management District v. EPA ("South Coast II," 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone national ambient air quality standard (NAAQS) and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked on April 6, 2015. These conformity determinations are required in these areas after February 16, 2019. A portion of the Atlanta Area was designated attainment for the 2008 ozone NAAQS on July 20, 2012 (77 FR 30087) with a maintenance plan for the 1997 8-hour ozone NAAQS later on January 2, 2014 with the 1997 ozone NAAQS revoked on April 6, 2015. Therefore, per the South Coast II decision, this conformity determination is being made for that partial portion of the 1997 8-hour ozone NAAQS.

"...transportation conformity determinations must be made in areas that were either nonattainment or maintenance..."

CURRENT AIR QUALITY MAINTENANCE AREA BOUNDARIES



Legend

- 2015 Ozone Standard Maintenance Area (7 counties)
- 2008 Ozone Standard Maintenance Area (15 counties)
- 1997 Ozone Standard Partial Orphan Maintenance Area (5 counties)

For the 1997 ozone NAAQS areas, transportation conformity for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c).

This provision states that the regional emissions analysis requirement applies one year after the effective date of EPA's nonattainment designation for a NAAQS and until the effective date of revocation of such NAAQS for an area. The 1997 ozone NAAQS revocation was effective on April 6, 2015, and the South Coast II court upheld the revocation. As no regional emission analysis is required for this conformity determination, there is no requirement to use the latest emissions model for budget or interim emissions tests for the 1997 8-hour ozone NAAQS. Therefore, transportation conformity for the 1997 ozone NAAQS for ARC's and GHMPO's 2050 MTP and FY 2024–2027 TIP can be demonstrated by showing the remaining requirements in Table 1 of 40 CFR 93.109 have been met.

These requirements, which are laid out in Section 2.4 of EPA's (November 2018) Guidance nd are addressed in the remainder of the document, include:

- Latest planning assumptions (93.110)
- Consultation (93.112)
- Transportation Control Measures (93.113)
- Fiscal constraint (93.108)

2008 Standard

Effective July 20, 2012 (77 FR 30087), 15 counties in the Atlanta region were designated and classified as a marginal nonattainment area under the 2008 8-hr. ozone standard of 0.075 ppm: Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, and Rockdale counties (see figure opposite page). Initially, an attainment date of December 31, 2015, was set. This date was later changed through litigation to July 20, 2015, for marginal nonattainment areas like Atlanta.

WHAT IS TRANSPORTATION CONFORMITY?

Transportation conformity is the process of ensuring a region's transportation planning activities contribute to attainment of pollutant limits set by the U.S. EPA. These national standards define the allowable concentration of six different pollutants: carbon monoxide, lead, nitrogen dioxide, fine and coarse particulate matter, ozone, and sulfur dioxide.

On May 4, 2016, it was published in the Federal Register that the region was reclassified from a marginal to a moderate nonattainment area (effective June 3, 2016, 81 FR 26697) for failure to meet the ozone standard before July 20, 2015. On July 14, 2016, EPA finalized a clean data determination for the 2008 ozone standard effective August 15, 2016 (81 FR 45419). This determination indicated that the Atlanta region met the 2008 ozone standard for the three summers from 2013 to 2015.

On July 14, 2016, GA EPD submitted a Maintenance Plan to US EPA. This document shows the state's implementation plan for continuing to attain the 2008 ozone standard into the future. Effective June 2, 2017 (82 FR 25523), EPA approved the state's implementation plan and the associated Motor Vehicle Emissions Budgets (MVEBs). This action redesignated the Atlanta region as a maintenance area.

2015 Standard

Effective December 28, 2015 (80 FR 65291), the 2015 8-hr. ozone standard was set at 0.070 ppm. Effective August 3, 2018 (83 FR 25776), seven counties in the Atlanta region were designated and classified as a marginal nonattainment area under the standard: Bartow, Clayton, Cobb, DeKalb, Fulton, Gwinnett, and Henry counties. Effective November 16, 2022, this seven-county area was redesignated as a maintenance area (87 FR 62733).

RECENT CONFORMITY DETERMINATIONS

Since the adoption of the ARC's last MTP in 2020 there have been several positive conformity determinations by USDOT and US EPA. Amendments were the result of project funding changes, programming of new projects with air quality implications, and/or rebalancing of funds. A schedule of the conformity determinations associated with the previous MTP is provided below.

DATE	MTP/TIP ACTION	NAAQS
February 18, 2020	2050 MTP (2020) / FY 2020-2025 TIP	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
September 14, 2020	2050 MTP (2020) / FY 2020-2025 TIP Amendment #1	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
March 17, 2021	2050 MTP (2020) / FY 2020-2025 TIP Amendment #2	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
November 16, 2021	2050 MTP (2020) / FY 2020-2025 TIP Amendment #3	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
March 16, 2022	2050 MTP (2020) / FY 2020-2025 TIP Amendment #4	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
June 14, 2022	2050 MTP (2020) / FY 2020-2025 TIP Amendment #5	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
January 4, 2023	2050 MTP (2020) / FY 2020-2025 TIP Amendment #6	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
May 5, 2023	2050 MTP (2020) / FY 2020-2025 TIP Amendment #7	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone
August 5, 2023	2050 MTP (2020) / FY 2020-2025 TIP Amendment #8	1997 8-hour ozone 2008 8-hour ozone 2015 8-hour ozone

STATEMENT OF CONFORMITY

The purpose of this CDR 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 ARC 2050 MTP (2024) and FY 2024-2027 TIP, the CBMPO 2050 MTP, and the GHMPO 2050 MTP conform to the purpose of the SIP for the 8-hr. ozone standards.

REDUCING OZONE LEVELS

Ozone is not emitted directly by any source but rather is formed when nitrogen oxides (NOx) and volatile organic compounds (VOCs) combine in the air with sunlight. That's why air pollution control strategies are aimed at controlling NOx and VOCs, rather than ozone directly.

ARC has conducted the conformity determination for the ozone maintenance areas, encompassing all three MPOs and parts of the state outside the boundary of the MPOs.

An updated transportation conformity analysis is required under the 8-hr. ozone standards for the three MTPs and TIPs due to numerous changes to regionally significant projects. ARC is updating its MTP/TIP and there are numerous changes to non-exempt projects. CBMPO and GHMPO are also updating their long-range plans which contain numerous changes to non-exempt projects.

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

8-HOUR OZONE STANDARD

For the 8-hr. ozone conformity analysis the MVEB Test is required to demonstrate conformity. The latest approved MVEBs applicable to conformity under the 8-hr. ozone standard were established by GA EPD as part of Georgia's 2008 Ozone Maintenance SIP for the 15-county area and as part of Georgia's 2015 Ozone Maintenance SIP for the 7-county area.

Ozone is not emitted directly by any source; it is formed when Oxides of Nitrogen (NOx) and Volatile Organic Compounds (VOCs) combine in the atmosphere in the presence of sunlight. Therefore, air pollution control strategies are aimed at controlling NOx and VOC. Budgets are established for these two pollutants instead of ozone directly. The transportation conformity analysis for the 15-county 8-hr. ozone maintenance area and 7-county 8 hr. ozone maintenance area was performed with the MVEB Test using the set of approved budgets outlined in the following table.

APPROVED MOTOR VEHICLE EMISSION BUDGETS

ESTABLISHING SIP	EFFECTIVE DATE	YEARS APPLIED TO	MVEBS
Georgia's 2008 Ozone Maintenance SIP	June 2, 2017	All conformity years prior to 2030	NOx: 170.15 tons/day VOC: 81.76 tons/day
Georgia's 2008 Ozone Maintenance SIP	June 2, 2017	All conformity years 2030 and later	NOx: 58 tons/day VOC: 52 tons/day
Georgia's 2015 Ozone Maintenance SIP	November 16, 2022	All conformity years prior to 2033	NOx: 99.99 tons/day VOC: 54 tons/day
Georgia's 2015 Ozone Maintenance SIP	November 16, 2022	All conformity years 2033 and later	NOx: 54 tons/day VOC: 35 tons/day

The results of the emissions analysis for 2050 MTP (2024) demonstrate adherence to the established MVEBs. The conformity analysis was performed for the years 2020, 2030, 2033, 2040, and 2050. 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).

The TIP/MTP remains financially constrained consistent per 23 CFR Part 450 Subpart C (i.e., cost feasible). The funding source for construction and operation, if applicable, of all projects is identified and presented in Appendix 1 of **Volume I: 2050 Metropolitan Transportation Plan**.

Upon completion of the technical conformity analysis, ARC staff have determined that the 2050 MTP (2024) demonstrates 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 IIJA).

INTERAGENCY CONSULTATION

Section 93.105 of the Transportation Conformity Rule requires procedures be established for interagency consultation related to the development of the transportation plan and program and associated conformity determination. The interagency group meets on a routine basis to address transportation and air quality issues. See **Appendix 1** for the approved meeting minutes of the Interagency Consultation Group (IAC). The IAC is comprised of the following groups:

- The MPOs: ARC, CBMPO, and GHMPO
- Georgia Department of Transportation (GDOT)
- Metropolitan Atlanta Rapid Transit Authority (MARTA)
- GA EPD
- Federal Highway Administration (FHWA)
- Federal Transit Authority (FTA)
- US EPA
- Local transit providers: Atlanta-Region Transit Link Authority (ATL), Cherokee, Cobb, Douglas, Gwinnett, and Henry Counties
- Georgia Regional Transportation Agency (GRTA)

INTRODUCTION

ARC, CBMPO, and GHMPO coordinated activities for this conformity analysis with the IAC, and provided regular briefings to each agency's transportation technical and policy committees. ARC staff requested any potential changes with CBMPO and GHMPO projects for travel demand model network coding in May 2023. Draft 2050 MTP (2024) and FY 2024-2027 TIP documents were provided to CBMPO and GHMPO planning partners through the IAC in October 2023 to allow for time to comment prior to the scheduled January 2024 final adoption of the plan.

The draft MTP and TIP documents were made available to other ARC planning partners through the TCC and the Transportation and Air Quality Committee (TAQC) in October 2023, to allow for time to comment prior to formal adoption, in accordance with 93.105(b)(2)(iii) of the Transportation Conformity Rule. Final MTP and TIP documents were provided after January 2024, upon approval of the update, fulfilling the requirement of 40 CFR 93.105(c)(7).

Comments received and responses prepared by ARC are documented in **Volume IV: Public Engagement**.

[3] *While MOVES4 is the most up-to-date version of the MOVES model, there is a two-grace period ending on September 12, 2025 using that version. As there isn't enough time to adjust the input files for MOVES4 for this series, the technical analysis for this conformity determination can be completed using the version 3.1.*

TRANSPORTATION CONFORMITY RULE REQUIREMENTS

The following sections summarize the applicable requirements of Section 93.105 of the Transportation Conformity Rule and how the requirements have been met.

Emissions Analysis - Model and Assumptions

Section 93.105(c)(1)(i) of the Transportation Conformity Rule requires that the IAC be provided the opportunity for evaluating and choosing a model and associated methods and assumptions to be used in the regional emissions analysis needed to demonstrate conformity.

A detailed listing of the procedures and planning assumptions used for the conformity analysis is outlined in Appendix 2. This document was submitted to the IAC in accordance with Section 93.105(c)(1)(i) of the Transportation Conformity Rule. The document includes assumptions for the 8-hr. ozone emissions analyses. The IAC's approval of these assumptions was granted on September 26, 2023.

ARC has consulted with the IAC as to the required version of US EPA's mobile source emission model for the conformity analysis, MOVES3.1[3]. ARC worked in consultation with the GA EPD to develop necessary MOVES3.1 input files that specify all federally mandated and regional motor vehicle emission control programs.

Regionally Significant Projects

A regionally significant project is a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs. Regionally significant projects include those that provide access to and from the area outside the region, provide connections to key places inside the region (such as major activity centers, major planned developments, sports complexes, etc.), and transportation terminals. Modifications to roadways or transit projects that would normally be included in the modeling of a metropolitan area's transportation network are also considered regionally significant, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel. Projects that are regionally significant, regardless of funding source, must be included in the regional emissions analysis in accordance with Section 93.122(a)(1) of the Transportation Conformity Rule.

Section 93.105(c)(1)(ii) of the Transportation Conformity Rule requires an interagency consultation process for determining which minor arterials and other transportation projects (i.e., those projects that are not classified as principal arterials or above) should be considered regionally significant for the purposes of regional emissions analysis. As agreed by the IAC, ARC's policy is that all regional facilities that are functionally classified as minor arterial or above must be included in the travel demand model and regional emissions analysis. The project listing located in Appendix 1 of Volume I: 2050 Metropolitan Transportation Plan contains descriptions of any proposed regionally significant additions or modifications to the transportation system that are expected to be operational in each horizon year within the 8-hr. ozone maintenance areas.

WHAT PROJECTS ARE ANALYZED?

Any transportation project that is deemed 'regionally significant,' regardless of funding source, must be included in the regional emissions analysis. Regionally significant projects include those that provide connections to key regional destinations, such as major activity centers, sports facilities, and large planned developments.

For those regionally significant additions or modifications that fall within ARC's 21-county travel modeling domain, projects are identified and described in the following level of detail:

- ARC's highway network identifies intersections with existing regionally significant facilities.
- The effect of such additions or modifications on route options between transportation analysis zones is defined.
- Highway segments identify the design concept and scope sufficiently to model travel time under various traffic volumes, consistent with ARC's modeling method.
- Transit facilities, equipment, and services proposed for the future are defined in terms of design concept, scope, and operating policies sufficient to model transit ridership.
- Sufficient description of the transportation network shows a reasonable relationship between forecasted land use and the future transportation system.

Identification of Exempt Projects

Section 93.105(c)(1)(iii) of the Transportation Conformity Rule provides for an evaluation of whether or not projects otherwise exempt per Sections 93.126 and 93.127, should be treated as non-exempt in cases where projects may have adverse impact on emissions. Exempt projects are those considered to be neutral with respect to their impact on air quality or are air-quality beneficial.

A draft listing of the proposed projects in the MTPs and TIPs, including their exempt status, was provided to interagency members on October 17, 2023 in advance of the October 24, 2023 meeting, allowing time for the interagency consultation group to review and provide comment as needed prior to Board adoption and USDOT approval of the final MTPs and TIPs. All procedures used in the analysis and identification of these projects were done in accordance with Section 93.105 and provided for evaluation of any nonexempt project which may have been perceived to have an adverse impact on mobile source emissions.

Transportation Control Measures

Transportation Control Measures (TCM) are physical improvements and travel demand management strategies that reduce vehicle-related emissions. A SIP TCM is any TCM that is specifically identified and committed to in an approved SIP for the purpose of reducing emissions of air pollutants from transportation sources by improving traffic flow, reducing congestion, or reducing vehicle use. Section 93.105(c)(1)(iv) of the Transportation Conformity Rule provides for interagency consultation regarding timely implementation of TCMs included in the SIP. The Transportation Conformity Rule specifically requires the following:

- Assurance that the transportation program does not contradict any TCM commitment in the SIP,
- Assurance that the transportation program provides for the expeditious implementation of TCMs, and
- Assurance that the status of each TCM is included with each TIP submission until TCMs are fully implemented.

TCM strategies reflected in any of the 8-hr maintenance ozone SIPs currently are under of the category of Traffic Flow Improvements. This TCM comprises improved signalization.

Per the Final Rule published by the EPA in the Federal Register on March 8, 2021, and effective April 7, 2021, titled "Air Plan Approval; GA: Non-Interference Demonstration and Maintenance Plan Revision for the Removal of Transportation Control Measures in the Atlanta Area" (86 FR 13191), ARC is only required to report the status of a single TCM in the CDR and its amendments. The remainder of the TCMs have been removed from the SIP. Refer to Exhibit F of Appendix 2 for a full listing of TCMs for the Atlanta region that are included in any of the ozone SIPs for Georgia. Currently, all TCMs have been implemented in the region.

Evaluation of Conformity Triggers

Triggers for MTP and TIP conformity determination are established in Section 93.104(e) of the Transportation Conformity Rule. Triggers can include actions that establish new MVEBs for conformity, or that add, delete, or change TCMs, leading to the development of a new transportation plan and TIP conformity determination.

The IAC discusses conformity triggers on an as-needed basis. A conformity determination is required within two years of the effective date of the following triggers:

- US EPA's finding that the MVEBs in a submitted SIP are adequate,
- US EPA's approval of a SIP, if the budget(s) from that SIP have not yet been used in a CDR,
- US EPA's promulgation of an implementation plan which establishes or revises a budget, and/or
- US EPA's approval of a SIP, or promulgation of a Federal Implementation Plan, that adds, deletes, or changes a TCM.

MPO Notification of Non-Federal Regionally Significant Projects

Per Section 93.105(c)(4) of the Transportation Conformity Rule, the interagency consultation process must establish a mechanism to ensure that recipients of USDOT funds notify the MPO of any plans for construction of regionally significant non-federal projects. Regionally significant non-federal projects are those regionally significant projects that do not require federal funding or approval. In addition, the following requirements must be met:

- Notification of a planned project to the MPO is required even if the project sponsor has not made a final decision on project construction.
- Inclusion in the MPO transportation model and the regional emissions analysis is required of all known regionally significant non-federal projects.
- MPOs must respond in writing to any comments regarding regionally significant non-federal projects not adequately being accounted for in the regional emissions analysis.

All the requirements for interagency consultation during the conformity process have been met.

PUBLIC INVOLVEMENT

The 2050 MTP (2024) and FY 2024-2027 TIP reflect input and feedback gained from policy makers, regional leaders, stakeholders and the general public. Outreach efforts, by necessity, were innovative because of the COVID-19 pandemic. ARC was resourceful and steadfast in working to ensure that participation in the MTP development process occurred. As a result, the MTP and TIP reflect a diverse spectrum of opinion and discussions as well as the regional values and priorities of the MPO.

OVERVIEW OF PARTICIPATION ACTIVITIES

Outreach activities to support this effort include the robust participation efforts undertaken in contributing plans studies. Several plans and studies that feed into the MTP and TIP were completed during the plan development process. In addition, the primary way in which the MTP's recommendations are shaped to address issues at the local level is through the Comprehensive Transportation Plan (CTP) program. ARC developed a systematic approach to integrate CTP outreach activities and outcomes to support the MTP. In addition, ARC's pandemic period virtual engagement, including a planning webinar series and Connect ATL, all flowed into the MTP.

MTP-specific outreach activities, outlined below and described in detail in **Volume IV: Public Engagement**, are supplemented by the existing ARC committee and task force structure, including ARC transportation advisory groups, such as those formed as part of ARC's specialized plan/study development process. The 2050 MTP (2024) and FY 2024-2027 TIP participation process involved any person or group expressing interest in its activities and outcomes as well as targeted participants for plan development.

A variety of techniques were used to inform participation and to gather input. Techniques that were used to inform and engage are listed below.

2020 – 2021

- Webinar Series
- Proactive media (Blog posts, press releases, legal ads, social media campaign)
- Earned media

2022 – 2023

- ARC-hosted event: Connect ATL
- MTP Survey
- Proactive media (Blog posts, press releases, legal ads social media campaign)
- Earned media
- Local government briefings and Q/A
- Speaking engagements
- Atlanta Streets Alive
- Public Hearings (In-person and virtual)
- Open Conversation with local government staff

FACTORING IN INFLATION

The projected expense of future projects are expressed in terms of "year of expenditure" to factor in rising costs over time due to inflation. This MTP assumes an annual inflation rate of 2.5%, higher than the 2.2% used in the previous MTP.

PUBLIC REVIEW AND COMMENT PERIOD

The official public review and comment period for the draft 2050 MTP (2024), draft FY 2024-2027 Transportation Improvement Program (TIP), and the draft Conformity Determination Report (CDR) opened on October 27, 2023 and closed on December 8, 2023. Public comments were received in writing via email or mail, orally at one of two formal public hearings – November 8, 2023 at the Transportation and Air Quality Committee meeting and November 15, 2023 at a virtual public hearing scheduled between 5-7 PM.

A formal legal notice was posted in the Fulton County Daily Report, Mundo Hispanico, and on ARC's website. Notice of the official public comment period was also emailed to ARC's transportation specific listservs, and is included in ARC e-newsletters, blogs, and social media. In addition, media advisories and press releases were shared to local television, radio, and newspaper outlets.

Additional details about the public participation process are in Volume IV: Public Engagement, including additional information and results from the MTP public involvement program. Results of the MTP survey and the comments and responses provided during the official public comment period are also presented.

"The projected expense of future projects are expressed in terms of "year of expenditure" "

FISCAL CONSTRAINT

The MTP is required by law to be fiscally constrained, meaning that there will be enough revenue to cover the expected spending over the life of the plan. Revenue sources include federal funds from the USDOT, state funds collected from the motor fuel tax and other fees, local funds collected primarily from sales taxes, transit fares, private sector property tax assessments, and other sources. For purposes of demonstrating that the plan is fiscally constrained, only existing fund sources which are currently dedicated to or have been historically used for transportation purposes can be assumed.

PROJECT COSTS

ARC generally relies on project sponsors for developing, submitting and updating project costs. As a project moves through the development and design process, the scope of the project often changes as various potential designs are identified, evaluated and refined. This frequently results in the cost of the project changing also. Each time the MTP is amended or updated, the most recent project costs are incorporated and fiscal constraint of the overall plan is demonstrated again.

In order to compare the value of revenues and expenses over the horizon of the plan, the MTP uses a convention called "year of expenditure" (YOE) to express amounts. YOE means that the dollar value shown includes inflation between now and the year that the project is implemented. The average annual inflation rate assumed for this plan is 2.5%, which is higher than the 2.2% rate which was used in the previous MTP. While inflationary pressures have increased since 2020 for a variety of reasons, the dramatic spike experienced in 2022 is subsiding and inflation is trending back to the historical norm. The Federal Reserve has stressed that it is strongly committed to achieving its target goal of 2.0% annual inflation through interest rate increases and other measures at its disposal. Consequently, this plan remains optimistic that high inflation is a temporary problem, but does assume a slightly more conservative rate to ensure proposed projects can be implemented on the indicated timeline.

Costs presented in the project listings in Appendix 1 of **Volume I: 2050 Metropolitan Transportation Plan** which are within the TIP period are already inflated. But long-range phases are presented in current year dollars since a precise schedule for implementation has not yet been defined. A phase advanced in the 2031-2040 timeframe, for example, could occur anywhere within that period, resulting in a different cost based on whether the project is undertaken earlier or later in the decade. For this reason, all long range costs are aggregated and inflated to a mid-year point of the timeframe. For the 2031-2040 period, for example, an average YOE assumed is 2035.

The one exception to this approach to presenting costs are those projects comprising the Major Mobility Investment Program (MMIP). Figures for those projects are already inflated since they represent actual payments made on the debt issued to implement them.

Appendix 3 of this document provides the results of the YOE adjustments made to each project for the purposes of fiscally constraining the plan.

REVENUE ASSUMPTIONS

Major revenue assumptions and forecasts are developed in consultation with ARC's Financial Planning Team. The composition and purpose of this group is described in the Consultation and Coordination chapter of **Volume I: 2050 Metropolitan Transportation Plan**. To improve efficiency during this particular planning cycle, the role of the Financial Planning Team was conducted by the broader Interagency Consultation Group due to the significant overlap in membership.

The remainder of this section presents key information related transportation funding from federal, state, local and other sources, including assumptions used in estimating the amounts which will be available through 2050. These total revenues are then compared to estimated costs to implement the plan in order to demonstrate that it is fiscally constrained.

As presented in the Financial Plan chapter of the MTP document, the maximum amount of revenue from all sources which will be available for transportation services, projects and programs through 2050 will be in a range of $171.3 billion to $179.3 billion. The lower estimate reflects a more conservative outlook on the revenue generated by sales taxes around the region, in line with the referenda projections. The upper limit reflects historic collections, which have trended much more strongly than forecasts in recent years due to strong consumer spending.

OVERALL CONSTRAINT

Specific investments totaling $67.7 billion have been identified and reflected in the MTP project list in Appendix 1 of **Volume I: 2050 Metropolitan Transportation Plan**. These are projects which use federal funds and/or must be incorporated into the regional travel demand and air quality conformity analysis. These are referred to as "on-database project investments" on the following table.

Another $82.6 billion remains available for commitment to future projects yet to be identified. The overwhelming majority of these investments will be small scale maintenance and modernization projects being advanced by GDOT and local governments using non-federal funding sources. These projects do not have to be individually listed in the MTP or TIP and are referred to as "off-database project investments".

In addition to expenditures on projects, an additional $18.0 billion of the revenue generated at the state and local levels will be for administrative purposes (i.e., staffing and operating the various agencies and departments which are responsible for implementing transportation projects). This estimate was derived through a review of administrative line items contained within the budget documents of GDOT and a representative sample of local governments. It is also classified as an "off-database project investment".

Because the lower conservative estimate of $171.3 billion of revenue exceeds the $168.3 billion of expenditures for on-database project investments ($67.7 billion), off-database project investments ($82.6 billion) and agency operating expenses ($18.0 billion), the plan is fiscally constrained.

FHWA FORMULA FUNDS

A more detailed breakdown of FHWA formula funding is provided in a separate table. This shows that current commitments in the MTP/TIP sum to about $30.7 billion, while available funding from those programs total to $33.0 billion. The resultant $2.3 billion uncommitted balance is available in the event that a project cost increases or a new project must be added to the plan during a future amendment cycle.

FTA FORMULA AND CAPITAL INVESTMENT GRANT (CIG) FUNDS

A more detailed breakdown of FTA formula funding, as well as potential funding from the CIG discretionary program, is provided in a separate table. This shows that current commitments for formula funds in the MTP/TIP sum to about $5.6 billion, while available funding from those programs total to $6.2 billion. Note the explanation below the table regarding ongoing work related to assigning the uncommitted $0.6 billion of funds to line items in the plan.

DEMONSTRATION OF OVERALL MTP FISCAL CONSTRAINT - FEBRUARY 2024

	FEDERAL INVESTMENTS				
	FHWA FORMULA	FHWA	FTA FORMULA	FTA	TOTAL
ON DATABASE PROJECT INVESTMENTS					
Managed Lanes	$9,345,703,265	$136,124,447	$0	$0	**$9,481,827,712**
Highway Expansion	$3,131,696,449	$130,657,282	$0	$0	**$3,262,353,731**
Transit Expansion	$11,671,343	$150,000	$0	$4,026,021,803	**$4,037,843,146**
Bike/Ped Expansion	$692,662,810	$56,564,500	$0	$3,000,000	**$752,227,310**
Other Programs/Initiatives	$4,653,227,645	$9,382,460	$0	$0	**$4,662,610,105**
Road/Bridge Preservation		$0	$0	$0	**$10,237,395,658**
Road System Optimization and Safety	$2,115,243,205	$15,493,240	$0	$0	**$2,130,736,445**
Transit Operations and Capital Replacement (All Systems)	$21,141,666	$45,000,000	$6,105,286,468	$3,600,000	**$6,175,028,134**
	$19,971,346,383	**$393,371,929**	**$6,105,286,468**	**$4,032,621,803**	**$40,740,022,241**
OFF DATABASE PROJECT INVESTMENTS (SEE NOTES 1, 2 AND 3)					
Bike/Ped Expansion	N/A				
Road/Bridge Preservation					
Road System Optimization and Safety					
Transit Operations and Capital Replacement (MARTA)					
Transit Operations and Capital Replacement (Non-MARTA)					
OFF DATABASE PROJECT INVESTMENTS (SEE NOTES 1, 2 AND 3)					
City, County & State Agency Operations & Administration	N/A				
TOTAL INVESTMENTS	**$19,971,346,383**	**$393,371,929**	**$6,105,286,468**	**$4,032,621,803**	**$40,740,022,241**
AVAILABLE FUNDS (See Note 4)	**$33,000,000,000**	**$393,371,929**	**$6,200,000,000**	**$4,100,000,000**	**$43,693,371,929**
UNCOMMITTED FUNDS	**$13,028,653,617**	**$0**	**$94,713,532**	**$67,378,197**	**$2,953,349,688**

NOTES

(1) Amounts for State Investment assume that all available funds not required for matching federally projects funds will be programmed for: 1) administrative expenses, and 2) projects which are classified as exempt for air quality analysis purposes and do not have to be individually identified in the plan. Breakdown is 80% for road/bridge preservation and 20% for road system optimization and safety.

(2) Amounts for Local Government and CID Investments assume that all available funds not required for matching federally projects funds will be programmed for: 1) administrative expenses, and 2) projects which are classified as exempt for air quality analysis purposes and do not have to be individually identified in the plan. Breakdown is 15% for bike/ped expansion, 40% for road/bridge preservation, and 45% for road system optimization and safety.

(3) Amounts for Transit System Investments assume that all available funds not required for matching federally projects funds will be programmed for: 1) administrative expenses, and 2) projects which are classified as exempt for air quality analysis purposes and do not have to be individually identified in the plan.

(4) Amounts shown in this column are not additional revenue. They reflect a financing mechanism where funds available from the sale of bonds are repaid from existing federal, state and toll revenues in the future. The payback amounts, including debt service, are accounted for within the expenditures of those revenue sources. Toll revenues are assumed to be fully committed to operating and maintaining the express lane system and for debt service, leaving no excess revenue for commitment to other projects or programs in the MTP, thus they are not presented as a separate source. For more information, refer to the Financial Plan section of Volume I: 2050 Metropolitan Transportation Plan.

DEMONSTRATION OF OVERALL MTP FISCAL CONSTRAINT - FEBRUARY 2024 (CONT.)

	NON-FEDERAL INVESTMENTS				
	STATE	BONDS (SEE NOTE 4)	LOCAL GOVT / CID	TRANSIT OPERATORS	TOTAL INVESTMENT
ON DATABASE PROJECT INVESTMENTS					
Managed Lanes	$4,341,902,867	$13,271,487,514	$15,971,428	$0	$13,839,702,007
Highway Expansion	$5,060,244,177	$23,600,000	$3,226,068,903	$0	$11,548,666,812
Transit Expansion	$930,150	$0	$0	$5,691,848,006	$9,730,621,303
Bike/Ped Expansion	$1,063,534	$0	$615,180,811	$0	$1,368,471,655
Other Programs/Initiatives	$14,674,613	$0	$1,147,563,167	$0	$5,824,847,884
Road/Bridge Preservation	$2,444,016,104	$0	$566,621,631	$0	$13,248,033,394
Road System Optimization and Safety	$1,078,699,518	$0	$92,085,258	$0	$3,301,521,220
Transit Operations and Capital Replacement (All Systems)	$436,088,888	$0	$0	$1,881,220,669	$8,492,337,690
	$13,377,619,851	**$13,295,087,514**	**$5,663,491,198**	**$7,573,068,675**	**$67,354,201,965**
OFF DATABASE PROJECT INVESTMENTS (SEE NOTES 1, 2 AND 3)					
Bike/Ped Expansion	$0	$0	$2,525,476,320	$0	$2,525,476,320
Road/Bridge Preservation	$28,977,904,119	$0	$6,734,603,521	$0	$35,712,507,640
Road System Optimization and Safety	$7,244,476,030	$0	$7,576,428,961	$0	$14,820,904,991
Transit Operations and Capital Replacement (MARTA)	$0	$0	$0	$28,430,584,759	$28,430,584,759
Transit Operations and Capital Replacement (Non-MARTA)	$0	$0	$0	$1,496,346,566	$1,496,346,566
	$36,222,380,149	**$0**	**$16,836,508,802**	**$29,926,931,325**	**$82,985,820,276**
OFF DATABASE PROJECT INVESTMENTS (SEE NOTES 1, 2 AND 3)					
City, County & State Agency Operations & Administration	$3,000,000,000	$0	$14,000,000,000	$1,000,000,000	$18,000,000,000
	$3,000,000,000	**$0**	**$14,000,000,000**	**$1,000,000,000**	**$18,000,000,000**
TOTAL INVESTMENTS	**$52,600,000,000**	**$13,295,087,514**	**$36,500,000,000**	**$38,500,000,000**	**$168,340,022,241**
AVAILABLE FUNDS (See Note 4)	**$52,600,000,000**	**$13,295,087,514**	**$36,500,000,000**	**$38,500,000,000**	**$171,293,371,929**
UNCOMMITTED FUNDS	**$0**	**$0**	**$0**	**$0**	**$2,953,349,688**

NOTES

(1) Amounts for State Investment assume that all available funds not required for matching federally projects funds will be programmed for: 1) administrative expenses, and 2) projects which are classified as exempt for air quality analysis purposes and do not have to be individually identified in the plan. Breakdown is 80% for road/bridge preservation and 20% for road system optimization and safety.

(2) Amounts for Local Government and CID Investments assume that all available funds not required for matching federally projects funds will be programmed for: 1) administrative expenses, and 2) projects which are classified as exempt for air quality analysis purposes and do not have to be individually identified in the plan. Breakdown is 15% for bike/ped expansion, 40% for road/bridge preservation, and 45% for road system optimization and safety.

(3) Amounts for Transit System Investments assume that all available funds not required for matching federally projects funds will be programmed for: 1) administrative expenses, and 2) projects which are classified as exempt for air quality analysis purposes and do not have to be individually identified in the plan.

(4) Amounts shown in this column are not additional revenue. They reflect a financing mechanism where funds available from the sale of bonds are repaid from existing federal, state and toll revenues in the future. The payback amounts, including debt service, are accounted for within the expenditures of those revenue sources. Toll revenues are assumed to be fully committed to operating and maintaining the express lane system and for debt service, leaving no excess revenue for commitment to other projects or programs in the MTP, thus they are not presented as a separate source. For more information, refer to the Financial Plan section of Volume I: 2050 Metropolitan Transportation Plan.

DEMONSTRATION OF FISCAL CONSTRAINT (FHWA FORMULA FUNDS) - FEBRUARY 2024

AGGREGATE COST OF PROGRAMMED PROJECTS

FHWA PROGRAM (SEE NOTE 5)	2024	2025	2026 (SEE NOTE 4)	2027	2028 (SEE NOTE 2)
Bridge Formula Program	$3,716,590	$4,635,881	$4,215,452	$7,161,600	$0
Carbon Reduction Program (>200K) (ARC)	$17,875,928	$13,031,446	$13,292,075	$13,557,917	$13,829,075
Congestion Mitigation & Air Quality Improvement (CMAQ)	$32,900,000	$29,000,000	$47,000,000	$29,000,000	$29,000,000
Highway Infrastructure	$60,000	$0	$0	$0	$0
National Highway Freight Program (NHFP)	$42,296,782	$41,800,000	$21,881,316	$7,676,263	$0
Highway Safety Improvement Program (HSIP)	$37,288,000	$37,288,000	$0	$0	$0
Railway Highway Hazard Elimination Setaside (See Note 3)	$1,864,800	$1,864,800	$0	$0	$0
Railway Highway Protective Devices Setaside (See Note 3)	$1,491,200	$1,491,200	$0	$0	$0
National Highway Performance Program (NHPP)	$440,594,525	$613,696,555	$518,994,257	$581,652,875	$745,542,794
PROTECT (Y800)	$5,560,785	$0	$0	$0	$0
STBG - Statewide Flexible (GDOT)	$156,250,827	$160,095,089	$32,344,447	$12,747,818	$110,168,368
Off-System Bridge Setaside (See Note 3)	$5,040,195	$5,192,997	$1,104,000	$2,256,000	$0
STBG - Urban (>200K) (ARC)	$169,813,657	$106,528,346	$100,307,708	$107,061,043	$106,515,188
TAP - Urban (>200K) (ARC)	$15,768,334	$16,083,701	$16,405,375	$16,733,482	$17,068,152
TAP - Statewide (Recreational Trails Program)	$466,400	$466,400	$0	$0	$0
General Federal Aid 2026-2050	$0	$0	$0	$0	$0
Total of Project Costs	**$930,988,023**	**$1,031,174,415**	**$755,544,630**	**$777,846,998**	**$1,022,123,577**
Running Total Cost	**$930,988,023**	**$1,962,162,438**	**$2,717,707,068**	**$3,495,554,066**	**$4,517,677,643**
ESTIMATED AGGREGATE REVENUE					
FHWA Formula Funding Revenue (See Note 1)	**$978,276,280**	**$1,000,189,702**	**$1,022,555,400**	**$1,045,385,113**	**$1,068,683,989**
Running Total Revenue	**$978,276,280**	**$1,978,465,982**	**$3,001,021,382**	**$4,046,406,495**	**$5,11Q5,090,484**
NET REVENUES MINUS COSTS					
Running Total Balance (YOE)	**$47,288,257**	**$16,303,544**	**$283,314,314**	**$550,852,429**	**$597,412,841**

FEDERALLY RECOGNIZED FOUR-YEAR REGIONAL TIP COINCIDING WITH CURRENT STATEWIDE TIP TIMEFRAME

NOTES

(1) 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, as documented in the Financial Plan chapter of the MTP. 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 2024-2027), the program is balanced and is less than revenue estimates.

(2) FY 2028 is not considered to be part of the federally required four year TIP. Project costs and revenue estimates for this additional year are presented for information purposes only.

(3) 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.

(4) The total for CMAQ includes an $18,000,000 statewide commitment by GDOT for AR-061-2026. These funds are in addition to the base suballocated amount for the Atlanta region in other fiscal years.

DEMONSTRATION OF FISCAL CONSTRAINT (FHWA FORMULA FUNDS) - FEBRUARY 2024 (CONT.)

AGGREGATE COST OF PROGRAMMED PROJECTS

FHWA PROGRAM (SEE NOTE 5)	LR 2029-2030	LR 2031-2033	LR 2034-2040	LR 2041-2050	TOTAL
Bridge Formula Program	$0	$0	$0	$0	$19,729,523
Carbon Reduction Program (>200K) (ARC)	$0	$0	$0	$0	$71,586,441
Congestion Mitigation & Air Quality Improvement (CMAQ)	$0	$0	$0	$0	$166,900,000
Highway Infrastructure	$0	$0	$0	$0	$60,000
National Highway Freight Program (NHFP)	$0	$0	$0	$0	$113,654,361
Highway Safety Improvement Program (HSIP)	$0	$0	$0	$0	$74,576,000
Railway Highway Hazard Elimination Setaside (See Note 3)	$0	$0	$0	$0	$3,729,600
Railway Highway Protective Devices Setaside (See Note 3)	$0	$0	$0	$0	$2,982,400
National Highway Performance Program (NHPP)	$0	$0	$0	$0	$2,900,481,006
PROTECT (Y800)	$0	$0	$0	$0	$5,560,785
STBG - Statewide Flexible (GDOT)	$0	$0	$0	$0	$471,606,549
Off-System Bridge Setaside (See Note 3)	$0	$0	$0	$0	$13,593,192
STBG - Urban (>200K) (ARC)	$0	$0	$0	$0	$590,225,942
TAP - Urban (>200K) (ARC)	$0	$0	$0	$0	$82,059,044
TAP - Statewide (Recreational Trails Program)	$0	$0	$0	$0	$932,800
General Federal Aid 2026-2050	$2,052,557,390	$3,210,234,014	$8,739,921,097	$11,688,351,897	$25,691,064,398
Total of Project Costs	**$2,052,557,390**	**$3,210,234,014**	**$8,739,921,097**	**$11,688,351,897**	**$30,208,742,041**
Running Total Cost	**$6,570,235,033**	**$9,780,469,047**	**$18,520,390,144**	**$30,208,742,041**	

ESTIMATED AGGREGATE REVENUE

FHWA Formula Funding Revenue (See Note 1)	**$2,181,348,207**	**$3,411,011,568**	**$8,617,636,215**	**$13,651,394,952**	**$32,976,481,426**
Running Total Revenue	**$7,296,438,691**	**$10,707,450,259**	**$19,325,086,474**	**$32,976,481,426**	

NET REVENUES MINUS COSTS					UNCOMMITTED BALANCE
Running Total Balance (YOE)	**$726,203,658**	**$926,981,212**	**$804,696,330**	**$2,767,739,385**	**$2,767,739,385**

NOTES

(1) 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, as documented in the Financial Plan chapter of the MTP. 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 2024-2027), the program is balanced and is less than revenue estimates.

(2) FY 2028 is not considered to be part of the federally required four year TIP. Project costs and revenue estimates for this additional year are presented for information purposes only.

(3) 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.

(4) The total for CMAQ includes an $18,000,000 statewide commitment by GDOT for AR-061-2026. These funds are in addition to the base suballocated amount for the Atlanta region in other fiscal years.

DEMONSTRATION OF FISCAL CONSTRAINT (FTA FORMULA AND CIG FUNDS) - FEBRUARY 2024

AGGREGATE COST OF PROGRAMMED PROJECTS

FTA PROGRAM	2024 (SEE NOTE 1)	2025 (SEE NOTE 1)	2026 (SEE NOTE 1)	2027 (SEE NOTE 1)	2028 (SEE NOTE 2)
Bus and Bus Facilities Program	$6,503,172	$6,503,172	$6,503,172	$6,503,172	$6,503,172
Enhanced Mobility of Seniors and Individuals with Disabilities	$5,300,000	$5,300,000	$5,300,000	$5,300,000	$5,300,000
State of Good Repair Grants	$85,425,445	$85,425,445	$85,425,445	$85,425,445	$85,425,445
Transit Urbanized Area Formula Program	$97,978,363	$97,978,363	$97,978,363	$97,978,363	$97,978,363
Total of Project Costs	**$195,206,980**	**$195,206,980**	**$195,206,980**	**$195,206,980**	**$195,206,980**
Running Total Cost	**$195,206,980**	**$390,413,960**	**$585,620,940**	**$780,827,920**	**$976,034,900**
ESTIMATED AGGREGATE FORMULA FUNDING REVENUE					
Estimated FTA Formula Funds Revenue (See Note 1)	**$195,206,980**	**$195,206,980**	**$195,206,980**	**$195,206,980**	**$195,206,980**
Running Total Revenue	**$195,206,980**	**$390,413,960**	**$585,620,940**	**$780,827,920**	**$976,034,900**
NET REVENUES MINUS COSTS					**UNCOMMITTED FUNDS**
Running Total Balance (YOE)	**$0**	**$0**	**$0**	**$0**	**$-**
AGGREGATE COST OF PROGRAMMED PROJECTS USING CAPITAL INVESTMENT GRANT (CIG) DISCRETIONARY AWARDS					
CIG Program	**$0**	**$0**	**$0**	**$150,000,000**	**$150,000,000**
ESTIMATED AGGREGATE CIG PROGRAM REVENUE					
FTA CIG Program Revenue (See Note 4)	**$0**	**$0**	**$0**	**$150,000,000**	**$150,000,000**
NET REVENUES MINUS COSTS					**UNCOMMITTED FUNDS**
Running Total Balance (YOE)	**$0**	**$0**	**$0**	**$0**	**$0**

FEDERALLY RECOGNIZED FOUR-YEAR REGIONAL TIP COINCIDING WITH CURRENT STATEWIDE TIP TIMEFRAME

NOTES

(1) ARC forecasts that up to $6.2 billion of FTA formula funds will be available to the region over the timeframe of the plan. Regional funds for each core program are subdivided among eligible recipient agencies each fiscal year. FY 2024 appropriations and suballocated data for each agency was not available at the time of this document being prepared, so amounts shown are estimates which will be updated once appropriations amounts are available.

(2) FY 2028 is not considered to be part of the federally required four year TIP. Project costs and revenue estimates for this additional year 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. Refer to the Transit Program of Projects contained in "Volume II: FY 2024-2027 Transportation Improvement Program" for more information on how carryover balances are managed.

(4) An ATL Authority analysis forecasts up to $4.1 billion of CIG revenue could be available to the region over the timeframe of the plan. Revenue amounts by time period reflect current programming assumptions associated with individual projects expected to use those funds, but the actual timing and amount of funds may vary significantly. For more information on CIG revenue assumptions, refer to the Financial Plan section of Volume I: 2050 Metropolitan Transportation Plan.

DEMONSTRATION OF FISCAL CONSTRAINT (FTA FORMULA AND CIG FUNDS) - FEBRUARY 2024 (CONT.)

AGGREGATE COST OF PROGRAMMED PROJECTS

FTA PROGRAM	LR 2029-2030	LR 2031-2033	LR 2034-2040	LR 2041-2050	TOTAL
Bus and Bus Facilities Program	$13,669,798	$21,126,010	$50,787,682	$80,144,568	$198,243,918
Enhanced Mobility of Seniors and Individuals with Disabilities	$10,510,101	$16,242,851	$22,313,367	$61,619,597	$137,185,915
State of Good Repair Grants	$179,565,981	$277,510,515	$667,145,177	$1,052,776,176	$2,604,125,075
Transit Urbanized Area Formula Program	$220,712,111	$341,099,862	$820,016,235	$1,294,011,537	$3,165,731,560
Total of Project Costs	$424,457,991	$655,979,238	$1,560,262,461	$2,488,551,878	$6,105,286,468
Running Total Cost	$1,400,492,891	$2,056,472,129	$3,616,734,590	$6,105,286,468	

ESTIMATED AGGREGATE FORMULA FUNDING REVENUE

Estimated FTA Formula Funds Revenue (See Note 1)	**$424,457,991**	**$655,979,238**	**$1,560,262,461**	**$2,488,551,878**	**$6,105,286,468**
Running Total Revenue	**$1,400,492,891**	**$2,056,472,129**	**$3,616,734,590**	**$6,105,286,468**	

NET REVENUES MINUS COSTS					UNCOMMITTED FUNDS
Running Total Balance (YOE)	**$0**	**$0**	**$0**	**$0**	**$0**

AGGREGATE COST OF PROGRAMMED PROJECTS USING CAPITAL INVESTMENT GRANT (CIG) DISCRETIONARY AWARDS

CIG Program	**$0**	**$657,937,565**	**$177,131,699**	**$2,866,665,795**	**$4,001,735,058**

ESTIMATED AGGREGATE CIG PROGRAM REVENUE

FTA CIG Program Revenue (See Note 4)	**$0**	**$657,937,565**	**$177,131,699**	**$2,866,665,795**	**$4,001,735,058**

NET REVENUES MINUS COSTS					UNCOMMITTED FUNDS
Running Total Balance (YOE)	**$0**	**$0**	**$0**	**$0**	**$0**

NOTES

(1) ARC forecasts that up to $6.2 billion of FTA formula funds will be available to the region over the timeframe of the plan. Regional funds for each core program are subdivided among eligible recipient agencies each fiscal year. FY 2024 appropriations and suballocated data for each agency was not available at the time of this document being prepared, so amounts shown are estimates which will be updated once appropriations amounts are available.

(2) FY 2028 is not considered to be part of the federally required four year TIP. Project costs and revenue estimates for this additional year 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. Refer to the Transit Program of Projects contained in "Volume II: FY 2024-2027 Transportation Improvement Program" for more information on how carryover balances are managed.

(4) An ATL Authority analysis forecasts up to $4.1 billion of CIG revenue could be available to the region over the timeframe of the plan. Revenue amounts by time period reflect current programming assumptions associated with individual projects expected to use those funds, but the actual timing and amount of funds may vary significantly. For more information on CIG revenue assumptions, refer to the Financial Plan section of Volume I: 2050 Metropolitan Transportation Plan.

LATEST PLANNING ASSUMPTIONS

OVERVIEW

Section 93.110 of the Transportation Conformity Rule (Criteria and Procedures: Latest Planning Assumptions), defines the requirements for the most recent planning assumptions that must be in place at the initiation of the conformity determination process.

The planning assumptions relate to the socioeconomic forecasts, transit operating policies, and the transit and toll fare policies that impact the travel demand modeling process. A January 18, 2001 (revised in December 2008), memorandum from US EPA entitled "Use of Latest Planning Assumptions in Conformity Determinations," states that "areas are strongly encouraged to review and strive towards regular 5-year updates of planning assumptions, especially population, employment, and vehicle registration assumptions." ARC completes frequent, recurrent updates of planning assumptions used in the travel demand and emissions modeling process. ARC continuously reviews the travel demand model and regional emissions model as well as all assumptions and data used in model validation through the interagency consultation process. Newer assumptions and data are incorporated as appropriate.

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 **Appendix 2**. This document was 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 September 26, 2023.

Since the adoption of the last regional plan, ARC has updated its activity-based model. The 2019 Transit On-Board Survey was used to validate and update the transit element in the mode choice portion of the model. A new mode, Transportation Network Companies (TNCs), was incorporated as well. **Appendix 2** includes data on model calibration and validation. The current activity-based model is calibrated to the year 2015 and is validated to 2019/2020 pre-pandemic conditions and traffic volumes.

SOCIOECONOMIC FORECASTS

Per Section 93.110(b) of the Transportation Conformity Rule, the MTP must quantify and document the demographic and employment factors which influence the expected travel demand, including land use forecasts.

In addition to the structural changes listed above, travel demand model enhancements include updated population and employment estimates. For the 2050 MTP (2024) and the FY 2024-2027 TIP, ARC produced forecasts of population, households by income, auto ownership and number of workers and employment by industry and land use type for the entire 21-county region (which includes the maintenance portions of GHMPO and CBMPO). ARC produces forecasts through a process briefly outlined below, and in more detail in Appendix 2.

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 the winter and spring of 2022. TAC members advised staff on land use model calibration, policy variable development, and related iterative revisions to model runs. The TAC then recommended the final regional control total forecasts for use in the ARC's plans, including Hall and Bartow counties. Interagency consultation partners agreed on these population forecasts on September 26, 2023.

The PECAS (Production Exchange Consumption Allocation System) model was used in modeling to disaggregate the regional controls to small areas. This model runs annually and iteratively. The process is integrated with the ARC travel demand model, as impedances (travel costs) from the travel demand model are a significant influence layer for spatial allocation of population and job growth. A more detailed explanation of the techniques used to draft population and employment estimates is outlined in Appendix 2.

TOLLS AND MANAGED LANES

The first optional toll facility in the region, the I-85 Express Lanes, opened in 2011. The I-75 South Metro Express Lanes, the Northwest Corridor Express Lanes, and the I-85 Express Lanes Extension opened throughout 2017 and 2018. Additional future managed lane facilities as part of GDOT's Major Mobility Investment Program (MMIP) include I-285 Eastside, I-285 Top End, I-285 Westside, SR 400 as well as the I-75 South Commercial Vehicle Lanes. Additional long-range managed lanes projects include additional lanes on I-85 North, I-20 East, I-20 West, and the I-75 Gap between the HOV system and the I-75 South Metro Express Lanes. These projects are all planned to be open by 2050.

One advantage of the activity-based model over the trip-based model is its significantly improved sensitivity to highway pricing. Joint travel was specifically introduced to enhance modeling of HOV/HOT facilities. There are 15 trip modes for assignment in the activity-based model, including auto by occupancy and toll/non-toll choice, walk and bike modes as well as walk and drive to transit modes. Assignments are multi-class and include the following classes:

- SOV (non-toll)
- HOV 2 (non-toll)
- HOV 3+ (non-toll)
- SOV (toll eligible)
- HOV 2 (toll eligible)
- HOV 3+ (toll eligible)
- Commercial vehicle
- Medium duty truck
- Heavy duty truck: I-285 by-pass
- Heavy duty truck: remaining

TRANSIT OPERATING PROCEDURES

The conformity determination for each transportation plan and program must discuss how transit operating policies (including fares and service levels) and assumed transit ridership has changed since the previous conformity determination per Section 93.110(c). A detailed listing of the procedures and planning assumptions, including transit modeling assumptions, for the conformity analysis of the 2050 MTP (2024) and FY 2024-2027 TIP, GHMPO 2050 MTP, and CBMPO 2050 MTP is outlined in Appendix 2.

Provided below is a summary of the major transit modeling components.

On-Board Transit Survey Expansion

ARC conducted a regional transit on-board survey in 2019 to get a better understanding of transit rider travel behavior. The survey was used to make important updates to the mode choice model for the model used with this MTP update.

Zero-Car Household Distribution

Given that the 2019 regional transit on-board survey indicated that approximately 36% of transit ridership in the Atlanta region originates in households with no automobiles, the location of those households is extremely important when estimating transit ridership. The ARC activity-based model auto ownership model is estimated with both the travel survey results and American Community Survey data. These data allow staff to develop distributions of households by number of workers and vehicles owned. The resulting output is calibrated to ensure that the right number of zero-car households by number of workers is generated and distributed correctly in the region. The generation and placement of zero-car households impacts the total transit tours being generated by the model.

Fare Changes

Assumptions about transit fares for the existing and planned regional transit system were made and coded in the regional travel demand model. Transit fares are used as supplied by the regional transit operators and remain constant over time, throughout the life of the plan, across all network years. The fares reflect current operating plans, as provided to ARC by the various transit operators throughout the region. The transit fare structure involves different fares by transit systems coded as distinct operators along with each mode. Transfer amounts are also factored in when transferring between operators. Base one-way fares amongst the transit operators for fixed route service have not changed in the region since the prior MTP in 2020. Fares are in 2010 dollars CPI adjusted from what they were in 2015, except for the Atlanta Streetcar which began charging a fare in 2016.

Service Level Changes

At the time of the model development for the 2050 MTP (2024), eight transit agencies provided fixed route service in the Atlanta maintenance areas: Cherokee Area Transportation System (CATS), CobbLinc, Connect Douglas, Hall County Transit (HAT), Henry County Transit (HCT), Metropolitan Atlanta Rapid Transit Authority (MARTA), Ride Gwinnett, and XPRESS bus service through the Atlanta-Region Transit Link Authority (ATL). MARTA is the sole provider of heavy rail service as well as the ownership of the Atlanta Streetcar as of June 2018. Express bus service was provided by CobbLinc, Ride Gwinnett, MARTA, and the ATL. Local bus service was provided by all regional transit providers except the ATL. Hall County Transit discontinued their fixed route service effective July 1st 2021 in favor of a vanpool service.

Since adoption of the previous MTP, transit service in the region has seen major change. The regional transit agencies cut back service in spring 2020 due to the COVID-19 pandemic and has been steadily adding service back in the years since. However, the regional transit agency ridership remains significantly lower than it was pre-pandemic due to certain factors such as increased teleworking in the region. The ATL XPRESS system has been impacted the most of all the transit providers in the region as many office workers that commuted into Atlanta pre-pandemic now work from home during some or most of the work week post-pandemic.

The ARC travel demand model includes all Transportation Management Associations (TMA) and university shuttle operators in the Atlanta maintenance areas. Public shuttle services connecting specific major activity centers in the region include Atlantic Station provided through the Atlantic Station Access + mobility Program (ASAP+), the Buckhead Uptown Connection (BUC) provided through Livable Buckhead, and the Clifton Corridor provided through the Clifton Corridor TMA (CCTMA). Regional universities with shuttle service include: Atlanta University Center (AUC), Emory University, Georgia Institute of Technology, Georgia State University (GSU), Kennesaw State University (KSU), Life University, Savannah College of Art & Design (SCAD) Atlanta, University of North Georgia (UNG) Gainesville, and the University of West Georgia (UWG). On April 19, 2022, the BUC switched from fixed route shuttle operations to on-demand service.

Future Regional Transit Service

The CDR must include reasonable assumptions about transit service as well as increases in transit fares, road, and bridge tolls over time per Section 93.110(d). ARC has included several major expansions to the regional transit system over the life of this plan. Specific details about the expansions can be found in **Volume 1: 2050 Metropolitan Transportation Plan**. All projects meet the requirements of fiscal constraint and are appropriately accounted for in the federally required travel demand and mobile source emission modeling processes.

Major transit expansion projects included in the 2050 MTP (2024) include:

- I-285 North Corridor Bus Rapid Transit from Hamilton E Holmes MARTA Station to Indian Creek MARTA Station (AR-409A)
- Clifton Corridor Bus Rapid Transit - Phase 1 from Lindbergh Center MARTA Station to Emory University (AR-411)
- Clifton Corridor Bus Rapid Transit - Phase 2 from Emory University to Avondale MARTA Station (AR-412)
- I-20 East High-Capacity Premium Transit Service from Downtown Atlanta to Stonecrest Mall Area (AR-420)
- Summerhill Bus Rapid Transit from Downtown Atlanta to Southeast Atlanta Beltline (AR-454)
- Clayton Southlake Bus Rapid Transit Service from College Park MARTA Station to Southlake Mall (AR-455)
- North Avenue Corridor Bus Rapid Transit Service from North Avenue MARTA Station to Atlanta Beltline East / Ponce City Market (AR-457)
- Campbellton Road Bus Rapid Transit Service from Oakland City MARTA Station to Barge Road (AR-459)
- GA 400 Corridor Bus Rapid Transit Service from North Springs MARTA Station to Windward Parkway (AR-470)
- Connect Cobb / Northwest Atlanta High-Capacity Premium Transit Service from Kennesaw State University to Midtown Atlanta (AR-475)
- SR 54 Bus Rapid Transit - Phase 1 from East Point MARTA Station to Clayton Justice Center (AR-485A)
- SR 54 Bus Rapid Transit - Phase 2 from Clayton Justice Center to Lovejoy (AR-485B)
- Atlanta Streetcar East Extension from Jackson Street to Ponce City Market (AR-490A1)

- Atlanta Streetcar - Atlanta Beltline East Corridor from Ponce City Market to Lindbergh Center MARTA Station (AR-490B)
- Atlanta Streetcar - West Extension from Centennial Olympic Park to Westview Drive at Langhorn Street (AR-490C)
- Atlanta Streetcar - Atlanta Beltline Southwest Corridor from Westview Drive at Langhorn Street to MARTA South Rail Line between West End and Oakland City Rail Stations (AR-490D)
- Atlanta Streetcar - Northwest Beltline Corridor from Westview Drive at Langhorn Street to Bankhead MARTA Station (AR-490F)
- Atlanta Streetcar - Southeast Beltline Corridor from Irwin Street to University Avenue (AR-490G)
- South Fulton Parkway Corridor Bus Rapid Transit Service from College Park MARTA Station to SR 92 (AR-491A)
- North Avenue Corridor Bus Rapid Transit from North Avenue MARTA Station to Bankhead MARTA Rail Station (AR-491B)
- Northside Drive Corridor Bus Rapid Transit from Atlanta Metropolitan State College to I-75 North (AR-491C)
- I-85 North / Satellite Boulevard Corridor Bus Rapid Transit from Doraville MARTA Rail Station to Sugarloaf Mills (AR-491D)
- Buford Highway Arterial Rapid Transit from Lindbergh Center MARTA Station to Doraville MARTA Rail Station (AR-491E)
- Candler Road Arterial Rapid Transit from Avondale MARTA Station to GSU Panthersville Campus (AR-491F)
- Peachtree Road Arterial Rapid Transit from Arts Center MARTA Station to Brookhaven/Oglethorpe University MARTA Station (AR-491G)
- Metropolitan Parkway / Cleveland Avenue Arterial Rapid Transit (M-AR-451)

QUANTITATIVE ANALYSIS

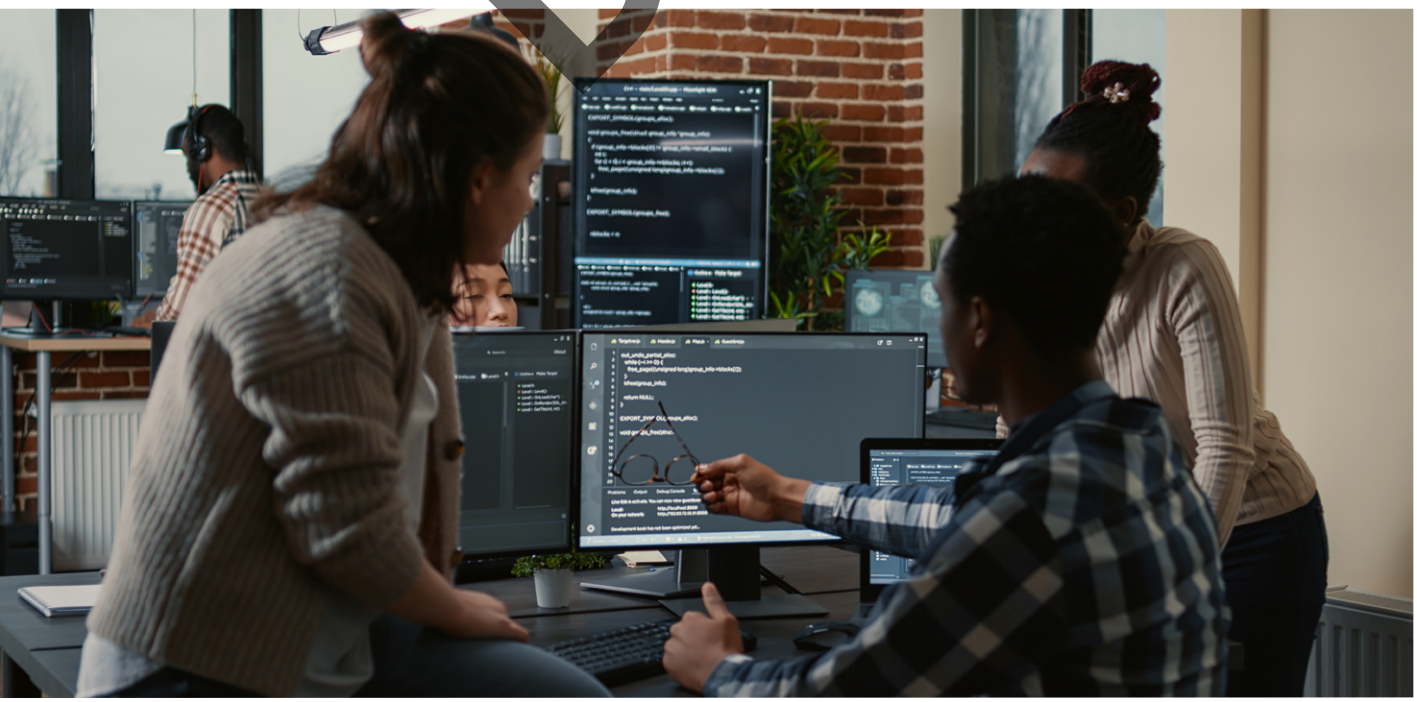
The regional emissions analysis used to demonstrate conformity to the 8-hr. ozone standard relies on ARC's 21-county regional activity-based travel demand model. Updated travel model networks were created for each analysis year (2020, 2030, 2033, 2040, and 2050) to reflect projects as listed in the 2050 MTP (2024), and in collaboration with changes to both the GHMPO and CBMPO MTPs/TIPs.

Analysis was performed using US EPA's MOVES emissions model, version MOVES3.1. This is the third MTP update that has used both ARC's activity-based model and US EPA's MOVES model. Direct comparisons between these results and results documented in previous CDRs (relying on either ARC's trip-based model or older versions of US EPA's emissions model) are inadvisable.

8-HOUR OZONE STANDARD

The 2008 maintenance area is broken into a 13-county and 2-county geography and the 2015 maintenance area into a 6-county and 1-county geography. The MOVES model is run separately for each geography. For a full explanation of how MOVES is run and how inputs are developed reference the MOVES3 User Guide. In addition, the MOVES county data manager input files used for this conformity analysis are available upon request.

Highway Performance Monitoring System (HPMS) adjustment factors were calculated in accordance with § 93.122(b)(3) of the Transportation Conformity Rule. These factors reconcile travel model estimates of VMT in the base year of validation to HPMS estimates for the same period. These factors include summer (seasonal) adjustments to convert from average annual VMT to summer-season VMT. Factors are calculated separately for the 13-county and 2-county geographies, as well as the 6-county and 1-county geographies, of the maintenance area. See **Appendix 2** for more details on planning assumptions used in this CDR.



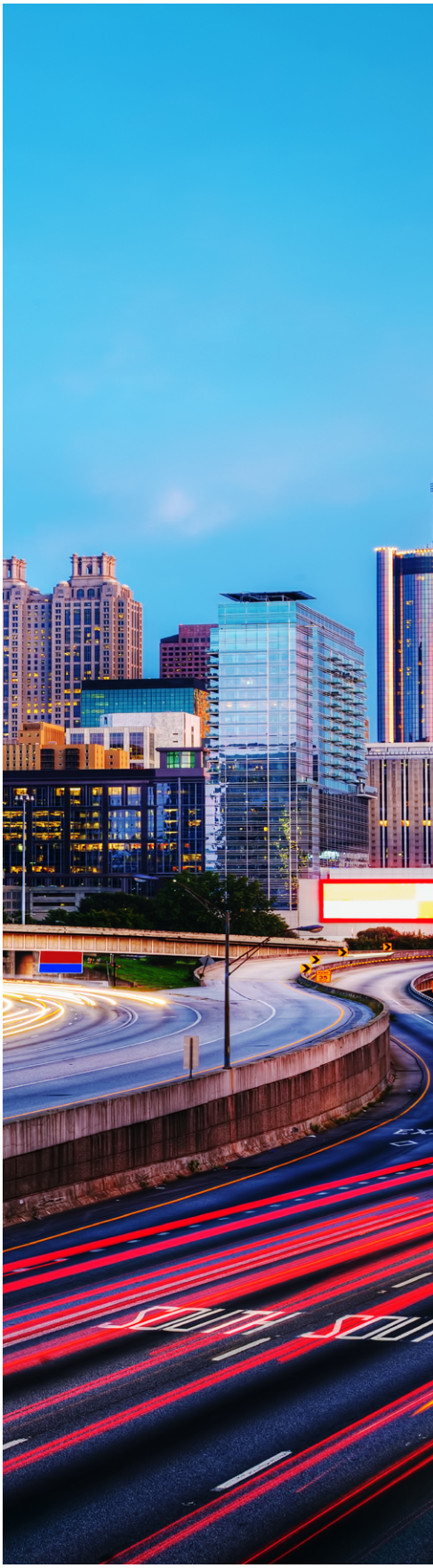
RESULTS OF ANALYSIS (8-HOUR OZONE STANDARD)

The results of the emissions analysis for 2050 MTP (2024) and CBMPO MTP for all analysis years for the 8-hr. ozone maintenance area demonstrate adherence to conformity requirements with levels of emissions below the MVEBs contained in the Ozone Maintenance Plan SIP (emissions analysis with modeling does not apply to the GHMPO MTP). The tables and figures which follow document the VOC and NOx emissions for each analysis year, as compared to the applicable MVEBs for the 2008 maintenance area and the 2015 maintenance area.

To maintain consistency between procedures used to estimate the MVEBs 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 § 12-9). It exempts from emission testing vehicles ten years old or older that are driven fewer than 5,000 miles per year and are owned by persons 65 years of age or older.

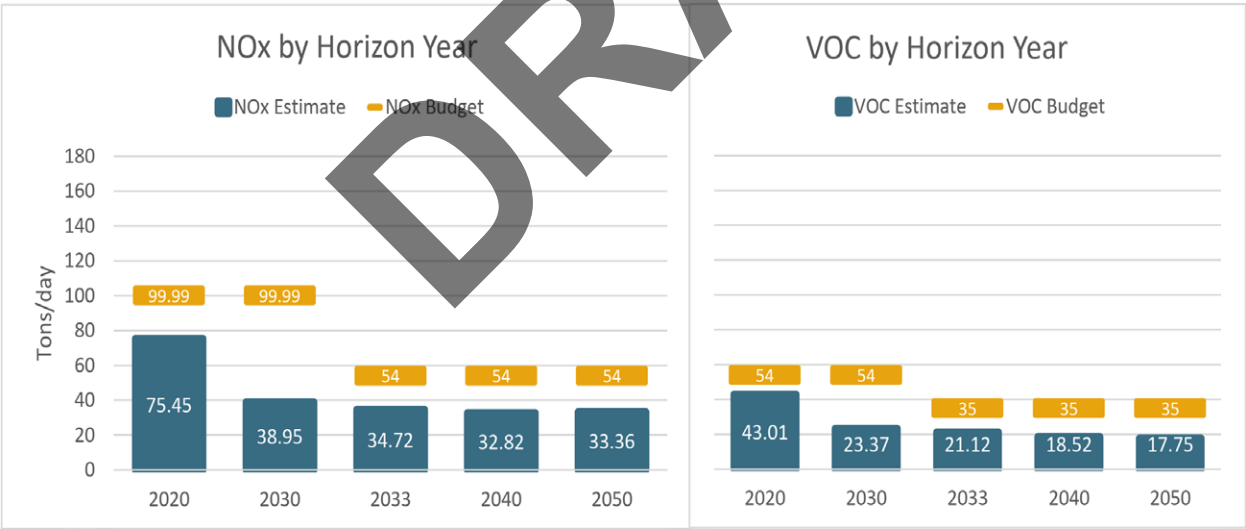
It was estimated that this senior I/M exemption increased VOC and NOx emissions by 0.05 and 0.03 tons per day respectively. These amounts are reflected in the following tables. This off-model adjustment is conservatively high and was applied to the emission results for VOC and NOx to produce final emission 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.

"This is the third MTP update that has used both ARC's activity-based model and US EPA's MOVES model..."



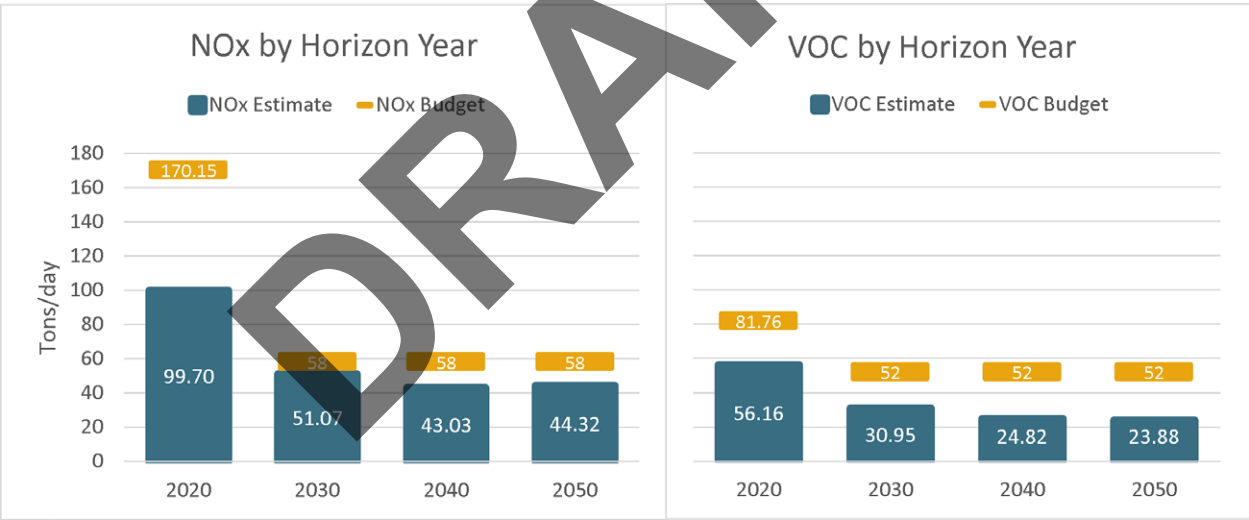
RESULTS OF THE 7-COUNTY MVEB TEST FOR THE 2015 8-HOUR OZONE STANDARD

MVEB PLAN	CONFORMITY YEAR	NOX (TONS/DAY)	VOC (TONS/DAY)
Georgia's 2015 Ozone Maintenance SIP for Years Before 2033	2020	75.45	43.01
		(99.99 budgeted)	(54 budgeted)
	2030	38.95	23.37
		(99.99 budgeted)	(54 budgeted)
Georgia's 2015 Ozone Maintenance SIP for Years 2033 and After	2033	34.72	21.12
		(54 budgeted)	(35 budgeted)
	2040	32.82	18.52
		(54 budgeted)	(35 budgeted)
	2050	33.36	17.75
		(54 budgeted)	(35 budgeted)



RESULTS OF THE 15-COUNTY MVEB TEST FOR THE 2008 8-HOUR OZONE STANDARD

MVEB PLAN	CONFORMITY YEAR	NOX (TONS/DAY)	VOC (TONS/DAY)
Georgia's 2008 Ozone Maintenance SIP for Years Before 2030	2020	99.70	56.16
		(170.15 budgeted)	(170.15 budgeted)
Georgia's 2008 Ozone Maintenance SIP for Years 2030 and After	2030	51.07	30.95
		(58 budgeted)	(58 budgeted)
	2040	43.03	24.82
		(58 budgeted)	(52 budgeted)
	2050	44.32	23.88
		(58 budgeted)	(52 budgeted)



Appendix 1

Interagency Consultation Group Meeting Notes

The Clean Air Act requires intergovernmental consultation for the development and submittal of applicable State Implementation Plan (SIP) revisions and before findings of conformity of transportation plans, programs and projects in airsheds designated as nonattainment or redesignated as attainment with a maintenance plan. To fulfill this requirement, an Interagency Consultation Group facilitated by ARC, was established and meets on a monthly basis as needed. At group meetings, agenda items focus on discussing and resolving matters related to air quality conformity analysis, as well as providing strategic guidance on the overall plan development process. These topics may include travel demand modeling methodologies, fiscal constraint assumptions, and public comment procedures. Formal membership in this group includes:

- Atlanta Regional Commission (ARC)
- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)
- Environmental Protection Agency (EPA)
- Georgia Department of Transportation (GDOT)
- Georgia Regional Transportation Authority (GRTA)
- Georgia Environmental Protection Division (EPD)
- Metropolitan Atlanta Rapid Transit Authority (MARTA)
- ARC member counties receiving federal transportation funding to provide transit services (Cherokee, Cobb, Douglas, Gwinnett and Henry)

Any local government or other stakeholder agency is welcome to participate in meetings, but three agencies in particular play a key advisory and coordination role:

- State Road & Tollway Authority (SRTA) / Atlanta-region Transit Link Authority (ATL)
- Gainesville-Hall MPO (GHMPO)
- Cartersville-Bartow MPO (CBMPO)

Notes for meetings held since the last major update of the MTP and TIP in early 2020 are compiled in this exhibit. As the MTP and TIP are amended over time, the CDR addenda produced in conjunction with those actions will include notes from additional meetings conducted in the intervening period since the previous conformity determination.

Appendix 2

Planning Assumptions and Modeling Inputs

2015 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 NOx and VOC emissions in the 7-county maintenance area.
2) Analysis Years: 2020, 2030, 2033, 2040, 2050
3) Conformity Test
    a. Motor Vehicle Emission Budget (MVEB) Test[1]
        i. For years prior to 2033, 2018 MVEBs are used:
            1. NOx: 99.99 tpd
            2. VOC: 54.00 tpd
        ii. For years 2033 and later, 2033 MVEBs are used:
            1. NOx: 54.00 tpd
            2. VOC: 35.00 tpd
4) Modeling Start Date: September 2023. This start date is defined by the ARC as the initiation of the first model run for plan amendment.

TRAVEL DEMAND MODELING ASSUMPTIONS

1) Base Year: 2020
    a. Model calibrated/validated to the year 2015/2020 using updated data and a comparison between estimated volumes and observed counts. Transit validated using 2019 Transit On-Board Survey results. See Exhibit A for validation/ calibration information.
2) Social/Economic Data: See Exhibit B.
3) ARC's Activity-Based Travel Demand Model (ABM) is the basis for these runs. See Exhibit C for an overview of ABM specifications.

EMISSIONS MODELING ASSUMPTIONS

1) Emissions Model: MOVES3.1 – Database: movesdb20230712
    a. Emissions Process – use MOVES in inventory mode for a July weekday
        i. For the years 2020, 2030, 2033, 2040, and 2050, modeled travel data is used

[1] *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.

to calculate emissions

b. Run separately for the 6-county and 1-county portions of the maintenance area[2]
   i. 6-county area activity, vehicle population and other inputs are assigned to Fulton County while running MOVES
   ii. 1-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 6 and 1 counties separately.
   b. Source Type Population
      i. Started with 2020 R.L. Polk & Co. registration data for the Atlanta maintenance counties
      ii. Future analysis year data is grown from 2020 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 6 and 1 county areas.
   d. I/M Programs – Applied to the 6-county area only (See Exhibit D)
   e. Age Distribution – Age data was derived from 2020 R.L. Polk & Co. registration data for the 6 and 1 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 6 and 1 county areas.
   g. Fuel – Local fuel use now matches between the 6- and 1-county areas due to the relaxation of the RVP summer fuel requirement in the 6-county area.

[2] For the 2015 eight-hour ozone NAAQS there are two sets of MOVES input files, one for the six counties that were once part of the former one-hour nonattainment area in which a specific set of emission control measures is in place, and one for the one remaining county in the 2015 8-hour ozone maintenance area.

MOVES3 was updated to correctly characterize Atlanta area fuels, so MOVES defaults were used.

h. Meteorology – July 2018 weather for Hartsfield-Jackson Atlanta International Airport was used for this analysis consistent with the 2015 Eight Hour Ozone Maintenance SIP

i. Starts – The regional travel demand model determines the number of trip starts in each of the 6 and 1 county areas. Applies only to the trips per day input. Trips per day for MOVES3 requires the activity be split by vehicle type for each of the 6 and 1 county areas. This split is accomplished by multiplying total trips per day from the regional travel demand model times the fraction of trips by each vehicle type. This fraction is calculated from vehicle population and MOVES default starts per day per vehicle. Defaults used for the rest of the start inputs.

j. Idle – MOVES defaults

k. Hotelling – MOVES defaults

3) VMT HPMS Adjustment Factors

a. Calculated for the year 2019 (See Exhibit 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 VMT[3]

d. Factors applied to VMT estimates generated by ARC travel demand model for 6-county portion and 1-county portion of 21-county modeling domain, separately

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 (See Exhibit F)

2008 Eight-Hour Ozone Standard Planning Assumptions &

[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.

Modeling Inputs

GENERAL METHODS AND ASSUMPTIONS

1) Modeling Methodology: Use the MOVES model in inventory mode to determine the total NOx and VOC emissions in the 15-county maintenance area.
2) Analysis Years: 2020, 2030, 2040, 2050
3) Conformity Test
   a. Motor Vehicle Emission Budget (MVEB) Test[4]
      i. For years prior to 2030, 2014 MVEBs are used:
         1. NOx: 170.15 tpd
         2. VOC: 81.76 tpd
      ii. For years 2030 and later, 2030 MVEBs are used:
         1. NOx: 58 tpd
         2. VOC: 52 tpd
4) Modeling Start Date: September 2023. This start date is defined by the ARC as the initiation of the first model run for plan amendment.

TRAVEL DEMAND MODELING ASSUMPTIONS

1) Base Year: 2020
   a. Model calibrated/validated to the year 2015/2020 using updated data and a comparison between estimated volumes and observed counts. Transit validated using 2019 Transit On-Board Survey results. See Exhibit A for validation/ calibration information.
2) Social/Economic Data: See Exhibit B.
3) ARC's Activity-Based Travel Demand Model (ABM) is the basis for these runs. See Exhibit C for an overview of ABM specifications.

EMISSIONS MODELING ASSUMPTIONS

1) Emissions Model: MOVES3.1 – Database: movesdb20230712
   a. Emissions Process – use MOVES in inventory mode for a July weekday
      i. For the years 2020, 2030, 2040 and 2050 modeled travel data is used to calculate emissions
   b. Run separately for the 13-county and 2-county portions of the maintenance

[4] *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.

area[5]
   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 2020 R.L. Polk & Co. registration data for the Atlanta maintenance counties for the 2008 ozone NAAQS that include the maintenance counties for the 2015 ozone NAAQS
      ii. Future analysis year data is grown from 2020 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 Exhibit D)
   e. Age Distribution – Age data was derived from 2020 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. Fuel – Local fuel use now matches between the 13- and 2-county areas due

[5] 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 two remaining ring counties in the 2008 8-hour ozone maintenance area.

to the relaxation of the RVP summer fuel requirement in the 13-county area. MOVES3 was updated to correctly characterize Atlanta area fuels, so MOVES defaults were used.

h. Meteorology – July 2014 weather for Hartsfield-Jackson Atlanta International Airport was used for this analysis consistent with the 2008 Eight Hour Ozone Maintenance SIP

i. 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. Trips per day for MOVES3 requires the activity be split by vehicle type for each of the 13 and 2 county areas. This split is accomplished by multiplying total trips per day from the regional travel demand model times the fraction of trips by each vehicle type. This fraction is calculated from vehicle population and MOVES default starts per day per vehicle. Defaults used for the rest of the start inputs.

j. Idle – MOVES defaults

k. Hotelling – MOVES defaults

3) VMT Reconciliation with HPMS

a. Calculated for the year 2019 (See Exhibit 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 VMT[6]

d. Factors applied to VMT estimates generated by ARC travel demand model for 13-county portion and 2-county portion of 21-county modeling domain, separately

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

[6] 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.

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 (see Exhibit 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 for the orphan maintenance area in tandem with the 2008 and 2015 eight-hour ozone standards.

Exhibit A - Model Validation

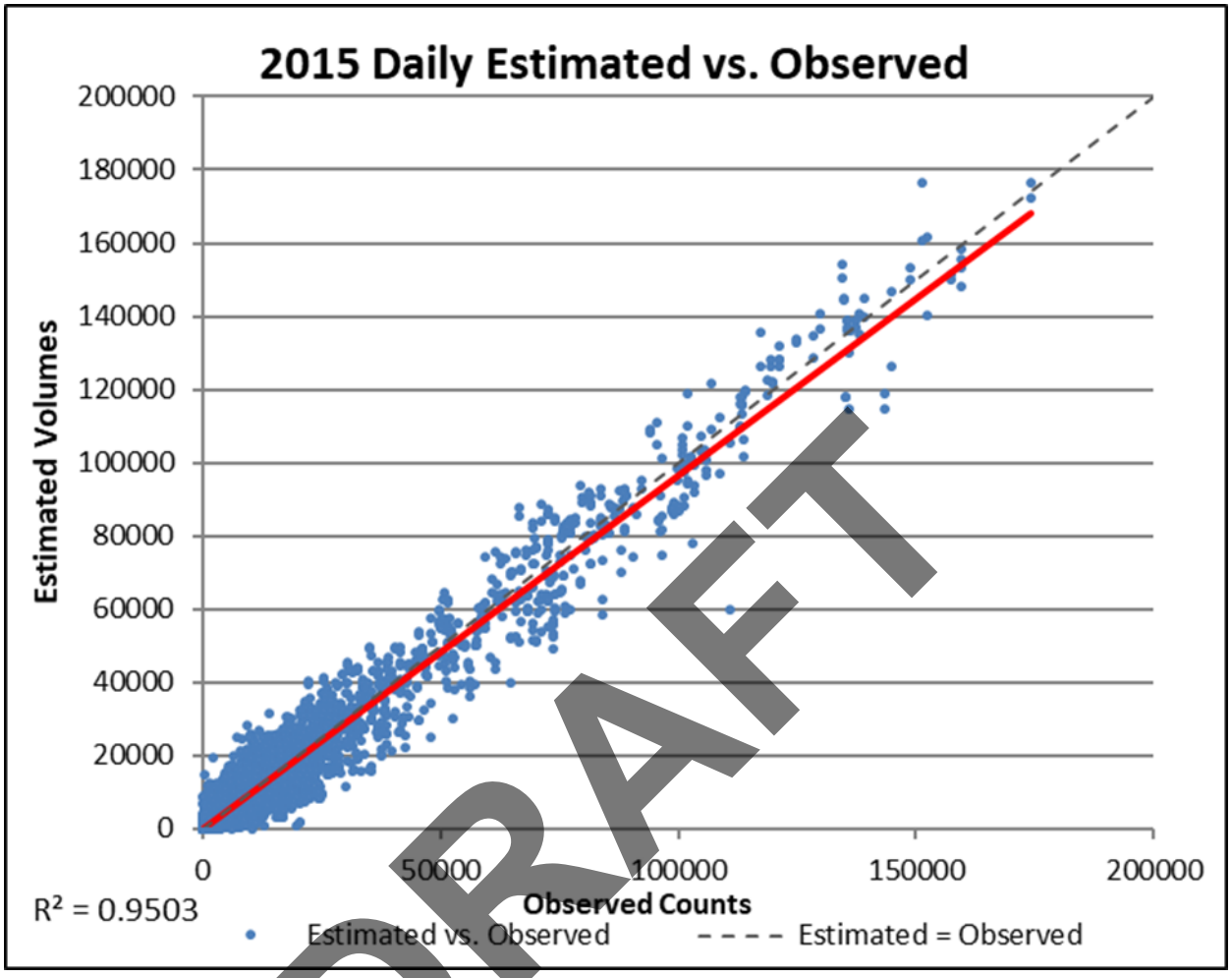
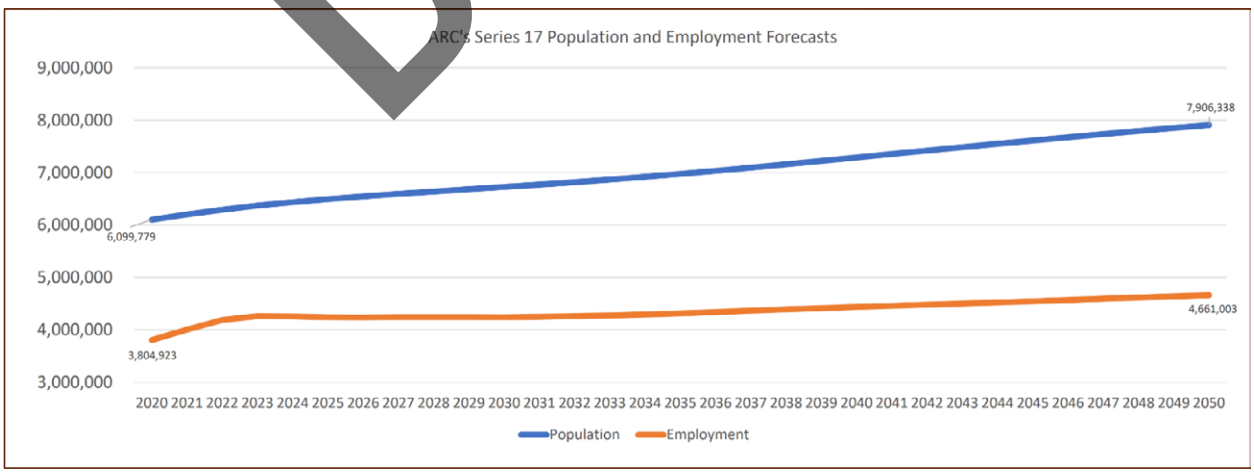


Exhibit B - Socioeconomic Data for the Travel Model

FORECASTING AND LAND USE ALLOCATION MODELING

ARC uses a two-step modeling process to develop regional control totals and small area forecasts used as inputs into our Activity-Based Travel Demand Model. These models include an econometric model (REMI) that uses a national forecast that is shared out to each county in the nation as well as a land use model (PECAS) that simulates future location of activities and the development of space by developers.

Prior to beginning the modeling work, ARC convenes a Technical Advisory Committee (TAC) that steers and reviews the assumptions, calibrations, and outcomes that are inherent in our econometric model. The TAC comprised of leading regional economists, technical experts, and policy advisors who advised us on different scenarios we could test through the REMI model that offered more realistic assumptions and reasonable outcomes of the local economy. Based on this feedback, we modified the standard REMI model output to include different projections of labor force participation rates, migration, and natural growth. We also adjusted the early years of the model to reflect ARC's population estimates rather than REMI-generated estimates based on forecasts. This resulted in several alternative scenarios that created a lower bound forecast range, mid-range and an upper bound forecast range. After three meetings and several runs of the model, the TAC endorsed the mid-range scenario as the region's control total, which is a population of 7.9 million in the 21-county area by the year 2050.



We are forecasting the region to add approximately 1.8 million new residents and close to 860,000 more jobs between 2020 and 2050.

REMI

The REMI model (Regional Economic Models, Inc.) is a very widely used regional economic policy analysis model. The model is used by government agencies on the national, state, and local level, as well as by private consulting firms, utilities, and universities. REMI is a structural economic forecasting and policy analysis model. It integrates input, output, computable general equilibrium, econometric, and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to wage, price, and other economic factors.

PECAS FOR SMALL AREA FORECASTING (LAND USE ALLOCATION)

ARC reviewed state-of-the art land use models, to allocate the forecast population and employment totals to small areas, between 2007 and 2008 and selected PECAS (Production Exchange Consumption Allocation System). PECAS' main purpose is to simulate the future location of activities (industries, households and government), and the development of space by developers, for both forecasting and policy analysis. It has been used in the conformity process for the first time in 2015.

The ARC PECAS model includes the two standard PECAS modules: The Activity Allocation module (AA) and the Space Development module (SD). AA follows an aggregate approach and represents how and why industries, government and households choose to locate in different zones or locations in the region. SD follows a microsimulation approach and simulates development at the parcel level, considering developers' profit-motivated behavior as well as land and market characteristics. These two modules interact with each other, and both also interact with the Atlanta transport model by providing it with land use data. The travel demand model, in turn, provides an indication of travel conditions for use in AA.

Exhibit 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 considering 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) Base Year: 2020

2) Project Listing: Project listings will be provided in electronic format to Interagency Consultation Group for review and include:
   a. Regionally Significant and Federally Funded
   b. Regionally Significant and Non-Federally Funded

3) Demographic Data: To be provided as separate attachment

4) Speed Data: Free-flow Speed by Area Type and Facility Type[7]

Facility Type		ABM Area Type						
Number	Name	CBD	Urban Commercial	Urban Residential	Suburban Commercial	Suburban Residential	Exurban	Rural
1	Interstate / Free-way	62	63	63	63	64	65	66
2	Expressway	43	46	49	52	55	58	61
3	Parkway / Rural Expressway	43	46	49	52	55	58	61
4	Freeway HOV/HOT (concurrent)	64	65	65	65	66	67	68
5	Freeway HOV/HOT (barrier)	64	65	65	65	66	67	68
6	Freeway Truck Only	62	63	63	63	64	65	66
7	System to System Ramp	50	50	50	55	55	55	55
8	Exit Ramp	35	35	35	35	35	35	35
9	Entrance Ramp	35	35	35	35	35	35	35
10	Principal Arterial	23	26	31	35	41	48	53
11	Minor Arterial	21	26	29	33	38	43	48
12	Arterial HOV	21	26	29	33	38	43	48
13	Arterial Truck Only	21	26	29	33	38	43	48
14	Collector / Local	17	23	24	26	30	35	45

[7] 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.

5) Transit Modeling
   a. Model calibrated/validated to 2019 transit ridership empirical observations provided by transit operators
   b. Reflects results from the 2019 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
      ii. Composed of 16 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 Drive Alone (Free)
         2. Auto SOV Drive Alone (Pay)
         3. Auto 2-Person Carpool (Free)
         4. Auto 2-Person Carpool (Pay)
         5. Auto 3+ Person Carpool (Free)
         6. Auto 3+ Person Carpool (Pay)
         7. Walk
         8. Bike
         9. Walk-All-Transit
         10. Walk-Premium Transit-Only
         11. PNR-All-Transit (PNR = Park and Ride)
         12. PNR-Premium Transit-Only
         13. KNR-All-Transit (KNR = Kiss and Ride)
         14. KNR-Premium Transit-Only
         15. School Bus
         16. Transportation Network Companies (TNC)
      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. Any costs of traveling incurred within the model are representative of year 2015 dollars
      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. 2019 Transit On-Board Survey Data
   i. Update of regional transit travel targets to 2019
      1. Modifications to travel demand model estimates of zero-car household transit work trips
      2. Modifications to travel demand model estimates of kiss-and-ride passenger access and use of transit system
      3. Overall evaluation of all modal constants
   ii. Assessment of travel demand model understanding of market segments and travel patterns relative to the on-board survey records

Exhibit D - I/M Program

EXHAUST AND EVAPORATIVE (OBD AND GAS CAP PRESSURE TEST) FOR 1997 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

Exhibit E - VMT Reconciliation with HPMS

OZONE VMT ADJUSTMENT FACTORS

Function Classification Name	Functional Classification	13-County Area Factor	7-County Area Factor
Rural Interstate	1	1.02	0.87
Rural Principal Arterial	2	0.94	0.93
Rural Minor Arterial	6	0.94	0.93
Rural Major Collector	7	1.14	0.8
Rural Minor Collector	8	1.14	0.8
Rural Local Collector	9	2.2	2.41
Urban Interstate	11	1.02	0.87
Urban Principal Arterial	12	1.02	0.87
Urban Minor Arterial	14	0.94	0.93
Urban Major Collector	16	0.94	0.93
Urban Minor Collector	17	1.14	0.8
Urban Local Collector	19	2.2	2.41

Exhibit F - Status of TCMs

Per the Final Rule published by the EPA in the Federal Register on March 8, 2021, and effective April 7, 2021, titled "Air Plan Approval; GA: Non-Interference Demonstration and Maintenance Plan Revision for the Removal of Transportation Control Measures in the Atlanta Area" (86 FR 13191), ARC is only required to report the status of a single TCM in the CDR and its amendments. The remainder of the TCMs have been removed from the SIP.

Description	ARC Project #	GDOT PI #	TIP	Status
Intersection Upgrade, Coordination & Computerization (Sponsor - GDOT in partnership with local jurisdictions)	AT-089	04Y108	1993-1995	Implemented
	CL-094	770600	1994-1996	Implemented
	CO-249	770601	1994-1996	Implemented
	DK-118	770603	1994-1996	Implemented
	FN-086	770605	1994-1996	Implemented
	FS-068	770605	1994-1996	Implemented
	GW-135	170950	1994-1996	Implemented
	R-098	04418	1994-1996	Implemented
	R-098	770391	1994-1996	Implemented

Appendix 3

Year of Expenditure Project Costs