

February 7, 2022

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To the appropriate Federal review agencies:

Please find the following outline of the proposed technical work tasks, consultation procedures, and assumptions to be used for conducting the mandated air quality conformity determination of the FY 2023-2026 Baltimore Region Transportation Improvement Program (TIP) and *Maximize2045: A Performance-Based Transportation Plan*, the 2019 plan. In light of the importance of review of conformity issues, these proposed tasks and assumptions have been approved through the interagency consultation process for transportation and air quality activities in the Baltimore region, including the Metropolitan Planning Organization (MPO) and state air and transportation agencies, in a forum that is open to interested stakeholders.

I. Introduction

The Clean Air Act, as amended in 1990, requires MPOs for regions in nonattainment or maintenance of National Ambient Air Quality Standards (NAAQSs) to perform technical analyses to demonstrate that regional transportation plans and programs conform to the most recently approved or adequate motor vehicle emission budgets approved by the

Environmental Protection Agency (EPA). These analyses must be conducted in accordance with the technical requirements and consultation procedures published in the November 24, 1993, Federal Register and as amended.

The Baltimore region, consisting of Anne Arundel County, Baltimore County, Baltimore City, Carroll County, Harford County, and Howard County, is designated as a “moderate” nonattainment area for the 2008 8-hour ozone standard and a “marginal” nonattainment area for the 2015 ozone standard. The current conformity process uses the 2012 Reasonable Further Progress (RFP) budgets. These budgets were developed to address the 1997 ozone standard, but will be used for all ozone standards addressed in this conformity determination. The RFP budgets were determined by EPA as adequate for use in conformity determinations, as published in the Federal Register on February 22, 2016.

As of October 24, 2016, the 1997 annual PM_{2.5} standard is revoked for areas that have attained the standard. The Baltimore region was redesignated to attainment of the standard December 16, 2014, and is no longer required to conduct conformity for the 1997 annual PM_{2.5} standard.

It is the Baltimore Metropolitan Council’s (BMC’s) understanding that the region is no longer required to address carbon monoxide (CO) in the conformity determination as it has been more than twenty years since the EPA determined the Baltimore City Central Business District (CBD) attained the CO NAAQS. This attainment determination occurred on December 15, 1995. The second maintenance plan for CO was in place until December 15, 2015.

Conformity analyses of Baltimore region transportation plans and programs are conducted by the Baltimore Regional Transportation Board (BRTB), the designated MPO. The regional Interagency Consultation Group (ICG), which includes voting membership of the BRTB and the Maryland Departments of the Environment (MDE) and Transportation (MDOT), facilitates regular and continuous communication and coordination of all conformity efforts and activities. BMC serves as professional staff to the BRTB and the ICG.

In determining conformity, BMC staff apply a regional travel demand forecasting model to specified horizon year scenarios to assess the transportation system’s travel and speed effects of implementing the region’s transportation plans and programs. MDE then applies horizon year specific vehicle emission factors from an emissions estimator model to outputs from the travel demand forecasting analysis to estimate the emission effects of the projected transportation system usage and performance characteristics. This conformity analysis determines whether regional transportation plans and programs are consistent with State Implementation Plan (SIP) air quality goals.

Section II below outlines the methodology to be used for the upcoming conformity determination. The ICG recognizes that the conformity determination must be based upon the most recent planning assumptions in force at the time the conformity analysis begins. The ICG also recognizes that the “time the conformity analysis begins” is the point at which the MPO begins to model the impact of the proposed transportation plan or TIP

on travel and/or emissions. The ICG considers the date of submission of this letter as the “time that the conformity analysis begins.”

The ICG feels that this letter provides an opportunity for review of assumptions by all interagency consultation agencies, including those responsible for approval (EPA, the Federal Highway Administration or FHWA, and the Federal Transit Administration or FTA), and for the general public.

II. Criteria and Approach

II.A. Criteria

Conformity is demonstrated if emissions levels from approved transportation plans and programs are less than emissions budgets established in the SIP and also provide expeditious implementation of Transportation Control Measures (TCMs) committed to in the SIP. Emissions of volatile organic compounds (VOCs) and nitrogen oxides (NO_x) will be compared to the 2012 RFP budgets, which were developed for the Baltimore Serious Area Nonattainment SIP for the 1997 8-hour Ozone standard and submitted to EPA in 2013.

II.B. Approach

The following approach, approved by the ICG members, will be used to demonstrate conformity for the FY 2023-2026 TIP and *Maximize2045*.

This conformity determination will determine whether the transportation plan and TIP conform to 2012 8-hour ozone RFP SIP budgets.

Emissions Budgets: The Baltimore region will perform conformity testing using the following budgets deemed adequate or approved by EPA. Conformity testing will be performed in accordance with the Transportation Conformity Rule.

Ozone Budgets Approved by the EPA for the 1997 Standard and Deemed Adequate for Use in Conformity Determinations

	NO _x (tons/day)	VOC (tons/day)
Budgets determined to be adequate by EPA (2012 RFP)	93.5	40.2

Testing Horizon Years:

- 2025 (near term year; no more than 10 years from the base year used to validate the transportation demand planning model- 2019)
- 2035 (no more than ten years between horizon years)
- 2045 (date for full implementation of long-range plan)

Travel Demand Modeling Method:

Methodology developed for a 2019 validation, which includes:

- An Activity Based Model estimated from the region’s 2008 household travel survey;
- An Activity Based Model calibrated from the region’s 2019 household travel survey;
- An Activity Based Model validated to observed (household travel survey, traffic county (AAWDT), and transit ridership (APC));
- Simulated household (transit/toll pass and vehicle availability) and person (usual place of work) long term choices;
- An average weekday person trip roster containing each synthetic person’s travel sequence by time of day (1/2 hour resolution), mode, destination, and purpose;
- A disaggregate freight modeling system simulating long distance freight and a truck/commercial vehicle touring model; and,
- An equilibrium multiclass highway assignment for eight time periods.

Mobile Emission Development:

- EPA’s Motor Vehicle Emission Simulator (MOVES) Model 2014a
- Latest available motor vehicle fleet registration data & vehicle miles traveled (VMT) mix

Socioeconomic Assumptions:

Based on latest available cooperative regional forecasts for employment, households and population.

Planning Assumptions:

There are three categories of projects: exempt, non-exempt/regionally significant, and non-exempt/not regionally significant. All non-exempt/regionally significant projects will be included in the modeled network. Projects must meet federal regulatory criteria that they come from the financially constrained regional transportation plan and the FY 2023-2026 TIP, with project staging as endorsed by the MPO.

Network Development:

Five regional transportation networks developed: 2019 (validation) existing network, and action (build) networks for 2025, 2035 and 2045 horizon years.

III. Work Tasks

The tasks and subtasks involved in the conformity analysis process of the FY 2023-2026 TIP and amended *Maximize2045* are listed below. Attachment I displays the steps and proposed timeframe for completing the 2023-2026 TIP. Attachment II displays the

proposed timeframe for completing the work tasks associated with the conformity analysis of the TIP and Plan.

- A. Receive project inputs from programming jurisdictions/agencies and organize into conformity documentation listings
 - 1. Project type, limits, etc.
 - 2. Phasing with respect to horizon years
 - 3. Action scenarios

- B. Prepare 2025 TIP action scenario travel and emissions estimates
 - 1. Code, edit, and build highway and transit networks
 - 2. Execute travel demand modeling
 - 3. Estimate emissions

- C. Prepare 2035 Plan Action scenario
(Steps as listed in B.)

- D. Prepare 2045 Plan Action scenario
(Steps as listed in B.)

- E. Identify and assess emission effects associated with non-modelable activities
 - 1. Implemented strategies – extent of continued benefits from previously implemented strategies
 - 2. Programmed – CMAQ-funded TIP projects, non-CMAQ federally-funded TIP projects, and non-federally funded TIP projects
 - 3. Planned – Projects included in the region’s long-range plan between 2026 and 2045

- F. Assess analytical results
 - 1. For emissions of NO_x and VOCs, compare emissions results with the 2012 RFP budgets from the Serious Area SIP.

- G. Identify TIP contribution to SIP goals and previous TIP and Plan commitments
 - 1. Identify previous emission reduction commitments (emission reduction strategies and/or transportation control measures). Update status reports as necessary from implementing agencies.

- H. Assess and document conformity results
 - 1. Document approach and methodology
 - 2. Draft conformity report and secure recommendation of ICG
 - 3. Present to Technical Committee, BRTB, consultation agencies, and general public
 - 4. Receive comments
 - 5. Address comments and present to BRTB for action/endorsement
 - 6. Finalize report and forward to FHWA, FTA, and EPA

I. Public Review

1. Provide the draft conformity document on the BMC web site for a 30-day public review.

DRAFT

Please contact Ms. Nicole Hebert with any questions or comments, at 410-732-0500 Ext. 1050, or nhebert@baltometro.org.

Thank you for your attention to this matter. We look forward to your response.

Sincerely,

Todd R. Lang, Director
Transportation Planning

Attachments

cc: Cristina Fernandez, Director EPA Region III Air Protection Division
Gregory Becoat, EPA Region III
Kwame Arhin, FHWA Maryland Division
Ryan Long, FTA Region III

2023-2026 TIP PRODUCTION SCHEDULE*

December 8, 2021	Draft TIP Schedule distributed via email to TC members and TIP Coordinators. Packet and instructions to follow via e-mail.
January 7, 2022	TIP coordinators can access database to submit new and updated project information. Reminder at TC Tuesday January 4 and via email.
March 1	Final new and updated project information due to BMC. <i>Critical to be completed by this date</i>
March 8	Database access closed
March 1-24	BMC staff reviews submitted projects and works with local/state agencies to resolve any questions
March 24	List of projects and draft conformity categories distributed to ICG
March/April	BMC staff update introductory text for the TIP, work with GIS staff to produce mapping materials, and work with MDOT on the annual element
April 7	List of projects and draft conformity categories approved by ICG. Travel demand modeling begins.
April 15	Letters of financial reasonableness due to BMC.
May 17-June 17	Draft TIP and Conformity Determination available for public review, including public meetings.
May 24 and June 28	Opportunity for public to comment at BRTB meeting
July 6	Resolution on TIP and Conformity presented to ICG and TC
July 26	Resolution on Final TIP and Conformity presented to BRTB

*Dates subject to change

CONFORMITY ANALYSIS SCHEDULE

Work Task		Timeframe For Completion
	Review methodology for completing conformity with the ICG	Jan 2022
	ICG approves methodology letter to send to federal partners	Feb 2022
	Methodology letter submitted by BMC to federal partners	February 7, 2022
A.	Receive project inputs from programming agencies/BRTB and organize into conformity documentation listings	March 2022
B-E	Prepare 2025, 2035, and 2045 TIP and/or Plan Action scenario travel and emissions estimates	April 2022
F.	Identify and assess emission effects associated with non-modelable activities	March/ April 2022
G.	Assess analytical results and present to ICG	April/ May 2022 May 4, 2022
H.	Identify TIP contribution to SIP goals and previous TIP and Plan commitments	May 2022
I.	Assess and document conformity results	May 2022
J.	Public Review	May/June 2022
	BRTB Approval	July 26, 2022
	BMC submits conformity documentation to federal partners	July 28, 2022