



Executive Committee

Action Item III-A

September 24, 2020

**Title VI Program
2020 Update**

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☒ Action ☐ Information

MEAD Number:
202206

Resolution:
☒ Yes ☐ No

TITLE:

2020 Title VI Program Update

PRESENTATION SUMMARY:

Metro's Title VI Program is being updated to meet the requirements of FTA Circular C 4702.1B Title VI Requirements and Guidelines for Federal Transit Administration Recipients.

PURPOSE:

To request Board approval of the 2020 Title VI Program, as required by the FTA Title VI Circular.-

DESCRIPTION:

FTA requires Metro to prepare and submit a Title VI Program update every three years to demonstrate Metro is complying with Title VI requirements. The Title VI Program must meet the requirements outlined in FTA Title VI Circular 4702.1B, effective October 1, 2012. The 2020 Title VI Program Update reports on Metro's activities from January 1, 2017 to June 30, 2020 and must be approved by Metro's Board of Directors prior to submission to FTA.

Key Highlights:

Metro's Board has already reviewed and approved several Title VI components, including service and fare equity analyses completed during the reporting period.

The 2020 Title VI Program update is mainly comprised of updates reflecting new data, documenting progress during the reporting period and enhancements made to existing processes. The following components have been incorporated into the Title VI Program:

- Title VI complaint procedures have been updated to improve handling, resolution, and documentation.
- The Public Participation Plan has been updated including documentation of public engagement activities.
- The LEP Language Assistance Plan including reevaluation of the Four-Factor Analysis with updated demographic data for the service area.
- Review of minority representation on Metro's advisory entities, including the results of

recent recruitment activities.

- Staff has engaged in monitoring and analyzing Metro's service delivery, which showed no discrimination against minority or low-income populations.

Background and History:

Title VI of the Civil Rights Act of 1964 provides that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Under the requirements established in the FTA Title VI Circular, agencies must submit the following elements as part of its program to the FTA:

- Title VI Assurances
- Title VI notices to the public of their rights
- Title VI complaint form and procedures
- List of Title VI investigations, complaints, and lawsuits
- Public Participation Plan and summary of public outreach
- Language Assistance Plan
- Racial composition of non-elected committees and councils
- Description of how the agency monitors its sub-recipients (not applicable to Metro)
- Title VI equity analyses for construction of new facilities
- Board approval of Title VI Program prior to submission to FTA

As a large fixed route transit provider, Metro must also submit:

- Demographic data, service profiles, and rider survey data
 - Description of public engagement process to define major service change, disparate impact, and disproportionate burden policies, including Board approval of major service change, disparate impact, and disproportionate burden policies
 - Title VI equity analyses of major service changes and fare changes, including Board approval of equity analyses results
 - Title VI system-wide service standards and service policies for each fixed route mode
 - Service standards for vehicle load, vehicle headway, on time performance, and service availability
 - Service policies for transit amenities and vehicle assignment
 - Results of monitoring of transit service, including Board approval of monitoring results
- Staff from several departments, have been working to update the Title VI Program since 2019. This group reviewed:
- Title VI system-wide service standards and policies – No changes
 - Major service change, disparate impact, and disproportionate burden policies – No changes
 - Results of monitoring transit service

Discussion:

Metro's 2020 Title VI Program Update addresses numerous requirements, as published in FTA Circular C 4702.1B. Metro's work to comply with each requirement is described

below. Many components in this Title VI Program Update were approved by the Board during this reporting period or in the prior Title VI Update, while others were updated in 2020.

Updates in 2020 Title VI Program

Update of tracking and documenting for Title VI complaints filed against the agency.
Update of recording and reporting of transit-related Title VI investigations, complaints, and lawsuits.

Metro has developed enhanced procedures for investigating and tracking Title VI complaints and Title VI customer complaints. Metro's Title VI complaint form has also been updated and made available on its website. Metro has improved oversight of the investigation of, documentation of, and the resolution of customer complaints.

There has been updating of creation and maintenance of files of customer service complaints implicating discrimination. There have been five formal Title VI complaints investigated and no Title VI lawsuits filed during the review period. Metro's improved documentation includes a list of all customer complaints received since implementation of the enhanced procedures. The list of customer complaints will be submitted as part of the Title VI Program Update, including the status of the complaint, and the findings of the investigations conducted.

Metro uses the information gathered from complaints to examine policies and practices of the organization and implement operational changes as appropriate; to detect misconduct in its earliest stages; to improve the customer service skills of frontline employees; and identify areas that should be emphasized in future training. In addition, Metro's Title VI rights brochure has been made available on-line, disseminated to Community-Based Organizations that serve minority, low-income, and LEP populations and is provided to patrons who lodge a complaint that may be related to Title VI. Additionally, "Take-One" notices in Metrorail stations via fixed durable placards as well as placards on Metrobuses provide contact information to obtain further information concerning complaint procedures.

Update of the collected demographic data analysis for minority groups in the service area and travel patterns

Metro has collected and analyzed socioeconomic data from the U.S. Census Bureau showing the extent to which members of minority groups and low-income persons are beneficiaries of its programs. Based on the 2014-2018 American Community Survey 5-Year, the total population of the service area is 4.2 million people. Minorities represent 60% of the area population, and persons living below the poverty level represent 9%.

Update of Metro's the Four-Factor Analysis to ensure Metro is providing meaningful access for LEP individuals by updating the Language Assistance Plan to address the identified needs of the LEP population.

The Language Assistance Plan provides updated information on the four-factor analysis, illustrated some of the language assistance measures employed by Metro as they were implemented, reported on efforts to implement its 2017 Language Assistance

Plan, and proposed language access initiatives planned for the next three years.

The Language Assistance Plan outlined in that document provides directions and goals for compliance and service regarding limited and non-English proficient population needs. This presupposes a multi-step process, moving into the future, of implementation, assessment of results, continued monitoring of the population and its needs, periodic adjustment based upon assessment of outcomes, and direct engagement and feedback from various involved populations. This is a model not only of compliance, but also of continuous improvement of service and provision of meaningful access to information.

The Language Assistance Plan also highlighted new institutional practices of engagement and communication that were implemented due to adoption of new approaches, or through refining previously instituted processes.

The three-year Language Assistance Plan addresses five major actions: 1) identify LEP individuals in your service area, 2) identify ways to provide assistance, 3) train staff, 4) provide notice to LEP persons, and 5) continuously monitor and update the plan. Metro focused its language services to address the needs of the LEP population in the region, including the following examples:

- Translating vital documents into the top six LEP languages in the region
- Providing a language interpretation line that is available through the Metro Service Call Center and used by various departments that serve customers
- Training frontline staff about Metro's Title VI and language access policies and procedures, cultural sensitivity, assistance available to LEP persons, and Title VI complaint procedures
- Targeting public outreach to areas where LEP populations reside and tend to travel
- Working with Community-Based Organizations (CBOs) that serve LEP, minority, and low-income populations to disseminate multilingual information and obtain feedback on language assistance needs and resources
- Providing translation of information on Metro's website into various languages

Update of the Public Participation Plan (PPP) that outlines strategies to engage minority and LEP populations and other constituencies that are traditionally underserved.

- Provides framework for Metro's communications and outreach activities to ensure equitable outreach, gain community feedback, and inform customers about projects and policies.
- Incorporates changes to communications planning to follow recognized project management processes (PMI)
- Documents 60 projects that have followed the PPP in the previous three years, including 26 projects that incorporated in-person outreach methods

Service monitoring of fixed route transit services to ensure that its service design and operational practices do not result in discrimination to minority and low-income populations.

Metro evaluated the service standards for vehicle load, vehicle headway, and on-time performance at the line level for both Metrorail and Metrobus, using the Disparate Impact/Disproportionate Burden (DI/DB) threshold applicable to the number of impacted riders (i.e., those experiencing service not meeting the standard). Metro evaluated the service availability standard by determining the percentage of minority and low-income persons within walking distance of Metro services compared to the non-minority and non-low-income persons within walking distance.

The results of the 2020 analysis revealed no significant difference in service provided to minority and low-income passengers versus other passengers vis-à-vis the Board-approved standards and policies established for Title VI service monitoring. Metro provides an equitable level of service to all its customers on Metrobus and Metrorail during peak and off-peak service periods. For some service standards, minority and low-income riders tended to experience service that is better than the systemwide average. For cases where more minority and low-income riders experienced service that failed to meet a given standard more than the system-level ridership, the results fell within the DI/DB threshold.

Other Requirements

Provide annual Title VI certifications and assurances to FTA.

Metro's Federal Fiscal Year 2017 FTA Certification and Assurances were executed on March 2, 2017. The Certification and Assurances for FY2018 were executed April 27, 2018 and for FY2019 were executed on May 20, 2019. Metro's General Manager and CEO, Paul Wiedefeld, acted as the Official Certifying Officer for Metro in each instance.

Provide notice to the public regarding the agency's Title VI obligations and apprise members of the public of the protections against discrimination afforded to them by Title VI.

The Title VI notice to the public is provided through several formats and venues, including posting and distributing notice of Title VI rights brochures on its website; disseminating notice of Title VI rights brochures to CBOs that serve low-income, minority, and LEP populations and at public meetings sponsored by Metro; distributing Take-One notices on MetroAccess vehicles and in Metrorail Stations; and notice of Title VI rights displayed as placards inside Metrobuses and available in the headquarters building lobby. Title VI notice brochures and Take-One notices are translated into the top six languages spoken by LEP individuals in the service area: Spanish, Chinese, Korean, Amharic, Vietnamese, and French.

Evaluate service and fare changes to determine whether those changes will have a discriminatory impact on minority and low-income persons.

Metro conducted 13 equity analyses between 2017 and 2020 using policies and procedures consistent with FTA Circular C 4702.1B. Service equity analyses were

completed for each of Metro's state of good operations Metrobus service changes in 2017 and 2019, for four Metro bus service changes and for one Metrorail service change. Equity analyses were completed for service and fare changes as part of the FY2018, FY2020, and FY2021 Operating Budgets. Fare equity analyses were completed for two parking rate changes and for one Metrorail fare change. For each service and fare proposal, staff developed the equity analysis and presented the findings to the Metro Board. The Board approved all the equity analyses conducted during the reporting period.

Provide minority representation on non-elected committees and councils.

The Riders' Advisory Council (RAC) is an all-volunteer group that obtains input from a broad range of riders and advises Metro's Board of Directors on ways to improve the system. The RAC is currently comprised of 11 members. The demographics of the current 11 members on the RAC include Male-64%, Female-36%, Caucasian-45%, African-American-36%, Hispanic-9%, and Asian-9%. Overall, minority representation on the RAC is 55%.

The Accessibility Advisory Committee (AAC) consists of 18 volunteers committed to helping Metro enhance the travel experience of people with disabilities and senior citizens. The AAC membership is diverse to reflect geographical areas, various types of disabilities, race, color, and national origin. The current AAC members include Male-50%, Female-50%, Caucasian-44%, African-American-44%, Hispanic-6%, and Asian-6%. Overall, minority representation on the AAC is 56%.

Complete a Title VI equity analysis when determining the site or location of facilities.

Facilities included, but not limited to, are storage facilities, maintenance facilities, operations centers, etc. Metro has six (6) different projects that are scheduled to be constructed or leased in the upcoming three (3) Federal fiscal years.

Provide Title VI assistance to sub-recipients of Federal financial assistance.

Metro does not pass through FTA funds to any sub-recipients, and is therefore not subject to these requirements.

FUNDING IMPACT:

Metro does not pass through FTA funds to any sub-recipients, and is therefore not subject to requirements regarding sub-recipient compliance with Title VI regulations.	
Project Manager:	Jan M. Bryant
Project Department/Office:	GM/Office of Equal Employment Opportunity

TIMELINE:

Previous Actions	
	09/2020 – Board Approval of Metro's 2020 Title VI Program and

Anticipated actions after presentation	<p>results of 2020 service monitoring under the system-wide service standards and policies</p> <p>10/2020 – 2020 Title VI Program Submittal to FTA</p>
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RECOMMENDATION:

Executive Committee concurrence and subsequent Board approval of the 2020 Title VI Program and the results of the monitoring.

2020 Title VI Program Update

Executive Committee

Jan M. Bryant, Director – OEEO
Allison Davis, Director – Strategic
Planning
September 24, 2020



Purpose

- Seek Board approval for the 2020 Title VI Program updates and Service Monitoring Results

Title VI of the Civil Rights Act of 1964

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

--42 U.S.C. 2000d

Metro's Commitment to Title VI

Demonstrates equal access through:

- Rail & bus system-wide service standards & policies
- Policy definitions for equity analysis
 - Major service change, disparate impact (minorities) & disproportionate burden (low-income persons)
- Complaint procedures updated
- Public Participation Plan updated
- LEP Language Assistance Plan updated

Changes in 2020 Program

- No major programmatic changes since 2017
- Updates:
 - Demographic and survey data
 - Language Assistance Plan
 - Monitoring of Metro service
 - Title VI complaint procedures
 - Public Participation Plan

Customer Demographics

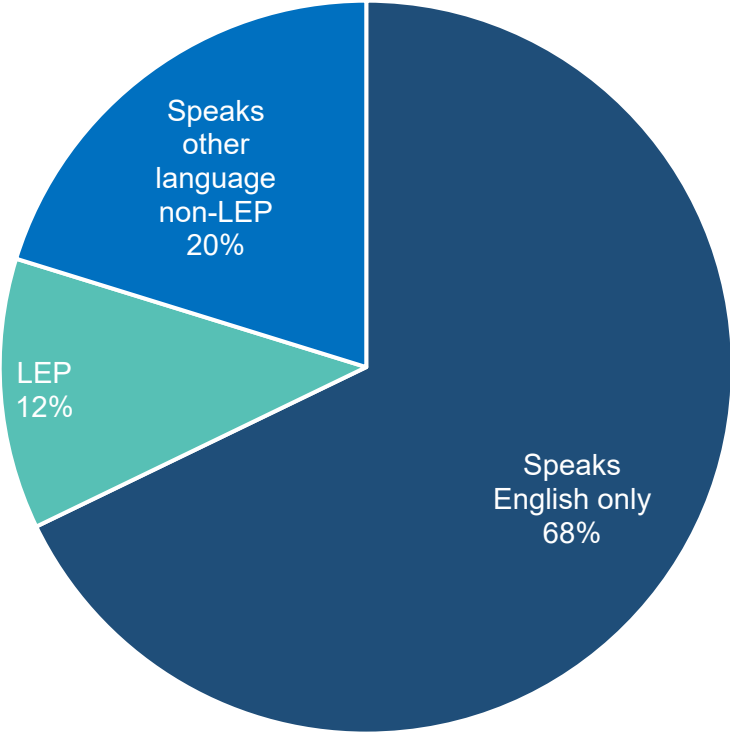
FY 2016	Annual Ridership	% Minority Ridership	% Low-Income Ridership
Rail	191,348,000	45%	13%
Bus	127,432,000	81%	52%
TOTAL	318,718,000		
System Wide Minority and Low-Income Ridership		60%	28%

FY 2019	Annual Ridership	% Minority Ridership	% Low-Income Ridership
Rail	175,255,450	45%	13%
Bus	107,258,752	81%	46%
TOTAL	282,514,202		
System Wide Minority and Low-Income Ridership		58%	25%



Limited English Proficiency (LEP) Language Assistance Plan

Languages Spoken



Total LEP Languages	% Regional LEP Pop.
Spanish	52.3%
Chinese (incl. Mandarin, Cantonese)	7.2%
Korean	6.2%
Vietnamese	4.9%
Amharic, Somali, or other Afro-Asiatic languages	4.5%
French (incl. Cajun)	2.8%
Arabic	2.6%
Persian (incl. Farsi, Dari)	2.2%
Yoruba, Twi, Igbo, or other West African languages	1.6%
Tagalog (incl. Filipino)	1.6%
Urdu	1.3%
Russian	1.2%
Others	10.1%



Limited English Proficient (LEP) Metro Customers By Jurisdiction



Metrorail

Jurisdiction	# Riders Per Day	% LEP
DC	100,073	3%
Maryland	106,316	7%
Montgomery County	59,545	7%
Prince George's County	46,771	6%
Virginia	91,497	6%
Fairfax County	39,682	8%
Arlington County	32,977	4%
City of Alexandria	16,238	6%
City of Falls Church	1,256	3%
City of Fairfax	1,344	7%
Region	298,066	5%

- Spanish (55%)
- Chinese - including Mandarin and Cantonese (7%)
- Amharic, Somali, or other Afro-Asiatic languages (6%)
- Korean (5%)
- Vietnamese (4%)
- French – including Cajun (3%)
- Arabic (2%)
- Other or Not Available (19%)



Metrobus

Jurisdiction	# Riders Per Day	% LEP
DC	86,766	18%
Maryland	51,281	38%
Montgomery County	20,582	42%
Prince George's County	30,699	36%
Virginia	25,538	35%
Fairfax County	10,221	45%
Arlington County	8,688	24%
City of Alexandria	5,330	36%
City of Falls Church	841	15%
City of Fairfax	458	39%
Region	163,583	27%

- Spanish (59%)
- Chinese - including Mandarin and Cantonese (6%)
- Amharic, Somali, or other Afro-Asiatic languages (6%)
- French – including Cajun (4%)
- Korean (3%)
- Vietnamese (3%)
- Arabic (2%)
- Other or Not Available (16%)

Title VI Complaints & Procedures

- Updated complaint procedures
- Between January 1, 2017 to June 30, 2020
no Title VI lawsuits filed and five formal Title VI complaints

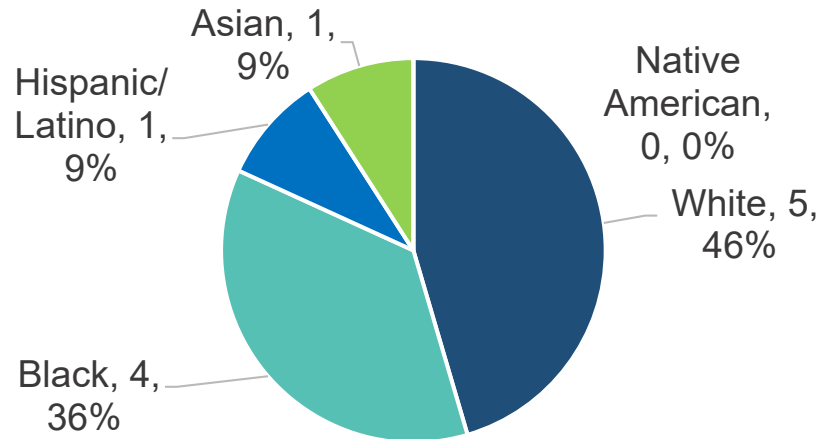


Other Requirements

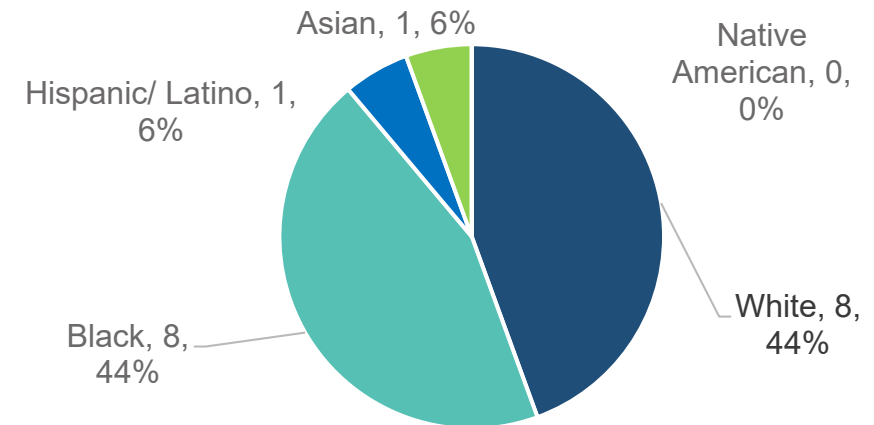
- Annual Title VI Certifications & Assurances
- Minority Representation on Advisory Boards

- Title VI Notices to the Public
- Service & Fare Change Equity Analyses 2017-2020
- Results of Service Monitoring – No DI/DB Impact

Riders' Advisory Council:
55% Minority



Accessibility Advisory Committee:
56% Minority



Service Guidelines, Title VI Equity Impact Analyses, and Title VI Monitoring

Bus or Rail Service Guidelines

- Comprehensive metrics to plan service and allocate resources
- Framework for recommending budget and other service changes

Title VI Equity Impact Analyses

- Conduct for major service, fare, and access to fare media changes
- Evaluate disparate impact (DI) or disproportionate burden (DB) of proposed changes

Title VI Monitoring

- Conducted every three years
- Monitors four standards during monitoring period
- Compares service for protected populations to mode average

Service Monitoring: FTA Circular Requirements

- Monitoring must happen once every three years as part of Title VI Plan
- Service standards monitored:
 - On-time Performance
 - Passenger Load
 - Scheduled Headways
 - Service Availability
- Standards must be mode-specific and can vary by peak and off-peak
- Service levels are compared for protected populations (minority and low-income) to mode average
- If disparate impact found, a mitigation plan must be developed
- Standards can change during three-year cycle, but require FTA agreement

Title VI Service Monitoring: Rail Standards

FTA Standard	Metro's Measure	Definition	Target
Vehicle Load	Passengers per car	Average number of passengers in a Metrorail car at maximum load points	100 passengers per car
Vehicle Headway	Frequency	Maximum scheduled time between trains during normal weekday service	Peak: 8 minutes Off-Peak: 12 minutes midday, with longer headways evenings
On Time Performance	Customer on-time performance	Percent of customer journeys completed on time	Number of journeys completed on time divided by total number of journeys. Vary by line and time of day
Service Availability	Population served by Metrorail	Percent of a population living near a Metrorail station	Population living within ½ mile of a rail station divided by the total population living in the compact zone.

Title VI Service Monitoring: Bus Standards

FTA Standard	Metro's Measure	Definition	Target
Vehicle Load	Load Factor	Average ratio of passengers/seat/bus during a service hour at the maximum load point	Peak: 1.2 (Radial), 1.1 (Crosstown), 1.0 (express) Off-peak: 1.0 (All service types)
Vehicle Headway	Frequency	Maximum scheduled time interval between buses	Peak: 15 min (Radial), 30 min (Suburban); Off-peak: 30 min (Radial), 60 min (Suburban)
On Time Performance	Schedule adherence	Percent adherence to scheduled service	Difference between scheduled and actual time arriving at time point. Target is between 2 min early and 7 min late
Service Availability	Population served by Metrobus	Percent of a population living near a Metrobus stop	Population living within ¼ mile of a bus stop divided by the total population living in the Compact Zone.

Disparate Impact/Disproportionate Burden

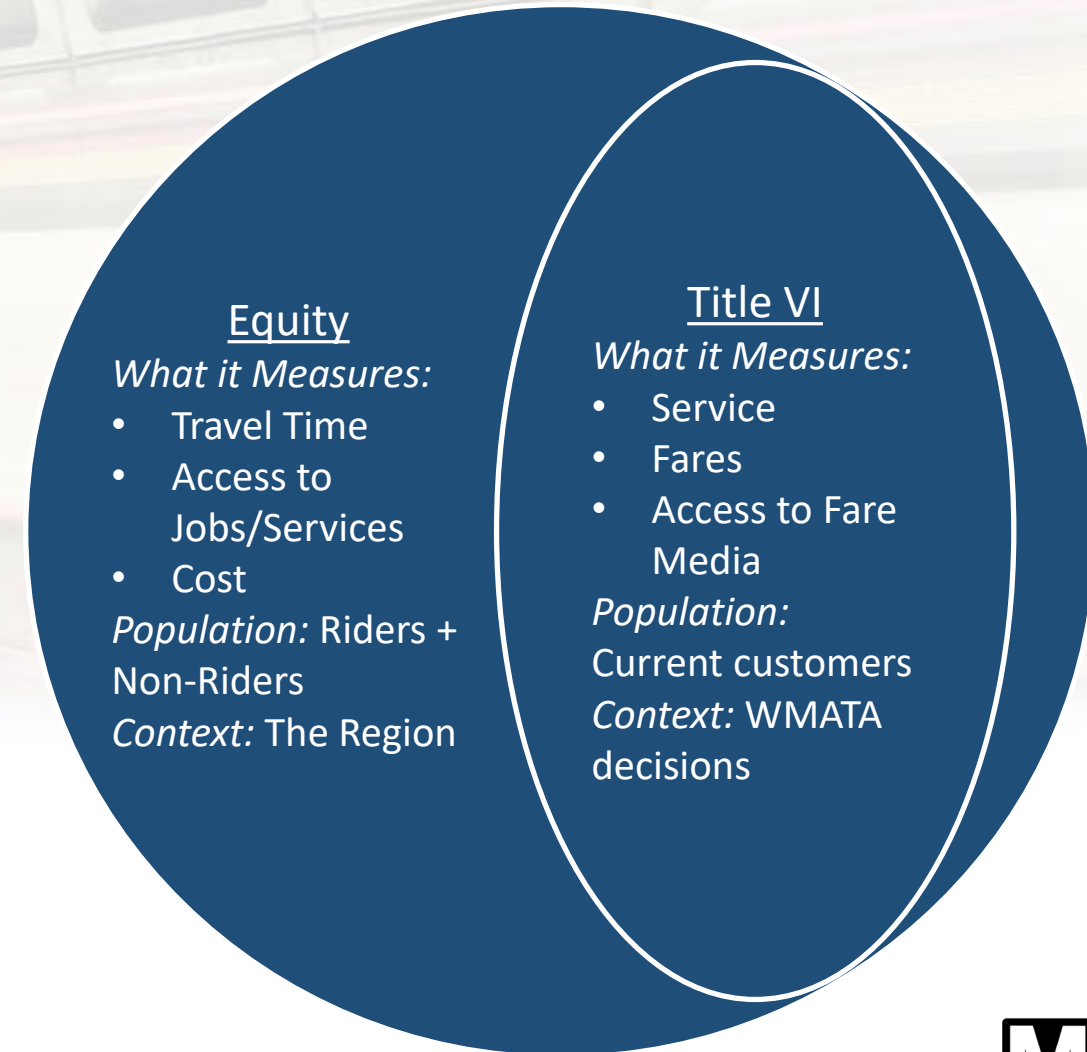
*Total Riders Affected by Service Change (per weekday)	Threshold for Significant Disparity (between % minority/low-income riders affected by service change and % of minority/low-income riders for the system or mode)
Up to 10,000	8%
10,001 to 20,000	7%
20,001 to 40,000	6%
Over 40,000	5%

**Based on natural breaks in Metro passenger survey data*

Exceptions to using the above thresholds may occur if Metro has limited survey data available and the margin of error in the data is 10% or greater. In such cases, Metro will collect new data to ensure a margin of error consistent with this definition.

Differences between Title VI and Transit Equity

- Title VI focuses on avoiding disparate treatment, not addressing broader racial and social inequities
- Title VI focuses on current customers/riders, not on all residents of the region
- Title VI focuses on a limited set of measures
- Title VI responds to Metro business decisions



Opportunities to Address Equity

- Advance Bus Transformation Project recommendations
 - Update Metrobus service guidelines to reflect customer experience and measure equity
 - Continue partnering with jurisdictional partners to improve bus frequency and reliability
- Build off of Public Participation Plan, proactively engage equity communities
- Examine bus and rail service together as a system
- Establish Transit Equity Working Group
- Consider establishing Racial and Social Equity Principles



Next Steps



- Action items
 - Request Board Approval of the 2020 Title VI Program Update & Approval of the Service Monitoring Results

Title VI Program Appendices



Equity Analysis Requirements

- Major Service Changes in Bus and Rail
- Any Fare Changes (*i.e.*, increase or decrease)
- Changes to fare media

Service & Fare Equity Analyses 2017-2020

- Service and Fare Changes, FY 2018 Operating Budget.
- Service Changes – 2017 Metrobus State of Good Operations
- Service Change, Metrobus NH2
- Service Change, Metrobus G9
- Service Change, Metrobus W9
- Service Change, Metrorail Red Line
- Fare Change, Parking Rates
- Service Change, Metrobus 3T
- Fare Change, Parking Rates
- Fare Change, Metrorail fares
- Service and Fare Changes, FY 2020 Operating Budget
- Service Changes – 2019 Metrobus State of Good Operations
- Service and Fare Changes, FY 2021 Operating Budget

SUBJECT: APPROVAL OF 2020 TITLE VI PROGRAM

RESOLUTION
OF THE
BOARD OF DIRECTORS
OF THE
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

WHEREAS, Federal Transit Administration (FTA) Circular 4702.1B requires the Board of Directors to review and approve the Title VI Program and service monitoring results; and

WHEREAS, FTA requires grant recipients, such as WMATA, to submit a Title VI Program every three years; and

WHEREAS, The 2020 Title VI Program updates several program elements, including demographics of the Transit Zone and customers; the Language Assistance Plan; the Public Participation Plan; monitoring of service standards; and Title VI complaints received and investigated; and

WHEREAS, WMATA is committed to ensuring its programs and policies are designed to provide meaningful participation in and equal access to transit services regardless of race, color, or national origin;

NOW, THEREFORE, be it

RESOLVED, That the Board of Directors approves the 2020 Title VI Program, including the service monitoring results in Attachment A to this Resolution; and be it finally

RESOLVED, That in order to comply with the FTA submission deadline, this Resolution shall be effective immediately.

Reviewed as to form and legal sufficiency,

/s/ Patricia Y. Lee

Patricia Y. Lee

Executive Vice President and General Counsel

Attachment A: Service Monitoring Analysis

I. Overview

Staff analysis shows that no significant difference exists between the service provided to Metro's minority and low-income passengers and the service provided to Metro's non-minority and non-low-income passengers.

II. Background

The Title VI Circular requires that transit providers ensure that service design and operational practices do not discriminate on the basis of race, color, or national origin. To ensure that such service is non-discriminatory, transit agencies are required to monitor fixed-route service at least once every three years using Board-approved service standards and policies. Although the Title VI Circular only requires that transit agencies compare levels of service between minority and non-minority riders, Metro also evaluates its service for low-income passengers.

Transit agencies must establish four service standards: on-time performance (OTP), vehicle headways, vehicle load, and service availability; and two service policies: distribution of transit amenities and vehicle assignment for each specific fixed route mode of service they provide. The Title VI Circular requires that the monitoring results be reported to the Board for its "consideration, awareness and approval." Appendix A describes each of the standards and policies used in the monitoring analysis.

To evaluate whether service is equitably delivered across each mode, Metro staff applied its Board-approved¹ disparate impact/disproportionate burden (DI/DB) test for those riders that experienced service that did not meet its Board-established standards or policies. As shown in Table 1, the DI/DB thresholds vary based on the number of average daily riders impacted.

Table 1: Metro's DI/DB Thresholds

Total Daily Riders Impacted	Threshold for Significant Disparity
Up to 10,000	8%
10,001 to 20,000	7%
20,001 to 40,000	6%
Over 40,000	5%

The DI/DB service test provides the threshold for determining when adverse effects of Metrorail and Metrobus services are borne disproportionately by minority or low-income populations.

¹ Adopted October 24, 2013, Res. 2013-27

If, for example, more than 4,000 off-peak riders experience a load factor that does not meet Metro's service standards, the DI/DB threshold would be 8 percent, because less than 10,000 riders are impacted. If the variance from the Metrorail system averages for minority and low-income riders was greater than 8 percent, Metro would consider the load standard to have a DI or DB.

III. Title VI Analysis

A. Data Sources and Methods

The monitoring analysis focuses on minority and low-income passenger trips experiencing service that does not meet WMATA's established standards or policies, comparing the demographic make-up of those customers to that of the total ridership during the same time period.

Metro's monitoring period corresponds to that of the FTA Triennial period, 2017 to 2019. Staff used the 2016 Metrorail Travel Trends Survey and the 2018 Metrobus Passenger Survey as its primary sources of demographic data. Operating data from fall 2019 was integrated with demographic data to assess the performance data for minority and-low income riders. To evaluate the service availability standard, staff used the American Communities Survey (2014-2018) data.

Service Standards - Load, Headways and OTP

Analysis of the first three service standards—load, headways, and OTP—is based on fall 2019 performance data. Each service standard was evaluated for both Metrorail and Metrobus using the DI/DB threshold applicable to the number of impacted riders (i.e., those experiencing service not meeting the Board-approved standard). Table 2 provides a high-level summary of the standards while Appendix A provides a more detailed summary.

Table 2: Service Standards and Measures

Standard		Measure
Vehicle Load	Rail	100 passengers per car (PPC)
	Bus	1.0 to 1.2 x Seated Load
Vehicle Headways	Rail	4 or 8 Min. Peak Varies. Off-Peak
	Bus	15 or 30 Min. Peak 30 or 60 Min. Off-Peak
OTP	Rail	Expected vs. actual trip time
	Bus	Window: 2 minutes early or 7 minutes late

Metrorail:

Vehicle Load: Vehicle load is measured at 'maximum load' points on each line. Using passenger survey data, staff determined the demographic composition of riders on each line to determine whether minority and low-income riders are significantly more likely to experience crowding.

Vehicle Headways: The analysis focuses on whether minority and low-income riders are significantly more likely to experience scheduled headways that do not meet established standards. To conduct the analysis, staff reviewed the number of trains scheduled per hour to see if the corresponding standard was met.

On-Time Performance: By combining OTP data and rail survey data, staff was able to determine the number of trips that were on-time for minority and low-income customers compared to the system average.

Metrobus:

Vehicle Load: Each Metrobus route has its own maximum load point by time of day. Staff evaluated rider demographics by route/line to determine whether minority and low-income riders are significantly more likely to experience crowding.

Vehicle Headways: The analysis focuses on whether minority and low-income riders are significantly more likely to experience scheduled headways that do not meet established standards. As with rail headways, staff reviewed the number of buses scheduled per hour to see if the headway standard that corresponded to that time period was met. However, staff also took into account the type of line (urban/ suburban), as the standards vary by line category (see Attachment A).

On-Time Performance: Metrobus OTP data is collected for six daily time periods and aggregated into peak and off-peak samples. By combining the OTP data, ridership data, and bus survey data, staff calculated the number the number of minority and low-income passenger who do not experience on-time service and compared these to the system averages.

Service Standards – Service Availability

To assess how accessible Metro's service is for minority and low-income residents, Metro staff used American Community Survey (2014-2018) residency data. Using GIS tools, staff calculated a buffer of a ½ mile around Metrorail stations and a ¼ mile around Metrobus stops. Using the GIS and ACS data, staff calculated the percentage of minority and low-income persons within walking distance of Metro services compared to the non-minority and non-low income population in Metro's service area.

Service Policies – Passenger Amenities, Vehicle Assignment

Metro has set standards for the distribution of passenger amenities through the rail transit network in its station design and planning standards. Metro does not own or operate bus stops except for those located on Metrorail station property. Consistent with the Title VI

Circular, Metro therefore only assessed distribution for those bus stops on Metrorail station property.

Metro's vehicle assignment policies focus on fleet age, and whether minority and low-income riders disproportionately ride on buses or railcars that are significantly older than the system average. The following paragraphs describe the staff analysis for each policy by mode.

Metrorail:

Passenger Amenities: Staff determined that all stations met these requirements. If the amenities were not present, staff would have calculated the demographic make-up of passengers using these stations to determine whether minority and low-income customers were significantly more likely to use stations where amenities were missing.

Vehicle Assignment: By applying operations data detailing train composition by car series on an average weekday², staff calculated an average vehicle age by line. Staff then used passenger survey data collected for each line to determine whether minority or low-income riders were significantly more likely to encounter older vehicles.

Metrobus:

Passenger Amenities: Metro does not own or manage bus stops beyond its rail stations. Metro has, however, set standards for bus bays at rail stations. Bus bays were included in the Metrorail station survey and evaluated with the Metrorail station amenities.

Vehicle Assignment: By applying the average age of the Metrobus fleet by garage to the ridership of the lines served by each garage, staff calculated the average vehicle age per bus line. Staff then used passenger survey data collected for each line to determine whether minority or low-income riders were significantly more likely to encounter older vehicles.

B. Results

Staff analysis shows that for each service standard and policy, Metro provides an equitable level of service to all its customers on Metrobus and Metrorail during peak and off-peak service periods.

Service Standards - Load, Headways and OTP

As shown in Tables 3 and 4, Metrorail and Metrobus service standards do not result in a DI or DB for minority or low-income passengers. In all cases, the percentage of minority and low-income trips not meeting a certain standard did not exceed the DI/DB threshold. In Tables 3 and 4, a negative number in the difference column indicates that minority or low-income passengers experience better service than the system average, as less of them see service that does not meet the guideline.

² ROCS SPOT data, October 2019

Metrorail:

With respect to OTP, minority and low-income customers are somewhat more likely to not experience on-time service than average. However, the differences are well below the threshold for disparate treatment. With respect to vehicle load, minority and low-income customer are less likely to experience load that exceeds guideline.

Three rail service standards—Off-peak vehicle load and peak and off-peak vehicle headway—meet the corresponding service standard criteria. For example, staff reviewed scheduling of trains and determined that Metro adheres to its headway policy. As a result, Metro’s headways do not result in a DI or DB.

Table 3: Metrorail Results – Load, Headways and OTP

Service Standard	DI/ DB Threshold	Difference Minority	Difference Low Income	Pass DI/DB Test
On-Time Performance				
Peak	5.0%	2.1%	0.1%	Yes
Off-Peak	7.0%	0.7%	0.4%	Yes
Vehicle Load				
Peak	5.0%	-1.6%	-1.3%	Yes
Off-Peak	All service meets standard			Yes
Vehicle Headway				
Peak	All service meets standard			Yes
Off-Peak	All service meets standard			Yes

Metrobus:

Staff analyzed the bus service that does not meet Metro’s Board-approved standards to determine whether a DI or DB exists. Table 4 summarizes the underperforming bus service provided to minority and low-income riders compared to the underperforming service provided for all customers.

As shown in Table 4, minority and low-income riders make up a slightly higher proportion of riders who experience service that is not on-time. However, there is no disparate treatment. They are less likely to experience service that exceeds the load guidelines for

that route/ time period. In terms of vehicle headways, low-income customers are less like to experience service that does not meet the guidelines for service during peak and off-peak periods. Minority customers are more likely to experience service that does not meet the guideline during off-peak periods. However, this difference is below the DI threshold, so, there is not disparate treatment.

Table 4: Metrobus Results – Load, Headways and OTP

Service Standard	DI/ DB Threshold	Difference Minority	Difference Low Income	Pass DI/DB Test
On-Time Performance				
Peak	5.0%	1.0%	1.4%	Yes
Off-Peak	6.0%	0.8%	1.1%	Yes
Vehicle Load				
Peak	8.0%	-10.7%	-10.5%	Yes
Off-Peak	8.0%	-4.7%	-7.8%	Yes
Vehicle Headway				
Peak	6.0%	0.1%	-8.2%	Yes
Off-Peak	8.0%	6.6%	-5.5%	Yes

Service Standards – Service Availability

Table 5 shows the differences in service coverage. Unlike Tables 3 and 4, a positive number means more service for minority or low-income customers while a negative number means the less service. Overall service coverage (Metrorail + Metrobus) is generally better for minorities and low-income residents. The only exception is minorities who live within a ½ mile of Metrorail. However, the difference is less than 5 percent.

Table 5: Service Availability Results

	Minority Diff.	Low-Income Diff.
Percent of residents within walking distance of:		
1/2 Mile Metrorail	-4.6%	8.2%
1/4 Mile Metrobus	3.9%	9.2%
Within Either	2.8%	8.7%

Service Policies – Passenger Amenities, Vehicle Assignment

Metrorail:

Passenger Amenities: Staff determined that all stations in the Metrorail system met the established criteria.

Vehicle Assignment: The average age of a rail vehicles across the system is 12.6 years³. For minority and low-income passengers, the average vehicle age is somewhat lower, at 12.4 years and 12.0 years, respectively. This analysis shows an equitable distribution of vehicles throughout the system.

Metrobus:

Passenger Amenities: Not applicable, other than for bus bay shelters at rail stations, which are included in the Metrorail analysis.

Vehicle Assignment: – The average age for a bus across all Metrobus lines is 7.1 years.⁴ For minority and low-income customers, the averages are virtually the same as the system average, 7.2 and 7.3 years respectively. This analysis shows an equitable distribution of vehicles throughout the system.

For the reasons listed above, staff has determined that no significant difference exists between the service provided to Metro's minority and low-income passengers and the service provided to Metro's non-minority and non-low-income passengers.

³ Vehicle deployment as of October of 2019, weighed by passenger trip

⁴ Ibid.

Appendix A

Table 1: Rail Service Standards			
FTA Standard ⁵	WMATA Measure	WMATA Definition	WMATA Calculation
Vehicle Load	Passengers-per-car (PPC)	Average number of passengers in a Metrorail car at maximum load stations	Normal (rush and non-rush) weekday minimum of 80 and maximum of 120 passengers-per-car, with an optimal occupancy being 100 passengers-per-car, averaged during a weekday hour at locations in the system where the vehicle passenger loads are the greatest. ⁶
Vehicle Headway	Time between trains (frequency)	Maximum scheduled time interval between trains during normal weekday service	Normal weekday rush period maximums shall be 4 minutes on core interlined segments, and 8 minutes on all other segments; normal weekday midday maximums shall be 6 minutes on core interlined segments, and 12 minutes on all other segments; for the Blue, Orange, Yellow, Green, and Silver Lines the normal weekday late night maximums shall be 10 minutes on core interlined segments, and 20 minutes on all other segments; for the Red Line the normal weekday late night maximum shall be 7.5 minutes on core segments, and 15 minutes on all other segments.
OTP	Rail customer on-time performance	Percent of customer journeys completed on time	Number of journeys completed on time divided by the total number of journeys. These standards vary by line, time of day, and day of week. ⁷
Service Availability	Population served by Metrorail	Percent of a population living near a Metrorail station	Population living within ½ mile of a rail station divided by the total population living in the compact zone.

⁵ As defined in FTA C 4702.1B IV §4a

⁶ As defined in WMATA Board Resolutions 2012-29, 2013-20, and 2017-11

⁷ As defined in Vital Signs Report

Table 2: Rail Service Policies	
FTA Policy ⁸	WMATA Policy
Distribution of Transit Amenities	WMATA will provide amenities such as seating, platform canopies, system maps, information signs, elevators, escalators, and waste receptacles at rail stations across the system.
Vehicle Assignment	Railcars are assigned to a line based on ridership demand, service schedules and maintenance infrastructure restrictions ⁹ .

Table 3: Bus Service Standards			
FTA Standard ¹⁰	WMATA Measure	WMATA Definition	WMATA Calculation
Vehicle Load	Load Factor	Average ratio of passengers per seat per bus during a service hour at the maximum load point	Peak service maximum load factors of 1.2 on radial lines, 1.1 on crosstown and 1.0 on express lines and off-peak service maximum load factors of 1.0 on all service types, averaged during a weekday service hour (peak or non-peak respectively) by line where vehicle passenger loads are the greatest. ⁶
Vehicle Headway	Time between buses (frequency)	Maximum scheduled time interval between buses	Weekday peak-period maximums shall be 15 minutes for Urban and Radial lines, and 30 minutes for Suburban lines; Off-peak and weekend maximums shall be 30 minutes for Urban and Radial lines, and 60 minutes for Suburban lines. ¹¹
OTP	Schedule adherence	Percent adherence to scheduled service.	For delivered trips, difference between scheduled time and actual time arriving at a time point based on a window of no more than 2 minutes early or 7 minutes late. ¹²
Service Availability	Population served by Regional and Non-Regional Metrobus	Percent of a population living near a Metrobus stop	Population living within ¼ mile of a bus stop (regional and non-regional) divided by the total population living in the compact zone.

⁸ As defined in FTA C 4702.1B IV §4b

⁹ Per Metrorail Fleet Management Plan, Revision 4G

¹⁰ As defined in FTA C 4702.1B IV §4a

¹¹ WMATA Board Resolution 2010-39

¹² Definition from Vital Signs Report

Table 4: Bus Service Policies	
FTA Policy ¹³	WMATA Policy
Distribution of Transit Amenities	WMATA will provide amenities such as shelters, system maps, schedules, and waste receptacles at bus stops where WMATA has decision-making authority.
Vehicle Assignment	Vehicles are assigned to routes based on ridership demands, road conditions, service types, maintenance garage capacity and vehicle technologies ¹⁴ .

¹³ As defined in FTA C 4702.1B IV §4b

¹⁴ Board Resolution 2010-39 Attachment A – 2010 Metrobus Fleet Management Plan