CHAPTER IV

REQUIREMENTS AND GUIDELINES FOR FIXED ROUTE TRANSIT PROVIDERS

1. **INTRODUCTION.** The requirements described in this chapter apply to all providers of fixed route public transportation (also referred to as transit providers) that receive Federal financial assistance, inclusive of States, local and regional entities, and public and private entities. Contractors are responsible for following the Title VI Program(s) of the transit provider(s) with whom they contract. Transit providers that are subrecipients will submit the information required in this chapter to their primary recipient (the entity from whom they directly receive transit funds) every three years on a schedule determined by the primary recipient. Direct and primary recipients will submit the information required in this chapter to FTA every three years. See Appendix L for clarification of reporting responsibilities by recipient category.

All transit providers—whether direct recipients, primary recipients or subrecipients—that receive financial assistance from FTA are also responsible for following the general requirements in Chapter III of this circular. The requirements in this chapter are scaled based on the size of the fixed route transit provider.

Providers of public transportation that only operate demand response service are responsible only for the requirements in Chapter III. Demand response includes general public paratransit, Americans with Disabilities Act complementary paratransit, vanpools, and Section 5310 non-profits that serve only their own clientele (closed door service). Providers of public transportation that operate fixed route and demand response service, or only fixed route service, are responsible for the reporting requirements in this chapter, but these requirements only apply to fixed route service.

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a. If a transit provider:
   (1) Operates 50 or more fixed route vehicles in peak service and is located in an Urbanized Area (UZA) of 200,000 or more in population; or
   (2) Has been placed in this category at the discretion of the Director of Civil Rights in consultation with the FTA Administrator,

Then the transit provider’s Title VI Program must contain all of the elements described in this chapter.

b. If a fixed route transit provider does not meet the threshold in paragraph a, then the transit provider is only required to set system-wide standards and policies, as further described below.

c. Threshold. FTA requires all transit providers to submit a Title VI Program to comply with DOT Title VI regulations; the threshold provides a distinction regarding the degree of evidence a fixed route transit provider must provide to demonstrate compliance with those regulations.

d. Determination. As of the effective date of this circular (4702.1B), those transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population, are required to meet all requirements of this chapter (i.e., setting service standards and policies, collecting and reporting data, monitoring transit service, and evaluating fare and service changes).

2. IMPLEMENTATION. Fixed route transit providers with Title VI Programs due between October 1, 2012 and March 31, 2013 must submit a Title VI Program that is compliant with this Circular by March 31, 2013. On or about October 1, 2012, FTA will publish a list of recipients that are in this group, and FTA will also reach out to each recipient to ensure awareness of the requirement.

a. All fixed route transit providers with Title VI Programs that do not expire between October 1, 2012, and March 31, 2013, are required to develop or update their system-wide standards and policies and submit them into TEAM by March 31, 2013.

b. Title VI Programs due to expire on or after April 1, 2013, must comply with the reporting requirements of this Circular, 4702.1B.

c. Service Equity Analyses. Transit providers with 50 or more vehicles in fixed route service that are located in large UZAs and have major service changes scheduled between October 1, 2012 and March 31, 2013, may follow the service equity analysis guidance provided in FTA Circular 4702.1A. A transit provider may conduct a service equity analysis consistent with the new Circular for major service changes occurring prior to April 1, 2013, but is not required to do so. All major service changes occurring on or after April 1, 2013 must be analyzed with the framework outlined in section 7 of this chapter.
d. **Surveys.** Transit providers with 50 or more vehicles in fixed route service that are located in large UZAs and that have not conducted passenger surveys in the last five years will have until December 31, 2013, to conduct these surveys.

3. **REQUIREMENT TO PREPARE AND SUBMIT A TITLE VI PROGRAM.** As stated in Chapter III of this Circular, in order to ensure compliance with the reporting requirements of 49 CFR Section 21.9(b), FTA requires that all direct and primary recipients document their compliance by submitting a Title VI Program to their FTA regional civil rights officer once every three years or as otherwise directed by FTA. For all transit providers (including subrecipients), the Title VI Program must be approved by the transit provider’s board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA. For State DOTs, the appropriate governing entity is the State’s Secretary of Transportation or equivalent. Transit providers shall submit a copy of the board resolution, meeting minutes, or similar documentation with the Title VI Program as evidence that the board of directors or appropriate governing entity or official(s) has approved the Title VI Program. FTA will review and concur or request the recipient provide additional information. Subrecipients shall submit Title VI Programs to the primary recipient from whom they receive funding, on a schedule to be determined by the primary recipient, in order to assist the primary recipient in its compliance efforts. Collection and storage of subrecipient Title VI Programs may be electronic at the option of the primary recipient.

a. **Contents of the Title VI Program.** Providers of fixed route public transportation shall include the following information in their Title VI Program.

   (1) All fixed route transit providers shall submit:

   (a) All general requirements set out in Section 4 of Chapter III of this Circular; and

   (b) System-wide service standards and system-wide service policies, whether existing or new (i.e., adopted by the transit provider since the last submission) as described in this chapter.

   (2) Transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population shall include the information in paragraph a(1) above, and will also include:

   (a) A demographic analysis of the transit provider’s service area. This shall include demographic maps and charts completed since submission of the last Title VI Program that contains demographic information and service profiles;

   (b) Data regarding customer demographics and travel patterns, collected from passenger surveys;

   (c) Results of the monitoring program of service standards and policies and any action taken, including documentation (e.g., a resolution, copy of meeting minutes, or similar documentation) to verify the board’s or governing entity or official(s)’s consideration, awareness, and approval of the monitoring results;
(d) A description of the public engagement process for setting the “major service change policy” and disparate impact policy;

(e) A copy of board meeting minutes or a resolution demonstrating the board’s or governing entity or official(s)’s consideration, awareness, and approval of the major service change policy and disparate impact policy.

(f) Results of equity analyses for any major service changes and/or fare changes implemented since the last Title VI Program submission; and

(g) A copy of board meeting minutes or a resolution demonstrating the board’s or governing entity or official(s)’s consideration, awareness, and approval of the equity analysis for any service or fare changes required by this circular.

4. **REQUIREMENT TO SET SYSTEM-WIDE SERVICE STANDARDS AND POLICIES.**

These requirements apply to all fixed route providers of public transportation service. Title 49 CFR Section 21.5 states the general prohibition of discrimination on the grounds of race, color, or national origin. Section 21.5(b)(2) specifies that a recipient shall not “utilize criteria or methods of administration which have the effect of subjecting persons to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program with respect to individuals of a particular race, color, or national origin.” Section 21.5(b)(7) requires recipients to “take affirmative action to assure that no person is excluded from participation in or denied the benefits of the program or activity on the grounds of race, color, or national origin.” Finally, Appendix C to 49 CFR part 21 provides in Section (3)(iii) that “[n]o person or group of persons shall be discriminated against with regard to the routing, scheduling, or quality of service of transportation service furnished as a part of the project on the basis of race, color, or national origin. Frequency of service, age and quality of vehicles assigned to routes, quality of stations serving different routes, and location of routes may not be determined on the basis of race, color, or national origin.”

All fixed route transit providers shall set service standards and policies for each specific fixed route mode of service they provide. Fixed route modes of service include but are not limited to, local bus, express bus, commuter bus, bus rapid transit, light rail, subway, commuter rail, passenger ferry, etc. These standards and policies must address how service is distributed across the transit system, and must ensure that the manner of the distribution affords users access to these assets.

These system-wide service standards differ from any standards set by the APTA Standards Development Program and other standards development organizations (SDOs), in that they will be set by individual transit providers and will apply agency-wide rather than industry-wide.

Providers of fixed route public transportation shall also adopt system-wide service policies to ensure service design and operations practices do not result in discrimination on the basis of race, color, or national origin. Service policies differ from service standards in that they are not necessarily based on a quantitative threshold.
a. **Effective Practices to Fulfill the Service Standard Requirement.** FTA requires all fixed route transit providers to develop quantitative standards for all fixed route modes of operation for the indicators listed below. Providers of public transportation may set additional standards as appropriate or applicable to the type of service they provide. See Appendix G for an example of how to report this information.

(1) **Vehicle load for each mode.** Vehicle load can be expressed as the ratio of passengers to the total number of seats on a vehicle. For example, on a 40-seat bus, a vehicle load of 1.3 means all seats are filled and there are approximately 12 standees. A vehicle load standard is generally expressed in terms of peak and off-peak times. Transit providers that operate multiple modes of transit must describe the specific vehicle load standards for peak and off-peak times for each mode of fixed route transit service (i.e., bus, express bus, bus rapid transit, light rail, heavy rail, commuter rail, passenger ferry, etc., as applicable), as the standard may differ by mode.

(2) **Vehicle headway for each mode.** Vehicle headway is the amount of time between two vehicles traveling in the same direction on a given line or combination of lines. A shorter headway corresponds to more frequent service. Vehicle headways are measured in minutes (e.g., every 15 minutes); service frequency is measured in vehicles per hour (e.g., 4 buses per hour). Headways and frequency of service are general indications of the level of service provided along a route. Vehicle headway is one component of the amount of travel time expended by a passenger to reach his/her destination. A vehicle headway standard is generally expressed for peak and off-peak service as an increment of time (e.g., peak: every 15 minutes; and off peak: every 30 minutes). Transit providers may set different vehicle headway standards for different modes of transit service. A vehicle headway standard might establish a minimum frequency of service by area based on population density. For example, service at 15-minute peak headways and 30-minute off-peak headways might be the standard for routes serving the most densely populated portions of the service area, whereas 30-minute peak headways and 45-minute off-peak headways might be the standard in less densely populated areas. Headway standards are also typically related to vehicle load. For example, a service standard might state that vehicle headways will be improved first on routes that exceed the load factor standard or on routes that have the highest load factors.

(3) **On-time performance for each mode.** On-time performance is a measure of runs completed as scheduled. This criterion first must define what is considered to be “on time.” For example, a transit provider may consider it acceptable if a vehicle completes a scheduled run between zero and five minutes late in comparison to the established schedule. On-time performance can be measured against route origins and destinations only, or against origins and destinations as well as specified time points along the route. Some transit providers set an on-time performance standard that prohibits vehicles from running early (i.e., ahead of schedule) while others allow vehicles to run early within a specified window of time (e.g., up to five minutes ahead of schedule). An acceptable level of performance must be defined (expressed as a percentage). The percentage of runs completed system-wide or on a particular route or line within the standard must be calculated and measured against the level of
performance for the system. For example, a transit provider might define on-time performance as 95 percent of all runs system-wide or on a particular route or line completed within the allowed “on-time” window.

(4) Service availability for each mode. Service availability is a general measure of the distribution of routes within a transit provider’s service area. For example, a transit provider might set a service standard to distribute routes such that a specified percentage of all residents in the service area are within a one-quarter mile walk of bus service or a one-half mile walk of rail service. A standard might also indicate the maximum distance between stops or stations. These measures related to coverage and stop/station distances might also vary by population density. For example, in more densely populated areas, the standard for bus stop distance might be a shorter distance than it would be in less densely populated areas, and the percentage of the total population within a one-quarter mile walk of routes or lines might be higher in more densely populated areas than it would be in less densely populated areas. Commuter rail service or passenger ferry service availability standards might include a threshold of residents within a certain driving distance as well as within walking distance of the stations or access to the terminal.

b. Effective Practices to Fulfill the Service Policy Requirement. FTA requires fixed route transit providers to develop a policy for each of the following service indicators. Transit providers may set policies for additional indicators as appropriate. See Appendix H for an example of how to report this information.

(1) Distribution of transit amenities for each mode. Transit amenities refer to items of comfort, convenience, and safety that are available to the general riding public. Fixed route transit providers must set a policy to ensure equitable distribution of transit amenities across the system. Transit providers may have different policies for the different modes of service that they provide. Policies in this area address how these amenities are distributed within a transit system, and the manner of their distribution determines whether transit users have equal access to these amenities. This subparagraph is not intended to impact funding decisions for transit amenities. Rather, this subparagraph applies after a transit provider has decided to fund an amenity.

This policy does not apply to transit providers that do not have decision-making authority over the siting of transit amenities. Transit providers are not responsible for setting a policy for transit amenities that are solely sited by a separate jurisdiction (e.g., a city, town, or county) unless the transit provider has the authority to set policies to determine the siting of these amenities. Transit providers are responsible for setting a policy for transit amenities that are installed under a contract between the transit provider and a private entity. In these cases, the transit provider shall communicate its service policy to the private entity.

Transit providers shall submit their siting policy where the definition of transit amenities includes but is not limited to:

(a) Seating (i.e., benches, seats at stops/stations)
(b) Bus and rail shelters and rail platform canopies
(c) Provision of information:
   i. Printed signs, system maps, route maps, and schedules.
   ii. Digital equipment such as next vehicle arrival time signs along bus routes and at fixed guideway stations (i.e., electronic signage that depicts when a transit vehicle will next arrive at the station or stop).
(d) Escalators
(e) Elevators
(f) Waste receptacles (including trash and recycling)

(2) Vehicle assignment for each mode. Vehicle assignment refers to the process by which transit vehicles are placed into service in depots and on routes throughout the transit provider’s system. Policies for vehicle assignment may be based on the age of the vehicle, where age would be a proxy for condition. For example, a transit provider could set a policy to assign vehicles to depots so that the age of the vehicles at each depot does not exceed the system-wide average. The policy could also be based on the type of vehicle. For example, a transit provider may set a policy to assign vehicles with more capacity to routes with higher ridership and/or during peak periods. The policy could also be based on the type of service offered. For example, a transit provider may set a policy to assign specific types of vehicles to express or commuter service. Transit providers deploying vehicles equipped with technology designed to reduce emissions could choose to set a policy for how these vehicles will be deployed throughout the service area.

5. REQUIREMENT TO COLLECT AND REPORT DEMOGRAPHIC DATA. This requirement applies only to transit providers that operate 50 or more fixed route vehicles in peak service and are located in Urbanized Areas (UZA) of 200,000 or more in population or that otherwise meet the threshold in the Introduction section of this chapter. Title 49 CFR Section 21.9(b) requires recipients to keep records and submit compliance reports (a Title VI Program) to FTA. Title VI Programs shall contain “such information, as the Secretary may determine to be necessary to enable him to ascertain whether the recipient has complied or is complying with this part.” In addition, 49 CFR 21.9(b) states that recipients “should have available for the Secretary racial and ethnic data showing the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance.” In order to ensure compliance with the regulation, FTA requires these transit providers to prepare data regarding demographic and service profile maps and charts as well as customer demographics and travel patterns.

In order to comply with the reporting requirements in 49 CFR Section 21.9(b), transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population shall collect and analyze racial and ethnic data as described below in order to determine the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance from FTA.

a. Demographic and Service Profile Maps and Charts. Transit providers shall prepare demographic and service profile maps and charts after each decennial census and prior to proposed service reductions or eliminations. Transit providers may use decennial census
data to develop maps and charts until the next decennial census or they may use American Community Survey (ACS) data between decennial censuses. These maps and charts will help the transit provider determine whether and to what extent transit service is available to minority populations within the transit provider’s service area. These maps may be prepared using Geographic Information System (GIS) technology, although transit providers without access to GIS technology may prepare the maps in alternative formats. FTA requires transit providers to prepare the following maps and charts:

(1) A base map of the transit provider’s service area that overlays Census tract, Census block or block group, traffic analysis zone (TAZ), or other locally available geographic data with transit facilities—including transit routes, fixed guideway alignments, transit stops and stations, depots, maintenance and garage facilities, and administrative buildings—as well as major activity centers or transit trip generators, and major streets and highways. Major activity centers and transit trip generators can include, but are not necessarily limited to, the central business district, outlying high employment areas, schools, and hospitals. This map shall overlay Census tract, block or block group data depicting minority populations with fixed transit facilities, such as bus shelters, transit stations, and fixed guideways. Another map shall highlight those transit facilities that were recently replaced, improved or are scheduled (projects identified in planning documents) for an update in the next five years.

(2) A demographic map that plots the information listed in (1) above and also shades those Census tracts, blocks, block groups, TAZs, or other geographic zones where the percentage of the total minority population residing in these areas exceeds the average percentage of minority populations for the service area as a whole. Transit providers may elect to produce maps that highlight separately the presence of specific minority populations if this information will assist the transit provider in determining compliance with Title VI and/or LEP. Transit providers shall also prepare a GIS or alternative map overlaying minority populations with fixed transit facilities, such as bus shelters, transit stations, and fixed guideways.

(3) For purposes of addressing environmental justice, and in order to evaluate the impacts of major service changes on low-income populations, demographic maps shall also depict those Census tracts, blocks, block groups, TAZs, or other geographic zones where the percentage of the total low-income population residing in these areas exceeds the average percentage of low-income populations for the service area as a whole.

b. Demographic Ridership and Travel Patterns. Fixed route providers of public transportation that meet the threshold in the Introduction section of this chapter shall collect information on the race, color, national origin, English proficiency, language spoken at home, household income and travel patterns of their riders using customer surveys. Transit providers shall use this information to develop a demographic profile comparing minority riders and non-minority riders, and trips taken by minority riders and non-minority riders. Demographic information shall also be collected on fare usage by fare type amongst minority users and low-income users, in order to assist with fare equity
analyses. The demographic information shall be displayed in tabular format. An example of this analysis is depicted in Appendix I.

The information required in this subparagraph may be integrated into passenger surveys employed by transit providers on a schedule determined by the transit provider but no less than every five years and may be collected at the time that such surveys are routinely performed, such as customer satisfaction surveys and origin and destination surveys used to update travel demand models. Transit providers should contact FTA for further guidance on survey sample sizes, data expansion procedures, and data collection methods suitable to the transit provider’s specific situation.

Transit providers shall take steps to translate customer surveys into languages other than English as necessary, or to provide translation services in the course of conducting customer surveys consistent with the DOT LEP guidance and the recipient’s language assistance plan.

6. **REQUIREMENT TO MONITOR TRANSIT SERVICE.** This requirement applies only to providers of public transportation that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population or that otherwise meet the threshold in the Introduction section of this chapter. In order to ensure compliance with DOT’s Title VI regulations, FTA requires these transit providers to monitor the performance of their transit system relative to their system-wide service standards and service policies (i.e., vehicle load, vehicle assignment, transit amenities, etc.) not less than every three years using the following method:

   a. Transit providers shall use the minority transit route definition to implement this monitoring program. Transit providers shall select a sample of minority and non-minority routes from all modes of service provided, e.g., local bus, bus rapid transit, light rail, etc. The sample shall include routes that provide service to predominantly minority areas and non-minority areas. Transit providers should bear in mind that the greater the sample size, the more reliable the results.

   As defined in Chapter I, a minority transit route is one in which at least one-third of the revenue miles are located in a Census block, Census block group, or traffic analysis zone where the percentage minority population exceeds the percentage minority population in the service area. Transit providers may supplement this with ridership data and adjust route designations accordingly. For example, a commuter bus that picks up passengers in generally non-minority areas and then travels through predominantly minority neighborhoods but does not pick up passengers who live closer to downtown might be more appropriately classified as a non-minority route, even if one-third of the route mileage is located in predominantly minority Census blocks or block groups. On the other hand, a light rail line may carry predominantly minority passengers to an area where employment centers and other activities are located, but the minority population in the surrounding Census blocks or block groups does not meet or exceed the area average. This route may be more appropriately classified as a minority transit route. Transit providers should ensure they have
adequate ridership data before making these determinations, and include that data in their analyses.

b. Transit providers shall assess the performance of each minority and non-minority route in the sample for each of the transit provider’s service standards and service policies.

c. Transit providers shall compare the transit service observed in the assessment to the transit provider’s established service policies and standards.

d. For cases in which the observed service for any route exceeds or fails to meet the standard or policy, depending on the metric measured, the transit provider shall analyze why the discrepancies exist, and take steps to reduce the potential effects.

e. Transit providers shall evaluate their transit amenities policy to ensure amenities are being distributed throughout the transit system in an equitable manner.

f. Transit providers shall develop a policy or procedure to determine whether disparate impacts exist on the basis of race, color, or national origin, and apply that policy or procedure to the results of the monitoring activities;

g. Transit providers shall brief and obtain approval from the transit providers’ policy-making officials, generally the board of directors or appropriate governing entity responsible for policy decisions regarding the results of the monitoring program;

h. Submit the results of the monitoring program as well as documentation (e.g., a resolution, copy of meeting minutes, or similar documentation) to verify the board’s or governing entity or official(s)’s consideration, awareness, and approval of the monitoring results to FTA every three years as part of the Title VI Program. See Appendix J for an example of how to report this information.

Transit providers shall undertake these periodic service monitoring activities to compare the level of service provided to predominantly minority areas with the level of service provided to predominantly non-minority areas to ensure the end result of policies and decision-making is equitable. A transit provider at its discretion may choose to conduct service monitoring more frequently than every three years.

If a transit provider determines, based on its monitoring activities, that prior decisions have resulted in a disparate impact on the basis of race, color, or national origin, the transit provider shall take corrective action to remedy the disparities to the greatest extent possible, and shall discuss in the Title VI Program these disparate impacts and actions taken to remedy the disparities.

7. REQUIREMENT TO EVALUATE SERVICE AND FARE CHANGES. This requirement applies only to transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population or that otherwise meet the threshold in the Introduction section of this chapter. These transit providers are required to prepare and submit service and fare equity analyses as described below. Transit providers not
subject to this requirement are responsible for complying with the DOT Title VI regulations which prohibit disparate impact discrimination, and therefore should review their policies and practices to ensure their service and fare changes do not result in disparate impacts on the basis of race, color, or national origin.

To further ensure compliance with 49 CFR Section 21.5(b)(2), 49 CFR Section 21.5(b)(7), and Appendix C to 49 CFR part 21, all providers of public transportation to which this Section applies shall develop written procedures consistent with this Section to evaluate, prior to implementation, any and all service changes that exceed the transit provider’s major service change threshold, as well as all fare changes, to determine whether those changes will have a discriminatory impact based on race, color, or national origin. The written procedures and results of service and/or fare equity analyses shall be included in the transit provider’s Title VI Program.

One purpose of conducting service and fare equity analyses prior to implementing service and/or fare changes is to determine whether the planned changes will have a disparate impact on the basis of race, color, or national origin.

The typical measure of disparate impact involves a comparison between the proportion of persons in the protected class who are adversely affected by the service or fare change and the proportion of persons not in the protected class who are adversely affected. The comparison population for a statistical measure of disparate impact is all persons who are either affected by the service or fare changes or who could possibly be affected by the service or fare change (e.g., potential passengers). When a transit provider uses ridership as the comparison population, the transit provider will compare the ridership of the affected route(s) with the ridership of the system. For example, if the ridership of affected route(s) is 60 percent minority and the system ridership is 40 percent minority, then changes to the route(s) may have a disparate impact. When a transit provider uses the population of the service area as the comparison population, it will compare the population in Census blocks or block groups served by the affected route(s) with the population in the service area. For example, if affected route(s) serves Census blocks that are 40 percent minority and the service area is 45 percent minority, there would likely not be a disparate impact. Examples of this analysis are provided in Appendix K.

Low-income populations are not a protected class under Title VI. However, recognizing the inherent overlap of environmental justice principles in this area, and because it is important to evaluate the impacts of service and fare changes on passengers who are transit-dependent, FTA requires transit providers to evaluate proposed service and fare changes to determine whether low-income populations will bear a disproportionate burden of the changes. As depicted below, when a minority population is present, the correct analysis is a disparate impact analysis:
Transit providers shall use tables similar to those provided in Appendix K to depict the results of the service and/or fare equity analysis. Transit providers should refer to the checklist and examples in the Appendix for additional technical assistance with service and fare equity analyses.

Upon completion of a service or fare equity analysis, the transit provider shall brief its board of directors, top executive, or appropriate governing entity or official(s) responsible for policy decisions regarding the service and/or fare change(s) and the equity impacts of the service and/or fare change(s). The transit provider shall submit documentation such as a board resolution, copy of meeting minutes, or similar documentation with the Title VI Program as evidence of the board or governing entity or official’s consideration, awareness, and approval of the analysis.

a. Service Equity Analysis

FTA encourages transit providers to contact their FTA Regional Civil Rights Officer for technical assistance when they have determined that a service equity analysis is necessary. Upon request, FTA can provide technical assistance related to methodology and analysis prior to a transit provider’s board of directors taking action.

Transit providers shall evaluate the impacts of their proposed service changes on minority and low-income populations separately, using the following methods:

1. Service Equity Analysis for Minority Populations:
   a. Major Service Change Policy. In order to begin the analysis, the transit provider must first identify what constitutes a “major service change” for its system, as only “major service changes” are subject to a service equity analysis. The transit provider must conduct a service equity analysis for those service changes that meet or exceed the transit provider’s “major service change policy.”

   A major service change policy is typically presented as a numerical standard, such as a change that affects “x” percent of a route, “x” number of route miles or hours, or some other route-specific or system-wide change, or the number or concentration of people affected. The major service change policy will include
adding service and reducing service. The threshold for analysis shall not be set so high as to never require an analysis; rather, agencies shall select a threshold most likely to yield a meaningful result in light of the transit provider’s system characteristics.

A transit provider may exempt a temporary addition of service (e.g., demonstration projects), including those that would otherwise qualify as a major service change, from its definition of major service change. If a temporary service addition or change lasts longer than twelve months, then FTA considers the service addition or change permanent and the transit provider must conduct a service equity analysis if the service otherwise qualifies as a major service change.

(b) **Adverse Effects.** The transit provider shall define and analyze adverse effects related to major changes in transit service. The adverse effect is measured by the change between the existing and proposed service levels that would be deemed significant. Changes in service that have an adverse effect and that may result in a disparate impact include reductions in service (e.g., elimination of route, shortlining a route, rerouting an existing route, increase in headways). Elimination of a route will generally have a greater adverse impact than a change in headways. Additions to service may also result in disparate impacts, especially if they come at the expense of reductions in service on other routes. Transit providers shall consider the degree of adverse effects, and analyze those effects, when planning their service changes.

(c) **Disparate Impact Policy.** The transit provider shall develop a policy for measuring disparate impacts. The policy shall establish a threshold for determining when adverse effects of service changes are borne disproportionately by minority populations. The disparate impact threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by minority populations compared to impacts borne by non-minority populations. The disparate impact threshold must be applied uniformly, regardless of mode, and cannot be altered until the next Title VI Program submission.

For illustrative purposes only, here is an example: a transit provider adopts a disparate impact policy that provides any time there is a difference in adverse impacts between minority and non-minority populations of plus or minus ten percent, this is statistically significant, and such differences in adverse impacts are disparate. For example, if minorities make up 30 percent of the overall population, but would bear 45 percent of the impacts, and the non-minority group would bear 55 percent, there may be a disparate impact insofar as the minority group bears 15 percent more than its expected share, from 45 percent of the burden to 30 percent of the population; while the non-minority group bears 15 percent less than its expected share of 55 percent of burden compared to 70 percent of population—even though the absolute majority of the burden rests with the non-minority group. Applying the ten percent disparate impact policy, the provider will find a disparate impact and must therefore consider
modifying the proposed changes in order to avoid, minimize, or mitigate the disparate impacts of the proposed changes. [NOTE: Ten percent is not a suggested baseline or standard, and is used here solely as an example. As described above, each transit provider will adopt a disparate impact policy.]

(d) **Public Participation.** The transit provider shall engage the public in the decision-making process to develop the major service change policy and disparate impact policy.

(e) **Data Analysis.** The transit provider shall describe the dataset(s) the transit provider will use in the service equity analysis, i.e., whether the provider is using American Community Survey (ACS), Census blocks, block groups, traffic analysis zone (TAZ) level, or using ridership data. The transit provider shall also describe what techniques and/or technologies were used to collect the data. When relying on population data instead of ridership data, the choice of dataset should be the smallest geographic area that reasonably has access to the bus or rail stop or station. For example, passengers will generally walk up to one-quarter mile to a bus stop or one-half mile to a light or heavy rail station, or drive up to three miles to a commuter rail station. The demographics of the neighborhoods within those distances should be the datasets used. Transit providers may use the data from an entire Census block or block group when a portion of the area is within the walking or driving distance described above.

(f) **Assessing Service Impacts.** Transit providers shall evaluate the impacts of proposed service changes on minority populations using the following framework:

(i) The typical measure of disparate impact involves a comparison between the proportion of persons in the protected class who are adversely affected by the service or fare change and the proportion of persons not in the protected class who are adversely affected. The population for a statistical measure of disparate impact is all persons that are either affected by the service or fare changes or that could possibly be affected by the service or fare change (e.g., potential passengers), thus the comparison population may vary depending on the type of change under evaluation. The transit provider shall include in the analysis the reason for the comparison population selected.

For example, when making headway changes, eliminating a route, or increasing service to an area currently served by the transit system, the appropriate comparison population would likely be ridership, and the transit provider would compare the ridership of the affected route(s) with the ridership of the system.

On the other hand, when proposing to provide new service to a neighborhood or corridor not served by the transit system, the appropriate comparison population would likely be the population of the service area, and the transit
provider would compare the population in Census blocks or block groups served by the proposed route(s) with the population in the service area.

Further, if a transit provider is proposing a major service change that involves both headway changes and new service to a neighborhood or corridor not served by the transit system, the transit provider would not have to use different comparison populations for the different types of changes. The transit provider would select either ridership or population of the service area and conduct an analysis using the same comparison population.

Transit providers are cautioned not to “mix and match” their comparison populations. Ridership of affected route(s) should be compared to ridership of the system, and Census blocks or block groups should be compared with the population of the service area.

In instances where a transit provider does not have adequate ridership data or is otherwise uncertain as to which population to use for comparison purposes, the transit provider should contact their FTA regional office for technical assistance.

(ii) **Ridership Data.** When the transit provider determines that the correct population base is ridership, the transit provider shall document the reasons for selecting this population base and analyze any available information generated from ridership surveys to determine the minority and non-minority population ridership of the affected route(s) and the minority and non-minority ridership of the entire system.

(iii) **GIS or Alternative Maps.** When the transit provider determines that the correct population base is Census blocks or block groups, the transit provider shall document the reasons for selecting this population base and shall prepare maps of the routes that would be reduced, increased, eliminated, added, or restructured, overlaid on a demographic map of the service area, in order to study the affected population. Transit providers may also find it helpful to prepare these maps when doing an analysis based on ridership.

(iv) **Determination of Disparate Impact.** Each service change analysis must compare existing service to proposed changes, and calculate the absolute change as well as the percent change. The transit provider shall use its adverse effects definition and disparate impact threshold to determine whether the proposed major service change will result in adverse effects that are disproportionately borne by minority populations, by comparing the proportion of minorities adversely affected to the proportion of non-minorities adversely affected. The transit provider shall consider the degree of the adverse effects when doing this analysis. Any service change analysis shall be expressed as a percent change in tabular format. See Appendix K for an example of how to report this data.
(v) **Analysis of Modifications.** If the transit provider finds potential disparate impacts and then modifies the proposed changes in order to avoid, minimize, or mitigate potential disparate impacts, the transit provider must reanalyze the proposed changes in order to determine whether the modifications actually removed the potential disparate impacts of the changes.

(vi) **Finding a Disparate Impact on the Basis of Race, Color, or National Origin.**

If a transit provider chooses not to alter the proposed service changes despite the potential disparate impact on minority populations, or if the transit provider finds, even after the revisions, that minority riders will continue to bear a disproportionate share of the proposed service change, the transit provider may implement the service change only if:

- the transit provider has a substantial legitimate justification for the proposed service change, and
- the transit provider can show that there are no alternatives that would have a less disparate impact on minority riders but would still accomplish the transit provider’s legitimate program goals.

It is important to understand that in order to make this showing, the transit provider must consider and analyze alternatives to determine whether those alternatives would have less of a disparate impact on the basis of race, color, or national origin, and then implement the least discriminatory alternative.

(vii) **Examining Alternatives.** If the transit provider determines that a proposed service change will have a disparate impact, the transit provider shall analyze the alternatives (identified in the second bullet above) to determine whether alternatives exist that would serve the same legitimate objectives but with less of a disparate effect on the basis of race, color, or national origin. The existence of such an alternative method of accomplishing the transit provider’s substantial and legitimate interests demonstrates that the disparate effects can be avoided by adoption of the alternative methods without harming such interests. In addition, if evidence undermines the legitimacy of the transit provider’s asserted justification - that is, that the justification is not supported by demonstrable evidence - the disparate effects will violate Title VI, as the lack of factual support will indicate that there is not a substantial legitimate justification for the disparate effects. At that point, the transit provider must revisit the service changes and make adjustments that will eliminate unnecessary disparate effects on populations defined by race, color, or national origin. Where disparate impacts are identified, the transit provider shall provide a meaningful opportunity for public comment on any proposed mitigation measures, including the less discriminatory alternatives that may be available.

(2) **Service Equity Analysis for Low-Income Populations.** As noted above, low-income populations are not a protected class under Title VI. However,
recognizing the inherent overlap of environmental justice principles in this area, and because it is important to evaluate the impacts of service and fare changes on passengers who are transit-dependent, FTA requires transit providers to evaluate proposed service and fare changes to determine whether low-income populations will bear a disproportionate burden of the changes.

(a) Major Service Change Policy. As described under the Service Equity Analysis for Minority Populations, the transit provider must first identify what constitutes a “major service change” for its system, as only “major service changes” are subject to a service equity analysis. The transit provider’s major service change policy will apply to both analyses.

(b) Adverse Effects. As described under the Service Equity Analysis for Minority Populations, the transit provider shall define and analyze adverse effects related to major changes in transit service. The transit provider’s adverse effects policy will apply to both analyses.

(c) Disproportionate Burden Policy. The transit provider shall develop a policy for measuring disproportionate burdens on low-income populations. The policy shall establish a threshold for determining when adverse effects of service changes are borne disproportionately by low-income populations. The disproportionate burden threshold defines statistically significant disparity and may be presented as a statistical percentage of impacts borne by low-income populations as compared to impacts borne by non-low-income populations. The disproportionate burden threshold must be applied uniformly, regardless of mode.

(d) Public Participation. The transit provider shall engage the public in the decision-making process to develop the disproportionate burden policy.

(e) Selection of Comparison Population. Transit providers may use ridership data or population of the service area for the comparison population. If a transit provider uses ridership as the comparison population for the Title VI (minority populations) service equity analysis, the transit provider should use ridership as the comparison population for the low-income equity analysis. Similarly, if the transit provider uses the service area as the comparison population for the Title VI (minority populations) analysis, the provider should use the service area as the comparison population for the low-income analysis.

(f) Data Analysis. The transit provider shall describe the dataset(s) the transit provider will use in the service equity analysis, i.e., whether the provider is using American Community Survey (ACS), Census blocks, block groups, or traffic analysis zone (TAZ) level, or using ridership data. The transit provider shall also describe what techniques and/or technologies were used to collect the data. When relying on population data instead of ridership data, the choice of dataset should be the smallest geographic area that reasonably has access to the bus or rail stop or station. [NOTE: Census tract level may be used if that is the smallest geographic area available for income data]. For example,
passengers will generally walk up to one-quarter mile to a bus stop or one-half mile to a light or heavy rail station, or drive up to three miles to a commuter rail station. The demographics of the neighborhoods within those distances should be the datasets used. Transit providers may use the data from an entire Census block or block group when a portion of the area is within the walking or driving distance described above.

(g) **Assessing Service Impacts.** Transit providers shall evaluate the impacts of proposed service changes on low-income populations using the following method:

(i) **Ridership Data.** When the transit provider determines that the correct comparison population is ridership, the transit provider shall document the reasons for selecting this comparison population and analyze any available information generated from ridership surveys to determine the low-income and non-low-income population ridership of the affected route(s) and the low-income and non-low-income ridership of the entire system.

(ii) **GIS or Alternative Maps.** When the transit provider determines that the correct population base is Census blocks or block groups, the transit provider shall document the reasons for selecting this population base and shall prepare maps of the routes that would be reduced, increased, eliminated, added, or restructured/rerouted, overlaid on a demographic map of the service area, in order to study the affected population. Transit providers may also find it helpful to prepare these maps when doing an analysis based on ridership.

(iii) **Determination of Disproportionate Burden.** Each service change analysis must compare existing service to proposed service, and calculate the absolute change as well as the percent change. The transit provider shall use its disproportionate burden threshold to determine whether the proposed change will result in adverse effects that are disproportionately borne by low-income populations, by comparing the proportion of low-income persons adversely affected to the proportion of non-low-income persons adversely affected. Any service change analysis shall be expressed as a percent change in tabular format. See Appendix K for an example of how to report this data.

(iv) **Avoid, Minimize, Mitigate.** At the conclusion of the analysis, if the transit provider finds that low-income populations will bear a disproportionate burden of the proposed major service change, the transit provider should take steps to avoid, minimize, or mitigate impacts where practicable. The provider should also describe alternatives available to low-income passengers affected by the service changes.

(v) FTA considers the disproportionate burden analysis for low-income populations described above to be important for planning and environmental justice analysis purposes; however, since low-income populations are not a protected class under Title VI, failure to complete this analysis will not result in a finding of noncompliance under Title VI.
b. **Fare Equity Analysis**

(1) **Fare Changes.** The fare equity analysis requirement applies to all fare changes regardless of the amount of increase or decrease. As with the service equity analysis, FTA requires transit providers to evaluate the effects of fare changes on low-income populations in addition to Title VI-protected populations.

(a) **Exceptions.**

(i) “Spare the air days” or other instances when a local municipality or transit agency has declared that all passengers ride free.

(ii) Temporary fare reductions that are mitigating measures for other actions. For example, construction activities may close a segment of a rail system for a period of time and require passengers to alter their travel patterns. A reduced fare for these impacted passengers is a mitigating measure and does not require a fare equity analysis.

(iii) Promotional fare reductions. If a promotional or temporary fare reduction lasts longer than six months, then FTA considers the fare reduction permanent and the transit provider must conduct a fare equity analysis.

(2) **Data Analysis.** For proposed changes that would increase or decrease fares on the entire system, or on certain transit modes, or by fare payment type or fare media, the transit provider shall analyze any available information generated from ridership surveys indicating whether minority and/or low-income riders are disproportionately more likely to use the mode of service, payment type, or payment media that would be subject to the fare change. Notably, Census data will not be effective data for fare analyses, since it is impossible to know, based on Census data, what fare media people are using. The transit provider shall describe the dataset(s) the transit provider will use in the fare change analysis. This section shall also describe what techniques and/or technologies were used to collect the data. The transit provider shall—

(i) Determine the number and percent of users of each fare media being changed;
(ii) Review fares before the change and after the change;
(iii) Compare the differences for each particular fare media between minority users and overall users; and
(iv) Compare the differences for each particular fare media between low-income users and overall users.

Please see Appendix K for a sample analysis.

(3) **Assessing Impacts.** Transit providers shall evaluate the impacts of their proposed fare changes (either increases or decreases) on minority and low-income populations separately, using the following framework:
(a) **Minority Disparate Impact Policy.** The transit provider shall develop a policy for measuring disparate impact to determine whether minority riders are bearing a disproportionate impact of the change between the existing cost and the proposed cost. The impact may be defined as a statistical percentage. The disparate impact threshold must be applied uniformly, regardless of fare media, and cannot be altered until the next Title VI Program submission.

(b) **Public Participation Process.** The transit provider shall engage the public in the decision-making process to develop the disparate impact threshold.

(c) **Modification of Proposal.** If the transit provider finds potential disparate impacts and then modifies the proposed changes in order to avoid, minimize or mitigate those impacts, the transit provider must reanalyze the proposed changes in order to determine whether the modifications actually removed the potential disparate impacts of the changes.

(d) **Finding a Disparate Impact on the Basis of Race, Color, or National Origin.** If a transit provider chooses not to alter the proposed fare changes despite the disparate impact on minority ridership, or if the transit provider finds, even after the revisions, that minority riders will continue to bear a disproportionate share of the proposed fare change, the transit provider may implement the fare change only if:

- the transit provider has a substantial legitimate justification for the proposed fare change, and
- the transit provider can show that there are no alternatives that would have a less disparate impact on minority riders but would still accomplish the transit provider’s legitimate program goals.

It is important to understand that in order to make this showing, the transit provider must consider and analyze alternatives to determine whether those alternatives would have less of a disparate impact on the basis of race, color, or national origin, and then implement the least discriminatory alternative.

(e) **Examining Alternatives.** If the transit provider determines that a proposed fare change will have a disparate impact, the transit provider shall analyze the alternatives (identified in the second bullet above) to determine whether alternatives exist that would serve the same legitimate objectives but with less of a disparate effect on the basis of race, color, or national origin. The existence of such an alternative method of accomplishing the transit provider’s substantial and legitimate interests demonstrates that the disparate effects can be avoided by adoption of the alternative methods without harming such interests. In addition, if evidence undermines the legitimacy of the transit provider’s asserted justification—that is, that the justification is not supported by demonstrable evidence—the disparate effects will violate Title VI, as the lack of factual support will indicate that there is not a substantial legitimate justification for the disparate effects. At that point, the transit provider must revisit the fare changes and make
adjustments that will eliminate unnecessary disparate effects on populations defined by race, color, or national origin. Where disparate impacts are identified, the transit provider shall provide a meaningful opportunity for public comment on any proposed mitigation measures, including any less discriminatory alternatives that may be available.

(f) **Low-Income Disproportionate Burden Policy.** The transit provider shall develop a policy for measuring the burden of fare changes on low-income riders to determine when low-income riders are bearing a disproportionate burden of the change between the existing fare and the proposed fare. The impact may be defined as a statistical percentage. The disproportionate burden threshold must be applied uniformly, regardless of fare media, and cannot be altered until the next program submission.

(i) The transit provider shall engage the public in the decision-making process to develop the disproportionate burden threshold.

(ii) At the conclusion of the analysis, if the transit provider finds that low-income populations will bear a disproportionate burden of the proposed fare change, the transit provider should take steps to avoid, minimize or mitigate impacts where practicable. The transit provider should describe alternatives available to low-income populations affected by the fare changes.

c. **Service and Fare Equity Analysis for New Starts and Other New Fixed Guideway Systems.** Transit providers that have implemented or will implement a New Start, Small Start, or other new fixed guideway capital project shall conduct a service and fare equity analysis. The service and fare equity analysis will be conducted six months prior to the beginning of revenue operations, whether or not the proposed changes to existing service rise to the level of “major service change” as defined by the transit provider. All proposed changes to parallel or connecting service will be examined. If the entity that builds the project is different from the transit provider that will operate the project, the transit provider operating the project shall conduct the analysis. The service equity analysis shall include a comparative analysis of service levels pre-and post- the New Starts/Small Starts/new fixed guideway capital project. The analysis shall be depicted in tabular format and shall determine whether the service changes proposed (including both reductions and increases) due to the capital project will result in a disparate impact on minority populations. The transit provider shall also conduct a fare equity analysis for any and all fares that will change as a result of the capital project.