



**Regional Transit**

**Service Standards**

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**August 26, 2013**

## 1. INTRODUCTION

It is the policy of the Sacramento Regional Transit District (RT) to provide quality service to all customers regardless of race, color, national origin, or income. This document establishes service standards and related policies for RT's fixed-route transit service.<sup>1</sup> In addition to serving as a guide for staff and stakeholders, this document is intended to satisfy Title VI of the Civil Rights Act of 1964, Executive Order 12898, and related civil rights laws, which help assure that RT's services are provided in a non-discriminatory manner, specifically with regards to minority populations and low-income populations.

The Federal Transit Administration (FTA) requires RT to establish the following four service standards and two service policies:<sup>2</sup>

- Vehicle Loading Standards
- Productivity Standards (Headway Standard)
- On-Time Performance Standards
- Service Area Coverage Standards
- Vehicle Assignment Policy
- Transit Amenity Distribution Policy

Title VI requires RT, at least every three years, to prepare a Service Monitoring report that evaluates the fixed-route transit system against RT's service standards and policies on a route-by-route basis, broken down by minority and non-minority routes. Although not a Title VI requirement, RT includes low-income populations in this analysis as well.

This document also sets forth guidelines for RT's quarterly performance monitoring program, which was recommended by RT's 2012 TransitRenewal study and which provides a regular process for improving the productivity of RT's system.

## 2. TITLE VI SERVICE MONITORING

### Requirements

At least once every three years, RT is required to prepare a Title VI Service Monitoring report that evaluates the fixed-route transit system against RT's service standards on a

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<sup>1</sup> This document does not cover RT's complementary paratransit service.

<sup>2</sup> See FTA Circular 4702.1B, Chapter 4, Section 4. Service policies, as defined in the FTA circular, differ slightly from service standards; however, both are treated identically under the Title VI Service Monitoring program and are meant to be developed and enforced as part of a single program. For the sake of clarity and brevity, this document normally refers to service standards and service policies collectively as simply service standards.

route-by-route basis, broken down by minority and non-minority routes.<sup>3</sup> RT is required to have a policy for identifying and correcting disparate impacts on minority populations and to submit to FTA a copy of the resolution verifying the RT Board's consideration, awareness, and approval of the report's findings. Although not a Title VI requirement, RT addresses disproportionate burdens on low-income populations in this process as well.

The provisions of this document pertain to the regular monitoring of RT's service and may also prompt changes in RT's service. However, Title VI and federal Environmental Justice law also require RT to prepare an equity assessment prior to adopting any major changes to service or to the fare structure.<sup>4</sup> This process is discussed in RT's Service and Fare Change Policies document.

### **Minority and Low-Income Definitions**

FTA defines a minority person as anyone who is American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, or Native Hawaiian or other Pacific Islander.<sup>5</sup>

FTA defines a low-income person as a person whose household income is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines. The HHS definition varies by year and household size. For 2012, poverty guidelines ranged from \$11,170 for a single-person household to \$38,890 for a household of eight. The poverty guideline for a household of four was \$23,050. FTA encourages transit agencies to use a locally-developed threshold for low-income status, provided that the threshold is at least as inclusive as the HHS poverty guidelines. Since survey data does not always include household size or exact household income, RT will, when necessary, define low-income status according to the poverty guideline for a household of four, rounded up to the nearest bracket boundary. For example, if household income is known in \$15,000 increments, RT will consider household income less than \$30,000 to be low-income.<sup>6</sup>

### **Data and Methodology**

FTA defines a minority route as a route that has at least one-third of its total revenue mileage in a census block group with a percentage of minority population that exceeds the percentage of minority population in the transit service area. RT uses demographic data from the U.S. Census Bureau's American Community Survey to make this

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<sup>3</sup> See FTA Circular 4702.1B, Chapter 4, Section 6.

<sup>4</sup> See RT's Service and Fare Change Policies.

<sup>5</sup> See FTA Circular 4702.1B, Chapter 1, Section 5.

<sup>6</sup> See FTA Circular 4702.1B, Chapter 1, Section 5.

determination, although passenger surveys may be used instead for express buses and other routes where the demographics of the actual ridership may not match the area that is travelled through.

FTA recommends a Title VI Service Monitoring analysis be conducted on a sample of routes, which must include minority and non-minority routes. Although no numerical requirement exists, FTA guidance notes that the greater the sample size, the more reliable the results. In accordance with these guidelines, RT will usually include all regular routes in the sample, with the exception of demonstration projects, supplemental routes, contract service, special service, etc.

### **Report Findings**

As described above, RT prepares a Title VI Service Monitoring report at least once every three years. The Title VI Service Monitoring compares all fixed-route service to RT's service standards and policies, as set forth in this document, analyzes why any deficiencies exist, and suggests remedies. If any standards are found to be outdated or inappropriate, staff will also include an analysis and recommendations for revision. Staff will present the Service Monitoring report to the RT Board for consideration and approval, at which time the Board may also determine, based upon the report's findings, that a disparate impact on minority populations exists, in which case RT will take corrective action to remedy the disparities to the greatest extent possible.<sup>7</sup>

Since service improvements are not always financially feasible, RT is not required to add service in response to a disparate impact; however, if the RT Board determines that a disparate impact exists, RT will investigate cost-neutral ways to remedy the disparate impact. If such a condition exists, RT will also assure that if major service increases are proposed,<sup>8</sup> that the major service increases will improve overall service levels to minority populations relative to RT's overall ridership. This requirement will remain in effect until the RT Board determines that the disparate impact has been corrected, or until adoption of the next major service change, whichever comes first.

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<sup>7</sup> See FTA Circular 4702.1B, Chapter 4, Section 6.

<sup>8</sup> Major service changes are defined in RT's Service and Fare Change Policies, per Title VI requirements.

As part of RT's Title VI program, RT will provide FTA with a copy of the Board resolution affirming consideration, awareness, and approval of the Service Monitoring report, as well as a discussion of any disparate impacts and actions taken to remedy the disparities.<sup>9</sup>

Although not a Title VI requirement, RT includes disproportionate burdens on low-income populations in this process as well.

### 3. VEHICLE LOADING STANDARDS

RT collects ridership data on all bus and light rail routes, including the passenger load at the maximum load point of the trip. Vehicle loading standards are set forth below and generally range from a load factor of 1.0 to 2.0 based upon the number of seats and interior floor space of the vehicle.<sup>10</sup> Load factors are generally lower for RT's smaller buses as they tend to have narrower aisleways and fewer places to stand.

#### Vehicle Loading Standards

Vehicle Type	Seated	Standing	Total	Load Factor
40ft Low-Floor Bus	34	26	60	1.8
25ft Cutaway Bus	12	5	17	1.4
27ft Cutaway Bus	16	6	22	1.4
28ft Body-on-Chassis Bus	21	8	29	1.4
32ft Cutaway Bus	30	10	40	1.3
80ft Siemens Light Rail Vehicle	64	64	128	2.0
84ft CAF Light Rail Vehicle	64	64	128	2.0
88.5ft UTDC Light Rail Vehicle	67	67	134	2.0
Other Vehicle Types	Determined as Needed			

RT considers a route to be overloaded if 25 percent or more of one-way vehicle trips are regularly overloaded. For example, for an hourly route with 32 one-way vehicle trips per day, if 8 or more trips are overloaded, then the route is considered overloaded.

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<sup>9</sup> See FTA Circular 4702.1B, Chapter 4, Section 6.

<sup>10</sup> The loading factor is the ratio of total passenger capacity to seats.

#### 4. PRODUCTIVITY / HEADWAY STANDARDS

RT bases bus and light rail headways on both policy and productivity. Due to the importance of light rail in RT's system, bus headways are often based around light rail headways. Headway policies are as follows:

- Light rail runs at 15 or 30 minute headways
  - Regular bus routes connecting with light rail usually run at multiples of 15 minute headways to facilitate transferring
  - Regular headways should not exceed 60 minutes on any trunk or branch line
  - Headways on peak-only routes are based on passenger loads and are adjusted to match school bell times, shift changes, etc., except for light rail feeders, which should be timed around the light rail schedule
  - In areas where headways are 30 to 60 minutes, parallel routes should generally be spaced approximately one mile apart and additional resources should be used to improve headways before adding new routes or branches at closer distances
- Headway adjustments are based primarily upon productivity. Bus routes exceeding RT's maximum productivity standards are recommended for service increases while corrective action is recommended for routes that fail to meet RT's minimum productivity standards.

#### RT Productivity Standards

Service Type	Productivity Standards			
	Minimum		Maximum	
Regular Weekday Bus Service	20	boardings per hour	40	boardings per hour
Saturday Bus Service	15	boardings per hour	35	boardings per hour
Sunday/Holiday Bus Service	15	boardings per hour	35	boardings per hour
Community Bus Service	15	boardings per hour	30	boardings per hour
Peak-Only Light Rail Feeder	15	boardings per trip	34	boardings per trip
Peak-Only Downtown Express	25	boardings per trip	34	boardings per trip
Supplemental Service	25	boardings per trip	62	max load
Light Rail – Weekdays	85	boardings per train hr	400	max load

Light Rail – Weekends	65	boardings per train hr	400	max load
Contract Service	Varies	cost per passenger	Varies	cost per passenger

All productivity standards that are stated in terms of boardings per revenue hour can also be stated in terms of an equivalent cost per passenger boarding, which varies from year-to-year according to RT’s hourly per-vehicle operating costs. RT evaluates contract service according to the equivalent cost per passenger standards for Community Bus Service, less the operating subsidy.<sup>11</sup>

### 5. ON-TIME PERFORMANCE STANDARD

On-time performance for RT’s bus system is measured at time points. A bus is considered on-time if it leaves its time point between 0 and 5 minutes late. For the last time point on each trip, the arrival time is used instead of the leave time.

RT’s target is for the bus system to be 85 percent on-time or better. Individual routes are expected to be within one standard deviation of 85 percent on-time or better. For Title VI purposes, all routes are expected to be within one standard deviation of the actual systemwide average or better. Deviations from this goal are investigated to determine if there is a disparate impact on minority routes. This process is repeated for low-income routes.

On-time performance for RT’s light rail system is measured at the starting point of each trip. Trains are considered on-time if they depart 0 to 5 minutes late. RT’s target is for the light rail system to be 97 percent on-time or better. Individual light rail routes are also expected to be 97 percent on-time or better. Statistically significant deficiencies are investigated to determine if there is a disparate impact on minority or low-income passengers.

### 6. SERVICE AREA COVERAGE STANDARD

RT is authorized to serve the area within the Urban Services Boundary (USB) of Sacramento County, as well as portions of Yolo and Placer Counties. Yolo and Placer County, having elected to provide their own transit service, are currently served by locally based transit operators, as are the cities of Folsom, Elk Grove, Galt, and Rancho Murieta within Sacramento County. RT remains the official service provider for the area within Sacramento’s USB, less the City of Folsom and the City of Elk Grove.<sup>12</sup>

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<sup>11</sup> Service levels for contract service operated by RT are subject to the terms of the service agreement.

<sup>12</sup> The City of Folsom and the City of Elk Grove provide their own local transit service. A small portion of the City of Folsom is still part of RT’s service area, specifically, the area within three quarters of a mile of

While RT is the transit agency responsible for service to the aforementioned area, RT only provides service to a subset of this area. The table below specifies standards for actual coverage of RT's service area, at two different walk distances. Three-quarters of a mile is the standard walk distance used by both the Americans with Disabilities Act as well as FTA's National Transit Database to define a transit agency's coverage. For the purposes of estimating likely transit riders, however, FTA suggests that transit agencies assume walk distances of a quarter mile for bus routes and a half mile for light rail stations.

### Service Coverage Standards

Distance	Basic Local Service	High Frequency Service
0.75 miles from bus routes 0.75 miles from rail stations	85% of population	20% of population
0.25 miles from bus routes 0.50 miles from rail stations	50% of population	10% of population

Basic local service refers to regular all-day weekday bus and light rail service on regular headways. It excludes express buses and other peak-only routes. High frequency service is considered to be service with headways of 15 minutes or better.<sup>13</sup>

## 7. VEHICLE ASSIGNMENT POLICY

In order to assure that vehicles are not assigned in a discriminatory fashion, FTA requires transit agencies to have a written policy specifying how vehicles are assigned to routes.

### Bus Assignment

Prior to each operator signup, a baseline vehicle schedule is prepared for the upcoming signup period. Low-mileage vehicles are usually assigned to higher-mileage routes, so as to equalize mileage on vehicles of the same age. Certain routes may be designated to have buses with special equipment, e.g., branded or wrapped vehicles, signal

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RT's light rail stations. A small portion of the City of Elk Grove is still part of RT's service area as well, specifically, the area within three quarters of a mile of Route 65.

<sup>13</sup> See RT's 2009 TransitAction Plan for long-range coverage goals.



prioritization equipment, or data terminals that are used for route deviations. Higherperforming vehicle types may, at the discretion of RT's Operations Division management, be assigned to blocks with more schedule adherence problems.<sup>14</sup> On a daily basis, RT's Maintenance Department makes adjustments to the baseline vehicle schedule according to maintenance needs.

For RT's Title VI Service Monitoring report, RT calculates the average vehicle age for each route, and aggregates this data into an average vehicle age for all minority routes, which is compared to that for RT's overall system, to determine if a disparate impact exists.<sup>15</sup>

### **Light Rail Vehicle Assignment**

All RT light rail vehicles are air-conditioned, have high floors, have similar seating and standing capacities, and are dispatched from the same yard and maintenance facility. Train consists on the Blue Line and Gold Line can be and often are composed of mixed vehicle types for various reasons, including service and maintenance scheduling, voltage requirements, and performance. The Green Line uses a specially wrapped light rail vehicle.

For RT's Title VI Service Monitoring report, RT estimates the average vehicle age for each route.<sup>16</sup> These findings are presented, along with the percent minority ridership for each route, to determine if a disparate impact exists.

## **8. TRANSIT AMENITY DISTRIBUTION POLICY**

### **Bus Stops**

Locations for advertisement-supported shelters and benches are suggested by RT's contractor. RT also has numerous non-advertisement-supported shelters and benches that are located according to a number of criteria. Once a desired location is decided upon, RT determines if the desired location is feasible. All amenity installations must comply with local building codes, as well as with the Americans with Disabilities Act and Title 24 of the California Construction Code. Shelters also require an electrical connection for lighting. When a desired amenity location is not feasible, RT works with the applicable city or county to make necessary improvements.

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<sup>14</sup> For example, newer vehicles with better acceleration may be assigned to routes with frequent stops.

<sup>15</sup> This figure is weighted by the number of trips operated on each route by each vehicle.

<sup>16</sup> This estimate is based on known vehicle assignments from randomly chosen route checks.

Signage at all bus stops includes the route number, days of operation, a stop identification number, and a telephone number for more information. System maps are provided at all bus stop shelters. Route-specific maps and schedules are not normally provided at RT bus stops, although they are available at some bus stops where they were originally installed on a demonstration basis. Trash cans are installed by RT according to perceived need.

New benches and shelters paid for by RT are located according to a number of factors including, but not limited to, the following:

- Average daily boardings at the stop
- Prevalence of disabled passengers
- Presence or absence of amenities in the nearby area (e.g., shelter, trash cans, seating, lighting, etc.)
- Cost for additional curb, gutter, street, or sidewalk improvements
- Financial assistance from local jurisdictions, business improvement districts, etc.
- Minimum ridership of 40 daily boardings for shelters
- Title VI compliance goals

RT maintains a database of all bus stops, including benches and shelters. Using GIS software, RT compares this data to census data on service area demographics. RT's Title VI goal is for the percent of bus stops in minority areas equipped with benches to equal or exceed that for RT's overall service area. If a deficiency is found requiring corrective action, then, where the aforementioned ADA and other siting rules allow, RT will install non-ad-supported benches to correct the deficiency. If ADA or other siting rules prevent RT from adding benches where desired, RT will notify the applicable city or county. This process is repeated for shelters.

## **Light Rail Stations**

Amenities for light rail stations are distributed according to estimated ridership. Older stations may have been built to more limited standards. Improvements are programmed as part of RT's long-range capital program, as funding permits, to bring them into compliance with the following standards.

- a) Shelters: Minimum area of 3 sq. ft. per weekday peak hour passenger in each direction, excluding mini-high shelters. No shelters provided at transit malls.
- b) Mini-High Shelters: Must cover mini-high platform (used by mobilityimpaired passengers to board trains) if shelters are provided at the main platform.
- c) Drinking fountains: 1 per platform, except for island stations. An additional drinking fountain may be provided at a bus transfer center (with at least 3 bus stops) where the bus stops are not contiguous with the light rail platforms.
- d) Seating (main platform): Minimum of 12 linear feet (LF) of seating on each main platform. Additional seating of 0.2 LF per weekday peak hour passenger in each direction.
- e) Seating (mini-high platform): 1 seat or bench at each mini-high platform.
- f) Trash receptacles: Based on size of station, number of riders, and observed need.
- g) Recycling receptacles: Not currently provided. May be added in the same quantities as trash receptacles, once RT begins a recycling program.
- h) Bicycle racks: 1 rack (5-bike capacity) per station for new stations. Added or removed based on observed demand and use.
- i) Bicycle lockers: Initially provided based on estimated usage. Lockers may be added or removed later based on demand. Note that RT provides lockers to customers only by rental agreement, so demand is precisely known.
- j) Information display cases: (For maps, Schedules, and How-To-Ride Guides)  
1 four-sided display case per platform direction of travel. Additional two-sided display cases may be provided at each bus transfer center platform (with at least 2 bus stops) where the bus stops are not contiguous with the light rail platforms. Electronic signage may substitute for traditional displays.
- k) Dynamic Message Signs: 2 per platform at new and existing major stations

- l) Fare Vending Machines: Goal of 2 per station, except very low ridership stations. Additional FVMs may be provided at platforms with very high ticket purchases (more than 1,000 average daily weekday boardings per platform).
- m) Smart Card Addfare Machines: 1 per station at major stations. Additional FVMs (when implemented) may be provided at platforms with very high ticket purchases (more than 1,000 average daily weekday boardings per platform). Smart Card implementation expected to begin in 2013.
- n) Smart Card Tap Devices: Minimum 1 per platform. 2 per platform for most (when implemented) stations and 3 per platform for larger stations with heavy ridership or numerous well-used entrances
- o) Elevators: Provided when vertical distance of travel is greater than 16', unless replaced by a codecompliant ramp
- p) Tree shading: As needed to provide 50% shade coverage of platform and parking lots at maturity (15 years), or as close as possible to that goal while meeting other station design criteria. Removed on a case-by-case basis for safety/security purposes.
- q) Artwork: 1 art commission per station, except at sidewalk stations/malls.

For purposes of this policy, a center platform is considered 1 platform whether it serves one or two tracks. RT's Title VI goal is to meet the above-stated goals for seating and shelter. If, during the Service Monitoring process, RT is found deficient in this goal with respect to minority or low-income areas, RT will incorporate Title VI status into its capital development process to correct the deficiency.

## **9. PERFORMANCE MONITORING**

RT's 2012 TransitRenewal study recommended the establishment of quantitative productivity standards and a quarterly evaluation process for RT's fixed-route bus system. RT's quarterly ridership report compares each bus route's productivity to RT's productivity standards, set forth in Section 4 of this document. Bus routes that do not meet RT's productivity standards are added to a watch list and corrective action may be recommended by staff, if applicable. New bus routes that do not meet RT's productivity

standards within two years are automatically discontinued, according to RT's route sunset process.<sup>17</sup>

Corrective action for low-productivity routes may include the following:

- a) Marketing Campaigns                      Example activities include email blasts, press releases, newsletters, notices in vehicles, at major bus stops, and at light rail stations, fliers and handouts, promotional events, etc.
- b) Route/Schedule Adjustments            Examples include changes to headways, span of service, alignment, connection timing, and/or route/schedule adjustments to nearby routes to shift riders from one route to another; RT will not, as a practice, operate headways longer than 60 minutes
- c) Conversion to Smaller Bus              RT will assess the feasibility and savings from conversion of a full-size bus route to use a smaller bus<sup>18</sup>
- d) Cost-Sharing                                RT may pursue a cost-sharing agreement with nearby businesses, jurisdictions, or other organizations to reduce the net cost per passenger to a level equivalent to or exceeding RT's minimum productivity standards

### **Ridership Reporting Program**

Quarterly ridership reports are supplemented on a periodic basis with special in-depth reports. RT's overall ridership reporting program is summarized as follows:

- a) Key Performance Report<sup>19</sup>              Mode-level ridership data, including total ridership, boardings per revenue hour, farebox recovery, cost per passenger, on-time performance, complaints, vehicle reliability, fare evasion, etc.; includes comparison to budget goals, and comparison to previous year

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<sup>17</sup> See RT's Service and Fare Change Policies for more information on RT's route sunset process.

<sup>18</sup> This option may be constrained by RT's collective bargaining agreement with the operators' union.

<sup>19</sup> The Key Performance Report is prepared by RT's Finance and Community/Government Affairs Departments and contains Key Performance Indicators (KPIs) for all RT departments. Ridership statistics are the KPI for RT's Planning Department and make up only one part of the overall report.

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| b) Quarterly Ridership Report  | Route-level ridership data, including average daily ridership, boardings per revenue hour, farebox recovery, cost per passenger, and comparison to previous year; per TransitRenewal guidelines, boardings per revenue hour and cost per passenger are compared against productivity standards (see Section 2 of this report); |
| c) Year-End Report             | Supplement to Quarterly Ridership Report, usually updated after the close of the fiscal year examining longer term trends at the system, mode, route, and/or stop/segment level  |
| d) Fare Survey Report          | Supplement to Quarterly Ridership Report, usually issued after the close of the fiscal year, examining ridership by fare category, comparison of ridership to sales, and historical trends   |
| e) Title VI Service Monitoring | Supplement to Quarterly Ridership Report, issued at least once every three years; as required by Title VI; evaluates all bus and light rail routes against service standards to assure that minority and low-income populations are receiving equitable service levels/quality   |
| f) On-Board Survey Report      | Prepared at least once every five years per Title VI requirements; captures detailed information about passengers, including actual origins and destinations, trip purpose, ethnicity, household income, transferring patterns, and other data   |
| g) Route Profiles              | Supplement to Quarterly Ridership Report, issued at least once every five years, usually after a new on-board survey has been completed or new census data has been released; provides route map, historical narrative, demographics of service area and actual passengers, historical ridership trends, etc.                  |