

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT

**Final Title VI Assessment for the 2014
Inflation-Based Fare Increase,**

**An Update to the February 13, 2013 Draft Title VI Assessment for
the Extension of the
Productivity-Adjusted Inflation-Based Fare Increase Program**

REVISED

October 1, 2013

EXECUTIVE SUMMARY

On February 13, 2013, BART published the report “Title VI Assessment for the Extension of the Productivity-Adjusted Inflation-Based Fare Increase Program” which documented BART’s preliminary Title VI minority disparate impact analyses and low-income disproportionate burden analyses for the proposed extension of BART’s productivity-adjusted inflation-based fare increase program to include increases in 2014, 2016, 2018, and 2020. Pursuant to FTA Circular 4702.1B dated October 1, 2012 (Circular), BART performs an analysis of any fare change to determine if the change has a disparate impact on minority riders or places a disproportionate burden on low-income riders. In accordance with the Circular, BART is to make this determination by comparing the analysis results against a threshold, as defined in the Disparate Impact and Disproportionate Burden Policy (Policy), which was under development at the time the February 2013 report was prepared.

The February 2013 report is now revised as follows:

- The comparison between protected and nonprotected riders is added, pursuant to the adopted Policy.
- The appropriate threshold from BART’s Disparate Impact and Disproportionate Burden Policy adopted by the BART Board on July 11, 2013, is applied to the difference in fare change between protected riders and nonprotected riders.

The fare change discussed in this report is the extension of BART’s productivity-adjusted, inflation-based fare increase program. The BART Board authorized the first inflation-based fare increase program in 2003 by Resolution 4885. The amount of the increase is based on the change in inflation over a two-year period, with one-half percent subtracted from that number to account for ongoing improvements in BART operating efficiencies, so that the increase is actually less than inflation. The first program consisted of four biennial increases beginning in 2006 and ending in 2012. These small, regular fare increases have been key to BART’s financial stability during difficult economic times. Since 2006, the inflation-based component of BART fare increases has contributed approximately \$290 million¹ in additional fare revenue, which helped BART weather the recent recession without reducing service levels.

To keep the system running in a State of Good Repair (SGR), BART will need to secure approximately \$10 billion² in funding for the highest priority projects over the next ten years, including new rail cars, train control system, and the Hayward Maintenance Complex. Although BART has identified and planned over the years for many of the SGR reinvestments, securing funding is difficult and often highly dependent on regional and local sources, which include funding provided by the transit agency itself. Therefore, BART must “self-fund” a portion through operating sources, including fare revenue. Extending the District’s inflation-based fare increase program to raise fares in 2014, 2016, 2018, and 2020 is estimated to generate over \$325 million in additional fare revenue over the eight-year program based on current inflation and ridership projections.

¹ January 2006 through June 2013, with January 2013 through June 2013 estimated.

² Funding figure current as of February 2013.

The four biennial fare changes analyzed in this report were calculated by applying the same formula approved in Resolution 4885. If approved, each fare change under consideration would be calculated using actual data on inflation. On January 16, 2013, the Bureau of Labor Statistics released the final inflation data for 2012, which allowed for actual calculation of the proposed 2014 increase. This calculation, under the formula outlined in Resolution 4885, resulted in overall inflation of 5.7% over two years. After subtracting the 0.5% productivity factor, the actual fare increase proposed to be implemented will be 5.2%. For increases proposed for 2016, 2018, and 2020, it is necessary to use a projection of future inflation for the fare increase calculation. The inflation-based increase used for these three fare change analyses is 3.9%, which is calculated by taking the current projection of inflation estimated by the Metropolitan Transportation Commission (the Bay Area's regional planning organization), valued at 2.2% per year (4.4% over a two-year period), less the 0.5% productivity factor. The formula used is shown in Appendix A.

In conformance with its current Title VI procedures, BART undertook an equity analysis of the proposed extension of the inflation-based fare increase program and actively sought public input in a variety of ways using approaches outlined in BART's Public Participation Plan. Public outreach results are summarized in a separate "Public Participation Summary Report for the Extension of the Productivity-Adjusted Inflation-Based Fare Increase Program."

The proposed four biennial fare increases are across-the-board increases. The Policy states that an across-the-board fare change will be considered to have a disproportionate impact if the difference between the fare changes for protected riders and nonprotected riders is equal to or greater than 5%. Applying this threshold to the calculated differences, the present report finds that none of the proposed four inflation-based fare increases would result in a disparate impact or a disproportionate burden because, for each year (2014, 2016, 2018, and 2020), the increase difference between protected and nonprotected riders is less than 5%.

Highlights from the minority disparate impact and low-income disproportionate burden analyses, as well as input from the public, can be summarized as follows:

- The inflation-based fare increases would not result in a disparate impact on minority riders compared to non-minority riders or in a disproportionate burden on low-income riders compared to non-low income riders because the proposed changes would increase fares by virtually identical amounts for minority riders and low-income riders when compared respectively to non-minority riders and non-low income riders. Therefore, the calculated differences between the fare increases for protected groups and nonprotected groups fall below the 5% Policy threshold.
- The proposed fare changes apply to all fares and fare types and the fare types are projected to increase at the same percentage. Although each fare type has differing constituencies, all fare types are affected equally.
- Survey results, as reported in the "Public Participation Summary Report for the Extension of the Productivity-Adjusted Inflation-Based Fare Increase Program," show that approximately 60% of the responses indicated support for continuation of the inflation-based program.

This report makes preliminary findings that the 2016, 2018, and 2020 increases will not result in a disparate impact or a disproportionate burden on protected riders; such preliminary findings will be updated and finalized for Board approval once the percentage increase is known for these future years and prior to each increase.

This report, to which the Policy threshold has been applied, finalizes the Title VI Assessment for the proposed 2014 extension of the productivity-adjusted inflation-based fare increase program, finding that this extension does not have a disparate impact on minority riders or place a disproportionate burden on low-income riders.

1. INTRODUCTION

To ensure compliance with federal and state civil rights regulations, including but not limited to Title VI of the Civil Rights Act of 1964 and FTA Circular 4702.1B dated October 1, 2012 (Circular), BART performs an analysis of any fare change to determine if the change has a disparate impact on minority riders or a disproportionate burden on low-income riders when compared to overall users. In accordance with the Circular, BART is to make this determination by comparing the analysis results against a threshold, as defined in a Disparate Impact Disproportionate Burden Policy (Policy). At the time of the writing of the February 2013 report that provided preliminary analyses, BART was developing this Policy, including engaging the public in the decision-making process to develop the thresholds. The BART Board has since adopted the Policy on July 11, 2013.

Once the Policy was adopted, the preliminary analyses results described in the February 2013 report were compared to the thresholds, and the report updated.

The February 2013 report is revised as follows:

- The comparison between protected and non protected riders is added. The comparison of protected riders and overall users is retained for information purposes.³
- The appropriate threshold from BART's Policy is applied to the difference in fare change between protected riders and non protected riders, which is the more rigorous level of comparison.

BART also actively sought public input in a variety of ways using approaches outlined in BART's Public Participation Plan. Public outreach results are summarized in a separate report entitled "Public Participation Summary Report for the Extension of the Productivity-Adjusted Inflation-Based Fare Increase Program."

The fare change discussed in this report is the extension of BART's productivity-adjusted, inflation-based fare increase program. As stated in the District's Financial Stability Policy adopted by the BART Board in 2003, BART's ability to deliver safe, reliable service rests on a strong and stable financial foundation. A policy goal to help achieve this stability is to preserve and maximize BART's fare revenue base, through a predictable pattern of adjustments, while retaining ridership. Resolution 4885, also adopted in 2003, addressed this goal when the BART Board gave the General Manager authority to implement four productivity-adjusted inflation-based fare increases. The first such productivity-adjusted inflation-based fare increase was implemented on January 1, 2006 and the last in the series, calculated at 1.4%, was implemented on July 1, 2012.

The four small, regular fare increases have been key to BART's financial stability during difficult economic times: between January 2006 and July 2012, the inflation-based component of BART fare increases has contributed approximately \$290 million⁴ in

³ While Circular Chap. IV-19 calls for comparing protected riders and overall users, Circular App. K-11 indicates that comparing protected riders and nonprotected riders can "yield even clearer depictions of differences."

⁴ January 2006 through June 2013, with January 2013 through June 2013 estimated.

additional fare revenue, which helped BART weather the recent recession without reducing service levels. The size and regularity of the increases also have made them easier for riders to absorb, as evidenced by BART's growing ridership as well as results of a 2012 BART Customer Satisfaction Survey question asking whether BART was a good value for the money, to which 70% of respondents reported agreement, up from 64% in 2010. In the 2012 survey, another 18% expressed a neutral opinion and only 12% disagreed. Overall satisfaction with BART increased to 84%, from 82% in 2010.

Having a program of small, regular increases strengthens BART's financial planning process and ability to project future revenues to be used for service provision or capital needs. Programmed fare increases also help BART avoid the cycle of not raising fares for many years, then implementing a large fare increase out of financial necessity. In 1986, fares were increased by 30% following four years of no fare increases, and in the mid-1990s, a 45% cumulative fare increase over three years followed nine years of no fare increases. The increased revenue was required as BART's contribution to secure funding for a \$1 billion system renovation program.

To keep the system running in a State of Good Repair (SGR), BART will need to secure approximately \$10 billion⁵ in funding for the highest priority projects over the next ten years, including new rail cars, train control system, and the Hayward Maintenance Complex. Although BART has identified and planned over the years for many of the SGR reinvestments, securing funding is difficult and often highly dependent on regional and local sources, which include funding provided by the transit agency itself. Therefore, BART must "self-fund" a portion through operating sources, including fare revenue. Extending the District's inflation-based fare increase program to raise fares in 2014, 2016, 2018, and 2020 is estimated to generate over \$325 million in additional fare revenue over the eight-year program based on current inflation and ridership projections.

The SGR expense does not include expansion of the current system, which is typically funded from different sources. BART's riders rank train on-time performance, currently at 95%, as a top priority, and system reinvestment will help BART maintain and improve reliability and increase capacity for a growing ridership.

This report documents BART's Title VI minority disparate impact and low-income disproportionate burden analyses for the proposed extension of the inflation-based fare increase program to include increases in 2014, 2016, 2018, and 2020. Results from public participation activities are summarized in a separate "Public Participation Summary Report for the Extension of the Productivity-Adjusted Inflation-Based Fare Increase Program."

The four fare changes analyzed in this report were calculated by applying the same formula approved in Resolution 4885. That formula calculates the change in both national and local inflation over a two-year period, takes the average of these two changes, and then subtracts out 0.5% to account for improved BART operating efficiencies; thus, the increase is actually less than inflation. If approved, the fare changes under consideration would be calculated using actual data on inflation. On January 16, 2013, the Bureau of

⁵ Funding figure current as of February 2013.

Labor Statistics released the final inflation data for 2012, which allowed for actual calculation of the 2014 increase. This calculation results in overall inflation of 5.7% over two years. After subtracting the 0.5% productivity factor, the actual fare increase to be implemented will be 5.2%. For increases proposed for 2016, 2018, and 2020, it is necessary to use a projection of future inflation for the fare increase calculation. The inflation used for these three fare change analyses is 3.9%, which is calculated by taking the current projection of inflation estimated by the Metropolitan Transportation Commission (the regional planning organization), valued at 2.2% per year (4.4% over a two-year period), less the 0.5% productivity factor. The formula used is shown in Appendix A.

2. MINORITY DISPARATE IMPACT ANALYSES AND LOW-INCOME DISPROPORTIONATE BURDEN ANALYSES

2.1 Assessing Fare Increase Effects

This section describes the data and methodology used to assess the effects of a fare change on minority and low-income riders, in accordance with the fare equity analysis procedures in FTA Circular 4702.1B and BART's Disparate Impact and Disproportionate Burden Policy.

The procedures include four steps for assessing the effects of proposed, across-the-board fare changes:

- 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 between minority users and non-minority users; and
- iv. Compare the differences for each particular fare media between low-income users and non-low-income users.

As stated in Circular App. K-11, comparing protected riders and nonprotected riders can "yield even clearer depictions of differences." For purposes of across-the-board fare changes, BART's Disparate Impact and Disproportionate Burden Policy (Policy) follows this guidance. Once the comparison analysis is completed, the appropriate threshold from the Policy is applied to the difference in fare change between protected riders and nonprotected riders.

Should BART find that minority riders experience disproportionate impacts from the proposed change, BART should take steps to avoid, minimize, or mitigate disparate impacts. If the additional steps do not mitigate the potential disparate impacts on minority riders, pursuant to FTA Circular 4702.1B, BART may proceed with the proposed fare change if BART can show that:

- A substantial legitimate justification for the proposed fare change exists; and
- There are no alternatives serving the same legitimate objectives that would have a less disproportionate impact on minority populations.

If a finding is made that the proposed fare change would place a disproportionate burden on low-income riders compared to non-low income riders, BART will take steps to avoid, minimize, or mitigate impacts where practicable. BART shall also describe alternatives available to low-income populations affected by the fare change. Mitigation is neither necessary nor required where no disparate impact and/or disproportionate burden is found.

2.2 Data and Methodology Used

FTA Circular 4702.1B states that for proposed changes that would increase fares on the entire system, the agency shall analyze any available information from ridership surveys.

The primary data used to analyze the proposed fare increases are the following:

- 2008 BART Station Profile Study. With more than 52,000 surveys completed by weekday riders in spring 2008, the Station Profile Study summarizes the largest survey ever conducted by BART of how BART riders use and access the system.
- 2012 BART Customer Satisfaction Study. Conducted every other September, the Customer Satisfaction Study allows BART to track trends in rider satisfaction, demographics, and BART usage across the system. The 2012 study had a sample size of 6,700, including weekday peak, offpeak, and weekend riders.
- Current and projected BART fares. The projected fares are based on an actual inflation-based increase of 5.2% in 2014 and projected inflation-based increases of 3.9% in 2016, 2018, and 2020; these are the full fares and do not reflect the various discounts available to riders.
- Actual 2012 BART ridership by station as recorded by BART's automated fare collection system.

The large data set of the Station Profile Study allows for detailed analysis at the station-level, as compared to the smaller Customer Satisfaction Study which is better suited to provide for analysis across the entire BART system.

Methodology

The methodology used to assess the effects of a fare increase compares the weighted average fare increase between (a) minority and non-minority riders and (b) low-income and non-low income riders to determine if any of the increases would have either a disparate impact on minority riders or result in a disproportionate burden on low-income riders. In accordance with FTA Circular 4702.1B, BART makes this determination by comparing the analysis results against the appropriate threshold defined in the Policy. Fare change data for overall users continues to be provided for information purposes. In addition, pursuant to the Policy, staff reported the cumulative impacts over its three-year triennial reporting periods⁶, as well as for the productivity-adjusted inflation based increases in 2014, 2016, 2018 and 2020.

Actual 2008 Station Profile Study survey responses are used to determine the percent of riders at each station that are minority and that are low-income. Since BART has a distance-based fare structure, determining this information by station rather than

⁶ BART's current reporting period, approved by FTA, includes changes implemented before December 31, 2013. BART's subsequent triennial reporting period will include all changes occurring as of January 1, 2014.

systemwide allows for the development of weighted average fares. Both home-based origin and non-home origin responses are used to assign demographics to a station. Non-home origins at a station include all trips starting from locations other than home, such as work, school or shopping. Thus, using both home-based and non-home origin responses is more encompassing than using only home-based origins because it reflects all riders at a station.

Non-minority includes only those who are White alone (single race) and non-Hispanic. Minority persons include American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian or Other Pacific Islander. According to Station Profile Study responses, 52% of BART riders are minority.

For the purposes of these analyses, low-income is defined as Household Income under \$50,000. According to Station Profile Study responses, 28% of BART riders are considered low income.

The steps used to assess the effects of an across-the-board fare change are described in Appendix B. Results were generated for all stations currently in the BART system except the West Dublin/Pleasanton Station, which had not yet opened when the 2008 Station Profile Study was done. Future stations or expansion projects, such as the extension to Warm Springs, are not included in this analysis as fares for those projects have not yet been adopted.

2.3 Minority Disparate Impact Analyses Results and Low-Income Disproportionate Burden Analyses Results

Systemwide weighted average fares for (a) minority and non-minority riders and (b) low-income and non-low income riders, as well as for overall users, have been calculated using the methodology described in Appendix B. This process was performed for each of the proposed fare increases to determine if any of the increases would have either a disparate impact on minority riders or result in a disproportionate burden on low-income riders.

As shown in the table below, the four proposed fare increases build upon each other—that is, the results of the first proposed increase in 2014 were used as the basis for comparison to the results for the 2016 increase and so on until 2020, which was compared to 2018 results. Note that the percent fare change shown in each fare increase scenario may not exactly equal the proposed percent fare change since BART’s fares paid by passengers are rounded to the nearest nickel and the data below represent an average across riders. Also note that the percentage and dollar changes as published in the following tables may not add up as the figures are not rounded to the nearest hundredth- or thousandth-decimal place.

The following table presents the results of the calculation for the proposed inflation-based increase of 5.2% in 2014 and projected 3.9% increase to all fares proposed for 2016, 2018 and 2020. The inflation-based fare increases are across-the-board fare increases. BART’s Policy provides that an across-the-board fare change will be considered to have a disproportionate impact if the difference between the fare changes for protected riders and nonprotected riders is equal to or greater than 5%. Applying this threshold to the

calculated differences, this report finds that none of the proposed inflation-based fare increases would result in a disparate impact or a disproportionate burden because each difference is less than 5%.

Proposed Inflation-based Increases to All Fares

	Current 2012 Fares	Proposed 2014 Fares	Proposed 2016 Fares	Proposed 2018 Fares	Proposed 2020 Fares	Cumulative 2012 to 2020
Fare Increase %		5.2%	3.9%	3.9%	3.9%	
Minority	\$ 3.543	\$ 3.730	\$ 3.886	\$ 4.044	\$ 4.200	
Non-Minority	\$ 3.613	\$ 3.805	\$ 3.963	\$ 4.124	\$ 4.284	
Low Income	\$ 3.403	\$ 3.584	\$ 3.734	\$ 3.887	\$ 4.036	
Non-Low Income	\$ 3.641	\$ 3.834	\$ 3.994	\$ 4.156	\$ 4.317	
Overall	\$ 3.586	\$ 3.776	\$ 3.933	\$ 4.093	\$ 4.251	
Minority	% Change	5.29%	4.17%	4.06%	3.86%	18.56%
Non-Minority	% Change	5.31%	4.17%	4.07%	3.86%	18.57%
	Difference	-0.02%	0.01%	-0.01%	0.00%	-0.02%
	Disp Impact?	No	No	No	No	No
Low Income	% Change	5.31%	4.19%	4.10%	3.82%	18.58%
Non-Low Income	% Change	5.30%	4.16%	4.06%	3.88%	18.56%
	Difference	0.01%	0.02%	0.05%	-0.06%	0.02%
	Disp Burden?	No	No	No	No	No
Overall	% Change	5.30%	4.17%	4.07%	3.86%	18.56%
Minority	\$ Change	\$ 0.188	\$ 0.156	\$ 0.158	\$ 0.156	\$ 0.657
Non-Minority	\$ Change	\$ 0.192	\$ 0.159	\$ 0.161	\$ 0.159	\$ 0.671
Low Income	\$ Change	\$ 0.181	\$ 0.150	\$ 0.153	\$ 0.148	\$ 0.632
Non-Low Income	\$ Change	\$ 0.193	\$ 0.160	\$ 0.162	\$ 0.161	\$ 0.676
Overall	\$ Change	\$ 0.190	\$ 0.157	\$ 0.160	\$ 0.158	\$ 0.666

2.4 Alternatives Available for People Affected by the Proposed Fare Increases

This section analyzes alternative transit modes, fare payment types, and fare payment media available for people who could be affected by the proposed fare increases. The analysis compares fares increased by the inflation-based amounts with fares paid through available alternatives. The section also includes a demographic profile of users by BART fare payment type.

2.4.1 Alternative Transit Modes including Fare Payment Types

BART operates a single mode, heavy rail. However, there are four major operators in the BART service area that provide service parallel to some segments of the BART system:

- AC Transit: Bus operator with service in Alameda County and parts of Contra Costa County, and between parts of Alameda County and downtown San Francisco.
- Caltrain: Commuter rail with service from Gilroy in the South Bay through to downtown San Francisco.
- SamTrans: Bus operator with service in San Mateo County.
- San Francisco Muni: Bus and light rail operator serving the City and County of San Francisco.

The table below compares BART fares and the fares of operators providing service in parts of the BART service area.

	Adult Local Fare	Adult Pass Price
BART		
Current minimum fare	\$1.75	N/A
2014: Inflation-based 5.2% increase	\$1.85	N/A
2016: Inflation-based 3.9% increase	\$1.95	N/A
2018: Inflation-based 3.9% increase	\$2.05	N/A
2020: Inflation-based 3.9% increase	\$2.10	N/A
Other Operator Fares (as of January 2013)		
AC Transit	\$2.10	\$80 (monthly)
Caltrain (zone-based)	\$2.75-\$12.75	\$73-\$338 (monthly)
SamTrans	\$2.00	\$64 (monthly)
San Francisco Muni	\$2.00	\$74* (monthly)

*This pass is also good for unlimited rides on BART within San Francisco.

In comparing the other operators' fares to BART fares, the local cash fares of the other operators are higher than BART's minimum fare with the projected inflation-based fare increases implemented through 2016, when the minimum fare would be \$1.95. Even in 2020, the minimum fare of \$2.10 is equal to AC Transit's current fare and ten cents higher than SamTrans and San Francisco Muni. A rider could pay a fare using another operator's monthly pass that would be less expensive than the projected 2014 \$1.85 BART fare under the following circumstances:

- AC Transit: Rider takes more than 43 trips per month.
- Caltrain: Rider takes more than 39 trips per month (based on \$73 pass).
- SamTrans: Rider takes more than 34 trips per month.
- San Francisco Muni: Rider takes more than 40 trips per month.

2.4.2 BART Fare Payment Types, Fare Payment Media and Payment Method by Protected Group

The demographic profile of each fare type user from BART’s 2012 Customer Satisfaction Survey data is shown in the table below. Those data show minority riders are similar to overall riders in their usage of ticket types and fare media, although minority riders are somewhat less likely to use the 62.5% discounted tickets for seniors, people with disabilities, and youth aged 5 through 12 (children under age 5 ride for free). Low-income riders are more likely to use the regular fare product and less likely to use the high-value 6.25% discount (HVD) fare product, compared to overall riders.

2012 Customer Satisfaction data			Estimated trips		Estimated trips		Estimated trips	
Fare Type	Fare Media	Payment Method	Minority	%	Low income	%	Overall	%
Regular BART fare	Magnetic stripe, Clipper smart card	Cash, credit/debit, check, transit benefit payments	185,398	73.9%	110,517	81.7%	298,911	74.2%
			HVD	39,672	15.8%	10,241	7.6%	60,921
Senior/Disabled	Clipper smart card	Cash, credit/debit, check	12,747	5.1%	7,882	5.8%	23,144	5.7%
Muni Fast Pass *			9,190	3.7%	4,845	3.6%	14,608	3.6%
Student	mag stripe only	Cash, credit/debit, check	1,132	0.5%	802	0.6%	1,420	0.4%
BART Plus			708	0.3%	219	0.2%	895	0.2%
Other **			2,075	0.8%	750	0.6%	3,056	0.8%
Total			250,922	100.0%	135,256	100.0%	402,955	100.0%

* San Francisco Muni monthly pass accepted on BART within San Francisco.

** No Fare Type reported

Note: Children and students are underrepresented in survey sample as only those who appeared to be age 13+ were surveyed.

The following table details the percentage and value of the proposed increases by fare type. The proposed fare changes impact all fare types and fare media, with the exception that these changes do not apply to the Muni Fast Pass, which is the San Francisco Municipal Transportation Agency’s fare instrument. Since the proposed fare changes apply to all BART fares and fare types, the fare types are projected to increase at the same percentage. Although each fare type has differing constituencies, all fare types are affected equally.

Fare Type	Average FARES					FARE CHANGE							
	2012 Existing	2014 Proposed	2016 Proposed	2018 Proposed	2020 Proposed	2012-2014		2014-2016		2016-2018		2018-2020	
						%	\$	%	\$	%	\$	%	\$
Regular BART	\$3.59	\$3.78	\$3.93	\$4.09	\$4.25	5.3%	\$0.19	4.2%	\$0.16	4.1%	\$0.16	3.9%	\$0.16
HVD	\$3.36	\$3.54	\$3.69	\$3.84	\$3.99	5.3%	\$0.18	4.2%	\$0.15	4.1%	\$0.15	3.9%	\$0.15
Senior/Disabled/Youth	\$1.34	\$1.42	\$1.47	\$1.53	\$1.59	5.3%	\$0.07	4.2%	\$0.06	4.1%	\$0.06	3.9%	\$0.06
Student	\$1.79	\$1.89	\$1.97	\$2.05	\$2.13	5.3%	\$0.09	4.2%	\$0.08	4.1%	\$0.08	3.9%	\$0.08
BART Plus	\$3.36	\$3.54	\$3.69	\$3.84	\$3.99	5.3%	\$0.18	4.2%	\$0.15	4.1%	\$0.15	3.9%	\$0.15

2.5 Minority Disparate Impact Analyses and Low-Income Disproportionate Burden Analyses Findings

Pursuant to FTA Circular 4702.1B, BART performs an analysis of any fare change to determine if the change has a disparate impact on minority riders or results in a disproportionate burden on low-income riders. As provided in Circular App. K-11, comparing protected riders and nonprotected riders can “yield even clearer depictions of

differences” than the comparison between protected riders and overall users. For purposes of across-the-board fare changes, BART’s Policy follows this guidance and calls for comparison of the fare change experienced by minority riders to that experienced by non-minority riders, and the fare change experienced by low-income riders to that experienced by non-low income riders. BART also compares fare change of the protected group to that of overall users for information purposes. In accordance with the Circular, BART then measures the analysis results against the appropriate threshold defined in BART’s Policy.

The proposed inflation-based fare increases are across-the-board fare increases. The Policy states that an across-the-board fare change will be considered to have a disproportionate impact if the difference between the changes for protected riders and nonprotected riders is equal to or greater than 5%. The analysis results for the four biennial productivity-adjusted inflation-based fare increases compared to the 5% threshold are as follows:

- **2014:** Under the 5.2% increase scenario, the differences between the changes for protected riders and non-protected riders are less than the Policy’s 5% threshold. Low-income and minority riders would experience virtually the same percentage increase and a slightly lower dollar fare increase compared to non-low income and non-minority riders, respectively.
- **2016:** The projected 3.9% increase in 2016 results in differences between the changes for protected riders and nonprotected riders that are less than the Policy’s 5% threshold. Low-income and minority riders would experience the same percentage increase and a slightly lower dollar fare increase compared to non-low income and non-minority rides, respectively.
- **2018:** For 2018, with fares increasing by a projected 3.9%, differences between the changes for protected riders and nonprotected riders are less than the Policy’s 5% threshold. The percentage changes for protected riders and nonprotected riders are virtually identical, while the dollar changes are slightly higher for nonprotected riders.
- **2020:** With a projected 3.9% fare increase in 2020, the differences between the changes for protected riders and nonprotected riders are less than the Policy’s 5% threshold. Low-income and minority riders would experience the same or slightly lower percentage and dollar fare increases compared to nonprotected riders.

These results show that each of the proposed inflation-based fare increases would result in differences between the changes for protected riders and nonprotected riders that are less than the Policy’s 5% threshold; fares would increase by the same or slightly lower amounts for minority riders and low-income riders when compared to nonminority and non-low income riders, respectively. Therefore, this report finds that the proposed changes do not have a disparate impact on minority riders or result in a disproportionate burden on low-income riders.

3. CONCLUSION

BART actively sought public comment on the inflation-based fare increase program in a variety of ways, using approaches outlined in BART’s Public Participation Plan, as

described in the separate “Public Participation Summary Report for the Extension of the Productivity-Adjusted Inflation-Based Fare Increase Program.”

Applying the Policy’s 5% threshold , the minority disparate impact analyses and low-income disproportionate burden analyses in this report make a final finding that the proposed 2014 productivity-adjusted inflation-based fare increase would not result in disparate impacts on minority riders compared to non-minority riders or disproportionate burdens on low-income riders compared to non-low income riders.

Once inflation figures are available to calculate the actual value of the proposed 2016, 2018, and 2020 biennial increases, before implementation of that increase, staff will prepare an analysis in accordance with applicable state and federal laws, to determine if the actual increase would have a disparate impact on minority riders or result in a disproportionate burden on low-income riders when compared respectively to non-minority riders and non-low income riders. This report provides a preliminary assessment for 2016, 2018, and 2020, finding that none of these three, proposed increases will result in either a disparate impact or a disproportionate burden on protected riders. The final assessment for 2016, 2018, and 2020 regarding disparate impact and disproportionate burden, including application of the actual percentage increase once known, will be reported to the BART Board for approval. If there is a finding of no disparate impact and a finding of no disproportionate burden, then no further action is required by the Board to implement the increase.

APPENDIX A: Inflation-Based Formula for BART Fare Increases, as described in handout provided during public outreach activities in March 2012

BART’s Board-approved fare increase program called for fares to increase by a small, inflation-based amount in 2006, 2008, 2010, and 2012. BART is asking for input about continuing to use the current inflation-based formula in 2014, 2016, 2018, and 2020. In each of these years, based on inflation projections, the estimated systemwide fare increase would be 3.9%.

The formula BART uses to calculate the amount of the increase averages the changes in national and local inflation over a two-year period, and then subtracts one-half percent to account for improved BART operating efficiencies, so that the actual increase is less than inflation. The resulting percentage increase is applied to fares that are then rounded to the nearest nickel.

The current inflation-based formula for BART fare increases is as follows:

$$\left(\frac{\frac{(\text{NCPIU}_2 - \text{NCPIU}_0)}{\text{NCPIU}_0} + \frac{(\text{BACPIW}_2 - \text{BACPIW}_0)}{\text{BACPIW}_0}}{2} \right) - 0.005$$

Productivity Factor

Definitions:

NCPIU	National CPI-U Annual Average: U.S. City Average consumer price index for all urban consumers	Each average is measured for all items, over a calendar year with an index base period of 1982-84 = 100 as reported by the Bureau of Labor Statistics, U.S. Department of Labor
BACPIW	Bay Area CPI-W Annual Average: the San Francisco-Oakland-San Jose, CA local consumer price index for urban wage earners and clerical workers	

“0” and “2” subscripts of NCPIU and BACPIW represent the calendar year from which (“0”) and against which (“2”) the inflation change is calculated (e.g., if the formula is applied for 2012, the calendar years are 2008 and 2010).

Example Calculation: Fare Increase for 2012

$$\left(\frac{\frac{(218.1 - 215.3)}{215.3} + \frac{(223.8 - 218.4)}{218.4}}{2} \right) - 0.005$$

Productivity Factor

The result would be a 1.4% increase to fares.

APPENDIX B: Methodology Used to Assess the Effects of an Across-the-Board Fare Change

The following steps outline the methodology BART uses to assess the effects of a fare change, in this case, the proposed four biennial productivity-adjusted inflation-based fare increases, the first effective in 2014 and the last in 2020.

Step 1: For each of the proposed four productivity-adjusted inflation-based fare increases, estimate weighted average fares “Before Fare Increase” and “After Fare Increase” for each BART station.

In Step 1, the weighted average fare paid by riders boarding at each of BART’s existing 44 stations is estimated. The more riders boarding at a station that pay a certain fare, the closer the weighted average fare will be to that more-often paid fare. This is in contrast to a simple average fare where each fare has the same weight. A sample of stations is shown below, with the “2012 Fares” reflecting BART’s current fares and the “2014 Fares” reflecting the proposed 5.2% inflation-based fare increase for 2014.

Sample of Weighted Average Fare Data for Proposed 2014 Increase

<i>Origin Station</i>	2012 Fares	2014 Fares
Richmond	\$ 3.42	\$ 3.60
El Cerrito del Norte	\$ 3.59	\$ 3.77
El Cerrito Plaza	\$ 3.17	\$ 3.33
North Berkeley	\$ 3.40	\$ 3.61
Downtown Berkeley	\$ 3.11	\$ 3.28

For each station, a station-to-station fare table is multiplied by the 2012 station-to-station average weekday trip table (composed of actual trip data recorded by BART’s automated fare collection system) and the results are then summed. That sum is divided by the total number of average weekday trips for that station. The resulting dividend is the weighted average fare for that station. This calculation is performed to obtain average weighted fares before and after each fare increase using the appropriate fare table. The following chart shows the fare tables that were used in calculations for the four proposed fare increases. The actual 2012 average weekday trip table was used for all increase calculations.

<i>Fare Increase Effective:</i>	Fare Table Used in "Before Fare Increase" Calculation	Fare Table Used in "After Fare Increase" Calculation
2014	Actual 2012 Fare Table	Actual 2012 Fare Table Increased by 5.2% ("2014 Fare Table")
2016	2014 Fare Table	2014 Fare Table increased by 3.9% ("2016 Fare Table")
2018	2016 Fare Table	2016 Fare Table increased by 3.9% ("2018 Fare Table")
2020	2018 Fare Table	2018 Fare Table increased by 3.9% ("2020 Fare Table")

Step 2: For each of the proposed four productivity-adjusted inflation-based fare increases, estimate weighted average fares for minority, non-minority, low-income, non-low income and overall riders.

The percentage of minority and of low-income riders at each station is determined based upon reported responses in the 2008 Station Profile Study. These percentages are then multiplied by the 2012 actual station-specific entries to estimate the number of minority and low-income riders at each station. A weighted average fare for minority riders systemwide is then calculated by multiplying, at the station level, the minority riders times the average fare, summing the total and dividing by the number of minority riders. This same step is repeated to calculate the average weighted fare for low-income riders and for non-minority and non-low income riders.

Step 3: For each of the proposed four productivity-adjusted inflation-based fare increases, calculate the percent increase paid by minority riders, non-minority riders, low-income riders, non-low income riders, and overall users.

Using the systemwide weighted average fares calculated in Step 2 above, the percent increase in fares paid by minority riders, non-minority riders, low-income riders, non-low income riders, and overall riders is calculated “before” and “after” each proposed fare increase.

Step 4: For each of the proposed four productivity-adjusted inflation-based fare increases, to determine if the fare increase would have a disparate impact on minority riders or result in a disproportionate burden on low-income riders, apply to the differences in percent increases obtained in Step 3 above the appropriate Disparate Impact and Disproportionate Burden Policy threshold.

The difference in percent increase in fares “before” and “after” each increase is calculated for (a) minority riders compared to non-minority riders and (b) low-income riders compared to non-low income riders. The proposed inflation-based fare increases are across-the-board fare increases. BART’s Disparate Impact and Disproportionate Burden Policy states that an across-the-board fare change will be considered to have a disproportionate impact if the difference between the changes for protected riders and nonprotected riders is equal to or greater than 5%. Therefore, a 5% threshold is applied to the difference in percent increase in fares.