

Triennial Performance Audit

of the

Golden Gate Bridge, Highway and Transportation District (GGBHTD)

Fiscal Years 2014/15, 2015/16 and 2016/17

FINAL AUDIT REPORT

prepared for the



**METROPOLITAN
TRANSPORTATION
COMMISSION**

by



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NOTE:

All exhibits in this report are presented at the end of the associated discussion in each section.

EXECUTIVE SUMMARY

This executive summary highlights the findings from the performance audit of the Golden Gate Bridge, Highway and Transportation District (GGBHTD). In California, a performance audit must be conducted every three years of any transit operator receiving Transportation Development Act (TDA) Article 4 funds, to determine whether the operator is in compliance with certain statutory and regulatory requirements, and to assess the efficiency and effectiveness of the operator's services.

GGBHTD operates bus service under the banner of Golden Gate Transit (GGT). GGBHTD also operates Golden Gate Ferry (GGF) service between San Francisco and Marin County (Larkspur and Sausalito). GGBHTD provides ADA complementary paratransit through an agreement with the Marin County Transit District (MCTD). The audit period is Fiscal Years 2015 through 2017 (from July 1, 2014 through June 30, 2017).

Performance Audit and Report Organization

The performance audit was conducted for MTC in accordance with its established procedures for performance audits. The final audit report consists of these sections:

- An assessment of data collection and reporting procedures;
- A review of performance trends in TDA-mandated indicators and component costs;
- A review of compliance with selected PUC requirements;
- An evaluation of GGBHTD's actions to implement the recommendations from the last performance audit;
- An evaluation of functional performance indicator trends; and

- Findings, conclusions, and recommendations to further improve GGBHTD's performance based on the results of the previous sections.

Comments received from GGBHTD and MTC staff regarding the draft report have been incorporated into the final report. Highlights from the key activities are presented in this executive summary.

Results and Conclusions

Review of TDA Data Collection and Reporting Methods - The purpose of this review is to determine if GGBHTD is in compliance with the TDA requirements for data collection and reporting. The review is limited to the five data items needed to calculate the TDA-mandated performance indicators. While this review has determined that GGBHTD is in compliance with the data collection and reporting requirements for all five TDA statistics, it was learned that delays in the schedule resulting from traffic congestion -- primarily on the Highway 101 and Interstate 580/Richmond Bridge corridors, as well as in the City of San Francisco -- are not currently captured in the calculation of vehicle service hours. Regardless, the statistics collected over the six-year review period generally appear to be consistent with the TDA definitions, and indicate general consistency in terms of the direction and magnitude of the year-to-year changes across the statistics.

Performance Indicators and Trends – GGBHTD's performance trends for the five TDA-mandated indicators were analyzed by mode. A six-year analysis period was used for all the indicators. In addition, component operating costs were analyzed.

- Bus Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

- There was an average annual increase in the operating cost per hour of 5.5 percent, or 2.8 percent in inflation adjusted dollars. The largest annual increase (over 10 percent) occurred in FY2015.
- The cost per passenger increased on average by 16.3 percent per year, which amounted to an average annual increase of 13.3 percent in constant FY2012 dollars.
- Passenger productivity showed negative trends, with passengers per vehicle service hour decreasing overall by 9.3 percent annually, and passengers per vehicle service mile decreasing by 10.6 percent per year.
- Employee productivity increased an average 3.5 percent per year.
- All of these results were impacted by the removal of Marin local bus services from GGBHTD’s NTD reporting effective in FY2015.

The following is a brief summary of the component operating costs trend highlights for the bus service between FY2012 and FY2017:

- Noticeable decreases in total costs and most component costs categories in FY2015 corresponded with removing Marin local bus services from GGBHTD’s NTD reporting.
 - The most significant change was an average annual increase of 16.7 percent in the casualty/liability area. At the same time, fuel/lubricants costs decreased on average by 13.4 percent per year.
 - Labor and fringe benefits costs each represented about 40 percent of the total costs, and showed little overall change over the six years.
 - The remaining cost categories generally also saw modest changes, with each contributing six percent or less to total costs in each year.
- Ferry Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

- There was an average annual increase in the operating cost per hour of 3.2 percent, or 0.5 percent in inflation adjusted dollars. Most of the increase was in the first half of the review period.
- The cost per passenger increased on average by 1.3 percent per year, which amounted to an average annual decrease of 1.3 percent in constant FY2012 dollars.
- Passenger productivity showed moderately positive trends, with passengers per vessel service hour increasing by 1.8 percent per year overall, and passengers per vehicle service mile increasing by 1.2 percent.
- Employee productivity decreased an average four percent per year.

The following is a brief summary of the component operating costs trend highlights for the ferry service between FY2012 and FY2017:

- Overall, operating costs increased by 4.2 percent annually, but there were larger increases in most component cost categories.
 - Fuels/lubricants costs decreased by 5.8 percent annually on average, and over the period went down from 23 to 14 percent of total costs.
 - Labor costs, followed closely by fringe benefits costs, together comprised the largest share of total costs – about 50 to 60 percent depending on the year.
 - Services costs contributed between 12 and 16 percent of total costs, while the remaining cost categories each generally contributed less than five percent.
- Paratransit – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:
 - There was an average annual decrease in the operating cost per hour of 1.6 percent, or 4.1 percent in inflation adjusted dollars.

- The cost per passenger decreased on average by 14 percent per year, which amounted to an average annual decrease of 16.2 percent in constant FY2012 dollars.
- Passengers per vehicle service hour and vehicle service mile both increased substantially -- by 14.3 percent and 21.7 percent on average per year, respectively.
- All of these results were significantly impacted by a major GGBHTD paratransit service expansion from a new contract with Marin Transit that went into effect during FY2016.

The following is a brief summary of the component operating costs trend highlights for the paratransit service between FY2012 and FY2017:

- Total annual costs increased by 14.1 percent on average, driven by a corresponding increase in purchased transportation costs – by far the largest component cost category.
- These results were significantly impacted by a major GGBHTD paratransit service expansion from a new contract with Marin Transit that went into effect during FY2016.
- Purchased transportation costs continued to be the source of at least 98 percent of all costs in all six years.
- In-house labor and fringe benefit costs showed significant percent changes as well, but they comprised a very small portion of the total costs.

Compliance with Statutory Requirements – GGBHTD is in compliance with the sections of the state PUC that were reviewed as part of this performance audit. The sections reviewed included requirements concerning CHP safety inspections, labor contracts, reduced fares, Welfare-to-Work, revenue sharing, and evaluation of passenger needs.

Status of Prior Audit Recommendations – The recommendation from the prior audit is considered to have been implemented. During recent prior TDA audits, it was found that GGBHTD’s cost efficiency was generally worsening, with the cost per vehicle/vessel service hour increasing for each mode -- largely due to reductions in service levels combined with increases in operations costs. It was recommended that GGBHTD develop mode-specific strategies to address the situation aggressively so that cost per hour increases over the next few years did not continue to spiral upwards. GGBHTD reported numerous plans in various areas were underway during the previous and current audit periods for reducing costs, and increasing service hours and ridership. Specific plans in each area continue to be active, and apply to the bus service, ferry service, bus and ferry service, and in one instance to the paratransit service.

Cost per hour trends during the current review period (FY2012 through FY2017) were more positive overall than those noted in the prior audit. Modal results indicate inflation-adjusted average annual increases of 2.8 percent for bus and 0.5 percent for ferry, but a decrease for paratransit. Annual results for FY2017 compared to FY2016 show an increase in the cost per hour for only for bus (4.2 percent, inflation adjusted), with decreases for both ferry and paratransit. Efforts to reduce bus hourly costs have been impacted by increased bus travel times associated with traffic congestion, along with severe degradation in the operation of carpool lanes in Marin County. In light of these trend results and exceptional circumstances, GGBHTD appears to be adequately controlling its cost efficiency across all service modes.

Functional Performance Indicator Trends - To further assess GGBHTD’s performance over the past three years, a detailed set of systemwide and modal functional area performance indicators was defined and reviewed.

- Systemwide (All Modes) – The following is a brief summary of the systemwide functional trend highlights between FY2015 and FY2017:
 - Administrative costs decreased moderately to 25 percent of total operating costs, and decreased moderately overall to \$91 per vehicle service hour in FY2017.
 - Marketing costs increased to more than six percent of total administrative costs in the last two years, and rose to \$0.28 per passenger trip in FY2017.
 - The systemwide farebox recovery ratio was just above 34 percent in both FY2015 and FY2017.

- Bus Service – The following is a brief summary of the bus service functional trend highlights between FY2015 and FY2017:
 - Service Planning results showed a small decrease in the scheduled operator pay to platform ratio to 217 percent by FY2017, a 32 percent increase in the cost per passenger mile, consistently more than 85 percent of vehicle miles and hours in service, and the bus farebox recovery ratio at about 21.5 percent in both FY2015 and FY2017.
 - Operations results showed about 60 percent of operating costs consistently incurred from vehicle operations but a 14 percent increase in vehicle operations costs per hour. Virtually all scheduled vehicle service miles were actually operated. Operator scheduled absences were steady at about 12 percent of total work hours, and unscheduled absences at 20 percent. The actual operator pay to platform ratio decreased slightly to 252 percent. Schedule adherence went up from 83 to 86 percent, with little net change in the complaint rate and missed trips down to 0.1 percent in FY2017.
 - Maintenance results showed total maintenance costs steady at 15 percent of total costs but vehicle maintenance costs increasing by 19 percent per mile, and maintenance pay hours increasing by 12 percent compared to service hours. Maintenance employee scheduled absences were steady at 10.7 percent with a decrease in the unscheduled rate to 4.5 percent. The vehicle spare ratio decreased overall from 28 to 22 percent. The major mechanical

failure rate improved moderately, while the rate for all failures worsened overall but showed some improvement in the last year.

- Safety results showed the preventable accident rate improving steadily, but sharp increases in the casualty/liability cost rates, and lost days due to industrial accidents more than doubling. However, the latter represents lost days from claims originating over multiple years. GGBHTD recently implemented an Alternative Dispute Resolution (ADR) program which reportedly has resulted in a net decrease in lost days.
- Ferry Service – The following is a brief summary of the trolley coach functional trend highlights between FY2015 and FY2017:
 - Service Planning results showed a small decrease in the scheduled operator pay to platform ratio to 220 percent, a 4.2 percent increase in the cost per passenger mile, moderate decreases in vehicle miles and hours in service to 89 and 92 percent respectively, and the farebox recovery ratio rising from 61 to more than 65 percent.
 - Operations results showed operating costs incurred from vessel operations steady at about 55 percent, and also steady vessel operations costs per hour. Operator scheduled absences remained at about 11 percent of total work hours, while unscheduled absences went up from four to seven percent by FY2017, the latter due to unusually high FMLA and medical leave activity. The actual operator pay to platform ratio climbed to 289 percent, schedule adherence went down a few points from 97 percent in FY2015, the rate of complaints went down by 22 percent, and missed trips decreased to 0.1 percent in FY2017.
 - Maintenance results showed total maintenance costs steady at 16 percent of total costs and vessel maintenance costs at \$22 per mile. Maintenance pay hours were about 190 percent of service hours in both FY2015 and FY2017. Scheduled absences remained near 12 percent, while the unscheduled absence rate was five percent except for a spike to 12.9 percent in FY2016 due to unusually high FMLA and medical leave activity among the small number of maintenance employees. The vessel spare ratio decreased from one vessel to none

with the new Tiburon service in FY2017. The trend in major mechanical failures was generally positive, while the rate for all failures worsened overall but showed noticeable improvement in the last year.

- Safety results showed no reportable ferry accidents during the audit period, moderately increasing casualty/liability cost rates, and lost days due to industrial accidents more than doubling in FY2016 but a turnaround in FY2017.
- Paratransit – The following is a brief summary of the paratransit functional trend highlights between FY2015 and FY2017:
 - Service Planning results showed a 30 percent net decrease in the cost per passenger mile that coincided with GGBHTD’s expanded intra-county paratransit service as of FY2016. There were also some increases in vehicle miles and hours in service, to 85 and 87 percent respectively, and the farebox recovery ratio steadily rose from 6.4 to 8.3 percent by FY2017.
 - Operations results showed vehicle operations costs increasing moderately to 70 percent of total costs, while vehicle operations costs per service hour went down by more than 25 percent. Schedule adherence improved from 90 to 94 percent, the complaint rate was reduced by 75 percent, missed trips went down to 0.02 percent, and there were no ADA trip denials. Trip cancellations decreased from 67 percent of total ADA trips in FY2015 to 35 percent subsequently, as GGBHTD’s responsibility expanded from only inter-county paratransit trips to also include some Marin intra-county trips. Inter-county trip cancellations tend to be made several days in advance and thus have little effect on service delivery. The late trip cancellation and passenger no-show rates both remained at about three percent.
 - Maintenance results showed total maintenance costs rising sharply from five to 17 percent of total costs, and vehicle maintenance costs per mile more than doubling. At the same time, the vehicle spare ratio dropped from 43 percent to 15 percent, coinciding with GGBHTD’s expanded intra-county paratransit service. Mechanical

failure rates were similar in the first and last years, and no failures were reported in FY2016.

- Safety results showed a 30 percent improvement in the reportable accident rate.

Recommendations

1. TAKE STEPS TO ACCOUNT FOR CONGESTION DELAYS IN THE CALCULATION OF VEHICLE SERVICE HOURS FOR THE BUS SYSTEM.
[Reference Section: II. Review of TDA Data Collection and Reporting Methods]

During the conduct of this review, GGBHTD staff indicated that the definitions and procedures used to derive the TDA indicator statistics generally are consistent with those used for the NTD reporting system. However, during discussions with GGBHTD staff it was learned that delays in the schedule resulting from traffic congestion -- primarily on the Highway 101 and Interstate 580/Richmond Bridge corridors, as well as in the City of San Francisco -- are not currently captured in the calculation of vehicle service hours. Rather, GGBHTD attempts to correct for delays in the system every three months during the “quarterly shake-up,” by adding additional running time on routes that regularly run late due to congestion.

It is recommended that GGBHTD further investigate the issue to determine the impact congestion delays have on the reported service hours data, and determine how these hours can be accounted for in order to more accurately report vehicle service hours.

GGBHTD has recently started this process by developing a six-step corrective action plan to begin in May 2018 with a multi-departmental buy-in (Planning,

Finance and Information Technology Departments) to correct the data and ensure that future reports and calculations will include congestion delays. In the final steps, appropriate upgrades to the Hastus Scheduling Software System are anticipated by October 2019, followed by submission of the first full year of accurately reported vehicle service hours to the NTD in October 2020.

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I. INTRODUCTION

Public Utilities Code (PUC) Section 99246 requires that a performance audit be conducted every three years of each public transit operator in California. The audit requirement pertains to recipients of Transportation Development Act (TDA) funds, and is intended to assure that the funds are being used efficiently. The substance and process of the performance audit is defined by the Regional Transportation Planning Agency (RTPA).

In the San Francisco Bay Area, the Metropolitan Transportation Commission (MTC) has been designated the RTPA and has this responsibility. By statute, the audit must be conducted in accordance with the U.S. Comptroller General's "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions" (the "yellow book"). The performance audit is a systematic review to determine the extent to which a transit operator has complied with pertinent laws and regulations, and conducted operations in an efficient and economical manner. Relative to system compliance testing, all findings are reported regardless of materiality.

This report has been prepared as part of the performance audit of the Golden Gate Bridge, Highway and Transportation District (GGBHTD). GGBHTD operates bus service under the banner of Golden Gate Transit (GGT). GGBHTD also operates Golden Gate Ferry (GGF) service between San Francisco and Marin County (Larkspur and Sausalito). GGBHTD provides ADA complementary paratransit through an agreement with the Marin County Transit District (MCTD). All of these modes are included in this performance audit. The audit period is Fiscal Years 2015 through 2017 (from July 1, 2014 through June 30, 2017).

An overview of GGBHTD is provided in Exhibit 1. This is followed by an agency organization chart in Exhibit 2, which reflects the basic organizational structure during the audit period and beyond.

Performance Audit and Report Organization

This performance audit of GGBHTD was conducted for MTC in accordance with its established procedures for performance audits. The audit consisted of two discrete steps:

1. Compliance Audit - Activities in this phase included:
 - An overview of data collection and reporting procedures for the five TDA performance indicators;
 - Analysis of the TDA indicators; and
 - A review of compliance with selected state Public Utilities Code (PUC) requirements.

2. Functional Review - Activities in this phase included:
 - A review of actions to implement the recommendations from the prior performance audit;
 - Calculation and evaluation of functional performance indicator trends; and
 - Findings, conclusions, and the formulation of recommendations.

This report presents the findings from both phases. Comments received from GGBHTD and MTC staff regarding the draft report have been incorporated into this final report.

Exhibit 1: System Overview

Location	Golden Gate Bridge: PO Box 9000, Presidio Station San Francisco, CA 94129-0601 Golden Gate Transit: 1011 Andersen Drive San Rafael, CA 94901-5318 Golden Gate Ferry: 101 East Sir Francis Drake Boulevard Larkspur, CA 94939-1803
Establishment	GGBHTD is a special district of the State of California, formed under authority of the Golden Gate Bridge and Highway Act of 1923 and incorporated in 1928. Originally designed to build and operate the Golden Gate Bridge, mass transportation service was added to the District's authorization in 1969. The District encompasses the City and County of San Francisco, the Counties of Marin, Sonoma, and Del Norte, most of Napa County, and part of Mendocino County.
Board	The District is governed by a Board of Directors. The 19-member Board is comprised of the following: nine members from San Francisco; four from Marin; three from Sonoma; one each from Napa, Mendocino, and Del Norte.
Facilities	GGBHTD's Administrative offices are located at the Golden Gate Bridge Toll Plaza in San Francisco. Bus Administration, Operations and Maintenance facilities are located in San Rafael. The Ferry Administration facility is located at the Larkspur Ferry Terminal. GGBHTD owns and operates two Park and Ride lots in Larkspur and Santa Rosa, along with a bus station at the San Rafael Transit Center. Another bus station, the Santa Rosa Transit Mall, is owned by the City of Santa Rosa. In addition to the Larkspur Ferry Terminal, Golden Gate Ferry leases ferry facilities in Sausalito, at the San Francisco Ferry Terminal, and in Tiburon.
Service Data	<p>The District operates bus service under the name Golden Gate Transit (GGT). During the audit period, it had an active fleet of 193 clean diesel and diesel-electric hybrid buses and two categories of bus service:</p> <ul style="list-style-type: none">• Intercounty Bus Service, including Basic and Commute bus routes. There are five Basic service bus routes, which provide daily service throughout the day and evening between San Francisco, Marin, Sonoma and Contra Costa counties. There are 18 Commute service bus routes, which provide commute period service, mornings and evenings, Monday through Friday, except holidays, between San Francisco, Marin, and Sonoma counties.• Local Bus Service within Marin County. There are seven Local bus routes within Marin County, operated daily, with limited weekend service on certain routes. GGT operates these routes under contract with Marin Transit. Other contract operators provide additional local transit services for Marin County. Marin Transit determines the fares and service levels for all local transit services.

The Golden Gate Ferry (GGF) operates daily service (except New Year's, Thanksgiving, and Christmas days) between Sausalito, Larkspur or Tiburon in Marin County and San Francisco, at varying intervals of 15 to 120 minutes, depending on the time of the day, day of the week, and season. The Sausalito Ferry operates with one vessel on a 5.5 nautical-mile route. The Larkspur Ferry operates a summer schedule annually from about April 1 to September 30 and a winter schedule annually from about October 1 to March 31. The Larkspur Ferry operates with three vessels on an 11.25 nautical-mile route. On March 6, 2017, GGF commenced operation of commute ferry service between Tiburon and San Francisco, operating with one vessel on a 5.94 nautical-mile route. GGF also operates special ferry service from Larkspur Ferry to AT&T Park for San Francisco Giants home games and various concerts and events.

Intercounty paratransit service is operated by a paratransit contractor, Whistlestop Wheels (WSW). WSW operates local paratransit service within Marin County of behalf of Marin Transit and regional paratransit service between the Counties of Marin, Contra Costa, San Francisco, and Sonoma on behalf of GGT. This service is operated within three-quarters of a mile of GGT's basic bus routes.

Bus fares are based on a seven-zone system. As of July 1, 2017, adult cash fares range from \$2.00 for a local trip in Marin County to \$13.00 between Santa Rosa and San Francisco. Reduced fares are available for seniors, persons with disabilities, Medicare cardholders and youth (ages 5 to 18). Children ages four and under ride free when accompanied by an adult. Intercounty paratransit fares are no more than twice the equivalent GGT full adult fare. The regular one-way fare on the Sausalito Ferry is \$12.00 at all times; the regular one-way fare on the Larkspur Ferry is \$11.50 at all times, and the regular one-way fare on the Tiburon Ferry is \$12.00 at all times. Seniors, persons with disabilities, Medicare cardholders, youth (ages 5 through 18) and Clipper cardholders receive discounted fares, and children under the age of five ride free when accompanied by an adult on all ferry routes. The Giants Ferry fare is \$13.50 each way.

Recent Changes

Onboard bus stop announcements began in 2014 (in conjunction with the AVL system).

Bus Wi-Fi roll out occurred in August 2014.

Additional peak period Larkspur ferry trips were added (afternoon trip in September 2014 and morning trip in February 2015).

Major ferry boat refurbishments undertaken (M.S. San Francisco in 2014-2015, and M.V. Mendocino in 2015-2016).

A new contract with Marin Transit that reduced the number of Local bus routes operated by GGT began July 2015 and remains in effect until June 2020, with two one-year options.

Opening of Larkspur overflow parking for the addition of 250 parking spaces, in September 2015.

Sausalito and Tiburon mobile ticketing began in June 2016.

Real time bus departure electronic signs were installed at major transit hubs in February 2017.

New weekday peak period Tiburon ferry service began in March 2017.

Five-year bus and ferry fare increase program was approved in Spring 2017.

Planned Changes

GGBHTD is reviewing its regional service package to determine where enhancements can be made for regional customers. With the start-up of SMART rail service, staff will continue to explore service modifications and future needs in the North Bay.

Modification of current use of San Rafael Transit Center (SRTC) facility during construction of SMART extension to Larkspur, with eventual relocation or reconstruction of SRTC.

Coordination with SMART for provision of bus bridge (Route 31) to Larkspur Ferry until Larkspur SMART station opens.

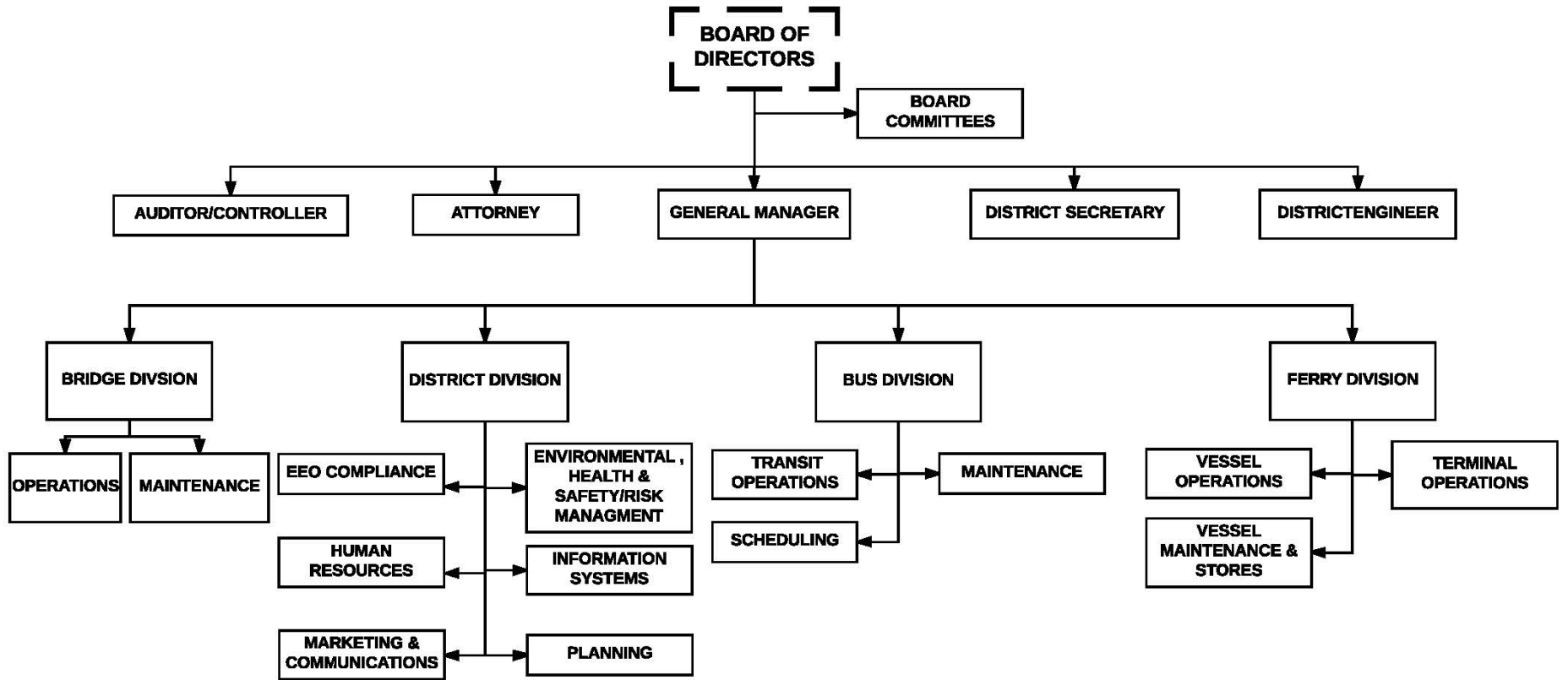
Coordination with SFMTA during Van Ness BRT construction and use of lanes when opened. Continued monitoring of Geary BRT project to modify service if appropriate during construction phases, once underway.

Staff

GGBHTD's staff is organized into four divisions: Bridge, Bus, Ferry and District Administration; each headed by a Deputy General Manager who reports to the General Manager. The FY2016/17 Budget listed a total of 810 full and part time budgeted positions. The breakdown by operating division was as follows:

Bridge:	174
Bus:	401
Ferry:	93
Dist. Admin.:	<u>142</u>
Total:	810

Exhibit 2: Organization Chart



FY 17/18

II. REVIEW OF TDA DATA COLLECTION AND REPORTING METHODS

This section focuses on the five performance indicators required by TDA law. These indicators have been defined by the state PUC to evaluate the transit operator's efficiency, effectiveness and economy. The purpose of this review is to determine if GGBHTD is compliance with the data collection and reporting requirements necessary to calculate the TDA performance indicators. The review is limited to the data items needed to calculate the indicators:

- Operating costs
- Vehicle/Vessel service hours
- Vehicle/Vessel service miles
- Unlinked passengers
- Employees (full-time equivalents)

The TDA indicator analysis is based on these operating and financial statistics in the National Transit Database (NTD) reports submitted annually to the Federal Transit Administration (FTA). The information reported by GGBHTD covering the audit period has been reviewed. GGBHTD's NTD reports generally include its bus, ferry and paratransit services. However, consistent with FTA reporting requirements, GGBHTD does not submit employee hour information for purchased transportation service to the NTD.

Compliance with Requirements

To support this review, GGBHTD also provided information to confirm and/or update its data collection and reporting procedures, using the descriptions in the prior performance audit as a reference. There were minor changes. The staff indicated that the

definitions and procedures used to derive the TDA indicator statistics generally are consistent with those used for the NTD reporting system. However, during discussions with GGBHTD staff it was learned that delays in the schedule resulting from traffic congestion -- primarily on the Highway 101 and Interstate 580/Richmond Bridge corridors, as well as in the City of San Francisco -- are not currently captured in the calculation of vehicle service hours. Rather, GGBHTD attempts to correct for delays in the system every three months during the "quarterly shake-up," by adding additional running time on routes that regularly run late due to congestion. The auditors have been working with the staff to determine how these hours can be accounted for in order to achieve more accurate reporting of vehicle service hours.

Based on the information provided, as shown in Exhibit 3.1, GGBHTD is in compliance with the data collection and reporting requirements for all five TDA statistics.

Consistency of the Reported Statistics

The resulting TDA statistics for GGBHTD's services are shown by mode in Exhibits 3.2 through 3.4. Included are statistics covering each fiscal year of the three-year audit period, plus the immediately preceding three fiscal years, resulting in a six-year trend. Certain potential inconsistencies which were identified are discussed below, along with explanations that have been provided:

- Bus Service – In FY2015, there were significant decreases in most of the reported statistics compared with those reported in the previous years. The FY2015 results ranged from about 15 percent lower than FY2014 for operating costs, to 43 percent lower for passengers carried. Beginning July 1, 2014, GGBHTD and Marin Transit entered into a new agreement allowing Marin Transit also to report in the NTD the local bus service that GGBHTD operates under contract for Marin Transit. Consequently, the

data reported by GGBHTD to the NTD for the last three years includes only its regional service.

- Paratransit Service – In FY2016, there were significant increases in the reported statistics compared with those reported in the previous years. The FY2016 results ranged from about 65 percent higher than FY2015 for operating costs, to 320 percent higher for passengers carried. Due to a new paratransit contract with Marin Transit that went into effect in mid-FY2016, GGBHTD is now responsible for a much larger portion -- approximately 25 percent -- of the intra-county paratransit trips. This growth in GGBHTD's paratransit service is reflected in the reported operating statistics in the last two years.

Overall, the statistics collected over the period appear to be consistent with the TDA definitions. Further, they indicate general consistency in terms of the direction and magnitude of the year-to-year changes across the statistics. For example, increases or decreases in annual operating costs are relatively proportional to increases or decreases in annual vehicle service hours and miles.

Exhibit 3.1: Compliance with TDA Data Collection and Reporting Requirements

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
Operating Cost	“Operating cost” means all costs in the operating expense object classes exclusive of the costs in the depreciation and amortization expense object class of the uniform system of accounts and records adopted by the Controller pursuant to Section 99243, and exclusive of all subsidies for commuter rail services operated under the jurisdiction of the Interstate Commerce Commission and of all direct costs for providing charter services, and exclusive of all vehicle lease costs.	In Compliance	<ul style="list-style-type: none"> • Defined as the cost of labor, services, depreciation, materials and supplies used exclusively for a particular mode. • NTD reporting guidelines are followed. Joint expenses allocated to modes based on a ratio of mode revenue plus expense to total revenue plus expense. • Contract/paratransit service operating costs based on financial data provided by the contractor.
Vehicle Service Hours	“Vehicle service hours” means the total number of hours that each transit vehicle is in revenue service, including layover time.	<u>Bus</u> - In Compliance, with Follow-up <u>Ferry</u> – In Compliance <u>Paratransit</u> – In Compliance	<ul style="list-style-type: none"> • <u>Bus</u> – Actual hours traveled in revenue service including layover time. Bus Division inputs scheduled bus revenue trip data into TranStat System. Cancelled trips are subtracted and extra trips added to scheduled bus trips to produce the monthly TranStat Trip Summary Report of accumulated actual vehicle service hours. Additional hours due to delays are not being captured. • <u>Ferry</u> – Actual hours in revenue service including layover time (not including out-of-service time between commute periods). Monthly “AM – PM Commute” report includes hours derived by calculating average trip time and layover time for six trip categories. Report includes missed service, cancellations, and extra (e.g., AT&T Park) service. • <u>Paratransit</u> – Hours operated by vehicle in revenue service, that is when the vehicle is available to the public with a reasonable expectation of carrying passengers. Does not include deadhead time. Contractor’s “Monthly Statistical Report for Transportation” includes cumulative statistics from daily driver manifests and dispatcher logs.

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
Vehicle Service Miles	“Vehicle service miles” means the total number of miles that each transit vehicle is in revenue service.	In Compliance	<ul style="list-style-type: none"> • <u>Bus</u> – Actual miles that buses travel while in revenue service. Bus Division inputs scheduled bus revenue trip data into TranStat System. Cancelled trips are subtracted and extra trips added to scheduled bus trips to produce the monthly TranStat Trip Summary Report of accumulated actual vehicle service miles. • <u>Ferry</u> – Actual miles that boats travel while in revenue service. Ferry Division inputs miles into the TranStat system, with miles derived by multiplying actual trips by miles per trip (Sausalito 6.33 miles, Larkspur 12.95 miles, Larkspur-AT&T Park 15.08 miles, and Tiburon 6.84 miles). • <u>Paratransit</u> – Miles operated by paratransit vehicle while in revenue service, that is when the vehicle is available to the public with a reasonable expectation of carrying passengers. Does not include deadhead miles. Contractor’s “Monthly Statistical Report for Transportation” includes cumulative statistics derived from daily driver manifests and dispatcher logs.
Unlinked Passengers	“Unlinked passengers” means the number of boarding passengers, whether revenue producing or not, carried by the public transportation system.	In Compliance	<ul style="list-style-type: none"> • <u>Bus</u> – Actual number of persons boarding buses in revenue service whether revenue producing or not. In addition to automated Clipper reader counts, operators count passengers on electronic registering fareboxes. Data is recorded by the fareboxes in electronic data files for all revenue trips, and downloaded daily into TranStat. The system edits erroneous data and reconciles missing data based on HASTUS records, and produces monthly Trip Summary Report. • <u>Ferry</u> – Passengers counted by Ferry staff when boarding each ferry trip. Daily counts input into TranStat by Planning staff, which produces monthly Trip Summary Report. • <u>Paratransit</u> – Actual number of persons boarding vans in revenue service whether revenue producing or not. Passengers counted by vehicle operators; data recorded on the drivers manifest and cover sheet; contractor reports monthly passenger data.

TDA Statistic	TDA Definition	Compliance Finding	Verification Information
Employee Full-Time Equivalents	2,000 person-hours of work in one year constitute one employee.	In Compliance	<ul style="list-style-type: none"> GGBHTD uses the NTD rules for reporting employees for both the NTD report and the MTC TDA application. This is the actual employee count of full and part-time employees who hold approved and filled positions at year-end. Actual hours are also reported by function.

Exhibit 3.2: TDA Statistics – Bus Service

TDA Statistic	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Operating Cost (Actual \$)	\$69,829,748	\$71,034,133	\$71,915,516	\$61,338,768	\$65,085,966	\$69,837,631
<i>Annual Change</i>	-	1.7%	1.2%	-14.7%	6.1%	7.3%
Vehicle Service Hours	324,783	341,103	314,768	242,130	249,002	248,288
<i>Annual Change</i>	-	5.0%	-7.7%	-23.1%	2.8%	-0.3%
Vehicle Service Miles	5,170,584	5,136,828	4,946,408	4,161,563	4,266,294	4,248,934
<i>Annual Change</i>	-	-0.7%	-3.7%	-15.9%	2.5%	-0.4%
Unlinked Passengers	6,671,990	6,627,935	6,384,779	3,612,638	3,498,627	3,137,403
<i>Annual Change</i>	-	-0.7%	-3.7%	-43.4%	-3.2%	-10.3%
Employee Full-Time Equivalents	517.3	508.3	493.1	500.3	348.9	332.4
<i>Annual Change</i>	-	-1.7%	-3.0%	1.5%	-30.3%	-4.7%

Sources: FY2012 through FY2014 - Prior Performance Audit Report
 FY2015 through FY2017 - NTD Reports (FY2017 - Revision 1 except FTEs - Original Submission)

Exhibit 3.3: TDA Statistics – Ferry Service

TDA Statistic	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Operating Cost (Actual \$)	\$25,356,427	\$26,256,854	\$29,837,295	\$30,224,047	\$29,893,726	\$31,138,174
<i>Annual Change</i>	- -	3.6%	13.6%	1.3%	-1.1%	4.2%
Vessel Service Hours	13,498	13,287	13,305	14,043	13,614	14,184
<i>Annual Change</i>	- -	-1.6%	0.1%	5.5%	-3.1%	4.2%
Vessel Service Miles	181,337	176,831	181,161	187,179	190,060	196,380
<i>Annual Change</i>	- -	-2.5%	2.4%	3.3%	1.5%	3.3%
Unlinked Passengers	2,195,414	2,324,874	2,470,583	2,540,691	2,545,122	2,523,077
<i>Annual Change</i>	- -	5.9%	6.3%	2.8%	0.2%	-0.9%
Employee Full-Time Equivalents	110.8	114.4	116.5	113.3	120.2	143.1
<i>Annual Change</i>	- -	3.2%	1.8%	-2.7%	6.1%	19.0%

Sources: FY2012 through FY2014 - Prior Performance Audit Report
 FY2015 through FY2017 - NTD Reports (FY2017 - Original Submission except Operating Costs - Revision 1)

Exhibit 3.4: TDA Statistics – Paratransit

TDA Statistic	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
Operating Cost (Actual \$)	\$982,954	\$1,060,895	\$1,185,575	\$1,293,031	\$2,125,383	\$1,904,122
<i>Annual Change</i>	- -	7.9%	11.8%	9.1%	64.4%	-10.4%
Vehicle Service Hours	10,629	10,929	9,613	10,158	23,726	22,351
<i>Annual Change</i>	- -	2.8%	-12.0%	5.7%	133.6%	-5.8%
Vehicle Service Miles	244,145	245,477	225,936	228,132	427,200	375,851
<i>Annual Change</i>	- -	0.5%	-8.0%	1.0%	87.3%	-12.0%
Unlinked Passengers	9,364	9,152	9,720	9,539	40,048	38,481
<i>Annual Change</i>	- -	-2.3%	6.2%	-1.9%	319.8%	-3.9%
Employee Full-Time Equivalents	(a)	(a)	(a)	(a)	(a)	(a)
<i>Annual Change</i>	- -	- -	- -	- -	- -	- -

Sources: FY2012 through FY2014 - Prior Performance Audit Report

(a) Not available (contracted services)

FY2015 through FY2017 - NTD Reports (FY2017 - Original Submission except Operating Costs - Revision 3)

III. TDA PERFORMANCE INDICATORS AND TRENDS

The performance trends for the GGBHTD's bus, ferryboat and paratransit service modes are presented in this section. Performance is discussed for each of the five TDA-mandated performance indicators:

- operating cost per vehicle/vessel service hour
- passengers per vehicle/vessel service hour
- passengers per vehicle/vessel service mile
- operating cost per passenger
- vehicle/vessel service hours per full-time equivalent employee (FTE)

The performance results in these indicators were developed from the information in the NTD reports filed with the FTA for the three years of the audit period by GGBHTD. The NTD reports were the source of all operating and financial statistics. However, since the NTD does not require transit systems to report employee work hours for contracted services, no FTE information was available for GGBHTD's contracted paratransit service.

In addition to presenting performance for the three years of the audit period (FY2015 through FY2017), this analysis features two enhancements:

- Six-Year Time Period – While the performance audit focuses on the three fiscal years of the audit period, six-year trend lines have been constructed for GGBHTD's service to provide a longer perspective on performance and to clearly present the direction and magnitude of the performance trends. In this analysis, the FY2015 to FY2017 trend lines have been combined with those from the prior audit period (FY2012 through FY2014) to define a six-year period of performance.
- Normalized Cost Indicators for Inflation – Two financial performance indicators (cost per hour and cost per passenger) are presented in both constant and current dollars to illustrate the impact of inflation in the Bay

Area. The inflation adjustment relies on the All Urban Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) for the San Francisco Metropolitan Area. The average CPI-W percent change for each fiscal year has been calculated based on the bi-monthly results reported on the U.S. Department of Labor – Bureau of Labor Statistics website. The CPI-W is used since labor is the largest component of operating cost in transit. Since labor costs are typically controlled through labor contracts, changes in normalized costs largely reflect those factors that are within the day-to-day control of the transit system.

The following discussion is organized to present an overview of GGBHTD's performance trends in each of the five TDA performance indicators. The discussion is organized by service mode – bus service is discussed first, followed by ferry service and then paratransit. For all service modes, the analysis is expanded to include a breakdown of the various component costs that contributed to the total and hourly operating costs during the last six years.

Bus Service Performance Trends

This section provides an overview of the performance of GGBHTD's bus service over the past six years. The trends in the TDA indicators and input statistics are presented in Exhibit 4. The six-year trends are illustrated in Exhibits 4.1 through 4.4.

- Operating Cost per Vehicle Service Hour (Exhibit 4.1)
 - A key indicator of cost efficiency, the cost per hour of the bus service increased an average of 5.5 percent annually, as service hours decreased overall while operating costs in the first and last year were about even.
 - The cost per hour ranged from a low of \$208.25 in FY2013 to a high of \$281.28 in FY2017. There were increases in every year except FY2013.

- The largest annual increase (over 10 percent) occurred in FY2015, which was also the first year that Marin local bus services were removed from GGBHTD’s NTD reporting.
- In constant FY2012 dollars, there was an average annual increase in this indicator of 2.8 percent.
- Passengers per Vehicle Service Hour (Exhibit 4.2)
 - A key indicator of passenger productivity, the lowest level of passengers per hour was in the last year (12.6), and the highest in the first year (20.5).
 - The overall result for the six years was a 9.3 percent average annual decline. There were declines in every year except FY2014.
 - This trend reflects a substantial loss of passenger productivity when the Marin local bus services were removed from GGBHTD’s NTD reporting in FY2015.
- Passengers per Vehicle Service Mile (Exhibit 4.2)
 - The six-year trend in this indicator showed an annual average decrease of 10.6 percent. Service miles decreased somewhat overall, while passengers carried decreased more substantially, especially toward the end of the period. The latter reduction appears generally in line with the recent experience of transit operators across the country. Contributing factors include lower fuel costs, easier auto loan terms, and especially the proliferation of competition from Transportation Network Companies (TNCs) such as Uber and Lyft. Additionally in California, a wider range of residents can now obtain drivers licenses with little difficulty.
 - There were 1.29 passengers per mile in the first three years, followed by levels decreasing from 0.87 to 0.74 in the last three years.
 - This trend also reflects a substantial loss of passenger productivity when the Marin local bus services were removed from GGBHTD’s NTD reporting in FY2015.

- Operating Cost per Passenger (Exhibit 4.3)
 - A key measure of cost effectiveness, the bus cost per passenger was \$10.47 in the first year of the review period, followed by increases in every subsequent year to \$22.26 per passenger by FY2017.
 - The overall increase averaged 16.3 percent annually, as ridership decreased significantly overall while operating costs in the first and last year were about even.
 - With the impact of inflation removed from the cost side (normalization), the result was an average annual increase of 13.3 percent in the cost per passenger.
 - This trend reflects a 50 percent increase between FY2014 and FY2015, when the Marin local bus services were removed from GGBHTD’s NTD reporting.

- Vehicle Service Hours per Employee (FTE) (Exhibit 4.4)
 - A measure of employee productivity, this indicator increased an average 3.5 percent per year over the six years.
 - Hours per FTE increased overall from 628 in FY2012 to 747 in FY2017, with a single-year low of 484 hours in FY2015 (the first year that Marin local bus services were removed from GGBHTD’s NTD reporting).
 - Vehicle service hours and FTEs both decreased overall during the period, but the decrease in hours was less pronounced.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

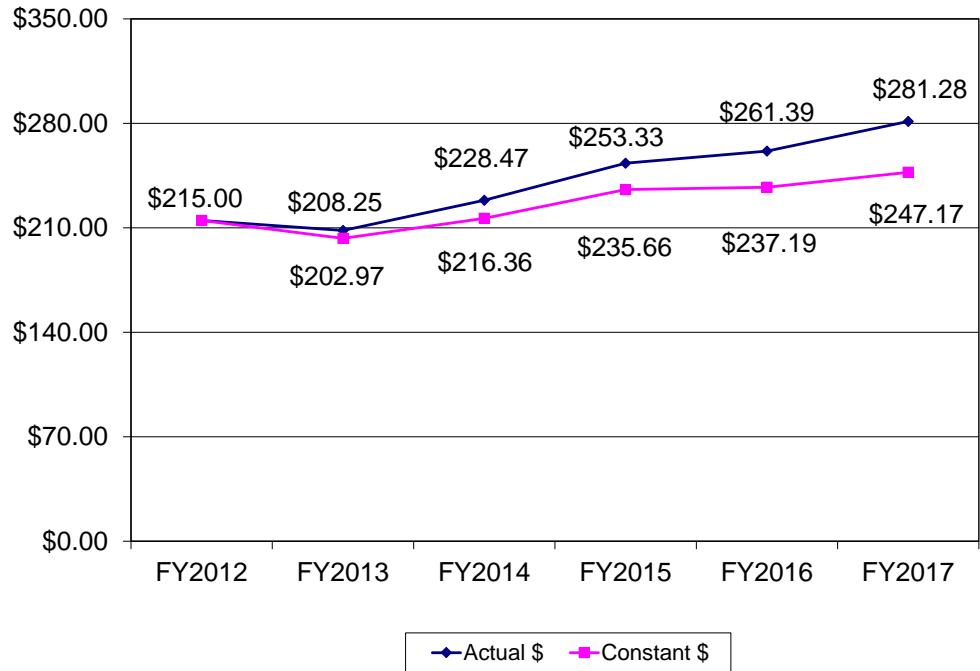
- There was an average annual increase in the operating cost per hour of 5.5 percent, or 2.8 percent in inflation adjusted dollars. The largest annual increase (over 10 percent) occurred in FY2015.
- The cost per passenger increased on average by 16.3 percent per year, which amounted to an average annual increase of 13.3 percent in constant FY2012 dollars.
- Passenger productivity showed negative trends, with passengers per vehicle service hour decreasing overall by 9.3 percent annually, and passengers per vehicle service mile decreasing by 10.6 percent per year.
- Employee productivity increased an average 3.5 percent per year.
- All of these results were impacted by the removal of Marin local bus services from GGBHTD's NTD reporting effective in FY2015.

Exhibit 4: TDA Indicator Performance – Bus Service

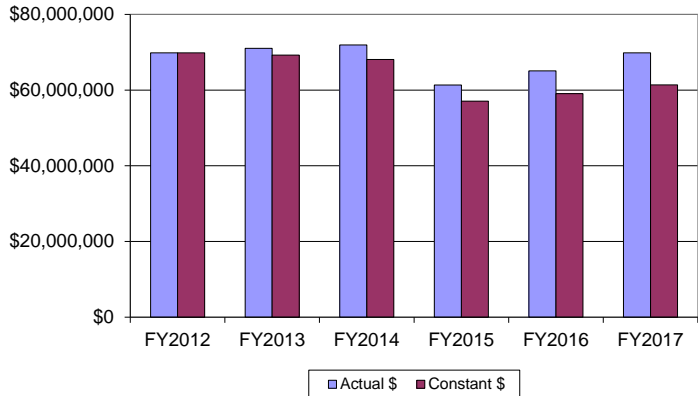
	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Av. Ann. Chg.
Performance Indicators							
Op. Cost per Vehicle Svc. Hour (Actual \$)	\$215.00	\$208.25	\$228.47	\$253.33	\$261.39	\$281.28	- -
<i>Annual Change</i>	- -	-3.1%	9.7%	10.9%	3.2%	7.6%	5.5%
Op. Cost per Vehicle Svc. Hour (Constant \$)	\$215.00	\$202.97	\$216.36	\$235.66	\$237.19	\$247.17	- -
<i>Annual Change</i>	- -	-5.6%	6.6%	8.9%	0.7%	4.2%	2.8%
Passengers per Vehicle Service Hour	20.5	19.4	20.3	14.9	14.1	12.6	- -
<i>Annual Change</i>	- -	-5.4%	4.4%	-26.4%	-5.8%	-10.1%	-9.3%
Passengers per Vehicle Service Mile	1.29	1.29	1.29	0.87	0.82	0.74	- -
<i>Annual Change</i>	- -	0.0%	0.0%	-32.7%	-5.5%	-10.0%	-10.6%
Op. Cost per Passenger (Actual \$)	\$10.47	\$10.72	\$11.26	\$16.98	\$18.60	\$22.26	- -
<i>Annual Change</i>	- -	2.4%	5.1%	50.7%	9.6%	19.7%	16.3%
Op. Cost per Passenger (Constant \$)	\$10.47	\$10.45	\$10.67	\$15.79	\$16.88	\$19.56	- -
<i>Annual Change</i>	- -	-0.2%	2.1%	48.1%	6.9%	15.9%	13.3%
Vehicle Service Hours per FTE	628	671	638	484	714	747	- -
<i>Annual Change</i>	- -	6.9%	-4.9%	-24.2%	47.5%	4.7%	3.5%
Input Data							
Operating Cost (Actual \$)	\$69,829,748	\$71,034,133	\$71,915,516	\$61,338,768	\$65,085,966	\$69,837,631	- -
<i>Annual Change</i>	- -	1.7%	1.2%	-14.7%	6.1%	7.3%	0.0%
Operating Cost (Constant \$)	\$69,829,748	\$69,234,048	\$68,101,814	\$57,059,319	\$59,061,675	\$61,368,744	- -
<i>Annual Change</i>	- -	-0.9%	-1.6%	-16.2%	3.5%	3.9%	-2.6%
Vehicle Service Hours	324,783	341,103	314,768	242,130	249,002	248,288	- -
<i>Annual Change</i>	- -	5.0%	-7.7%	-23.1%	2.8%	-0.3%	-5.2%
Vehicle Service Miles	5,170,584	5,136,828	4,946,408	4,161,563	4,266,294	4,248,934	- -
<i>Annual Change</i>	- -	-0.7%	-3.7%	-15.9%	2.5%	-0.4%	-3.9%
Unlinked Passengers	6,671,990	6,627,935	6,384,779	3,612,638	3,498,627	3,137,403	- -
<i>Annual Change</i>	- -	-0.7%	-3.7%	-43.4%	-3.2%	-10.3%	-14.0%
Employee Full-Time Equivalents	517.3	508.3	493.1	500.3	348.9	332.4	- -
<i>Annual Change</i>	- -	-1.7%	-3.0%	1.5%	-30.3%	-4.7%	-8.5%
Bay Area CPI - Annual Change	- -	2.6%	2.9%	1.9%	2.5%	3.3%	- -
- Cumulative Change	- -	2.6%	5.6%	7.5%	10.2%	13.8%	2.6%

Sources: FY2012 through FY2014 - Prior Performance Audit Report
FY2015 through FY2017 - NTD Reports (FY2017 - Revision 1 except FTEs - Original Submission)
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

Exhibit 4.1: Operating Cost per Vehicle Service Hour – Bus Service



Operating Cost



Vehicle Service Hours

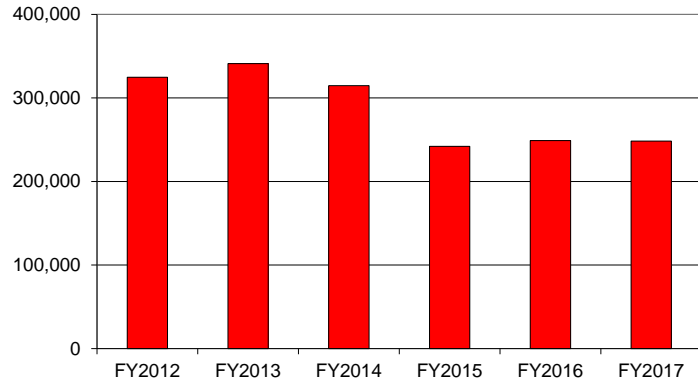
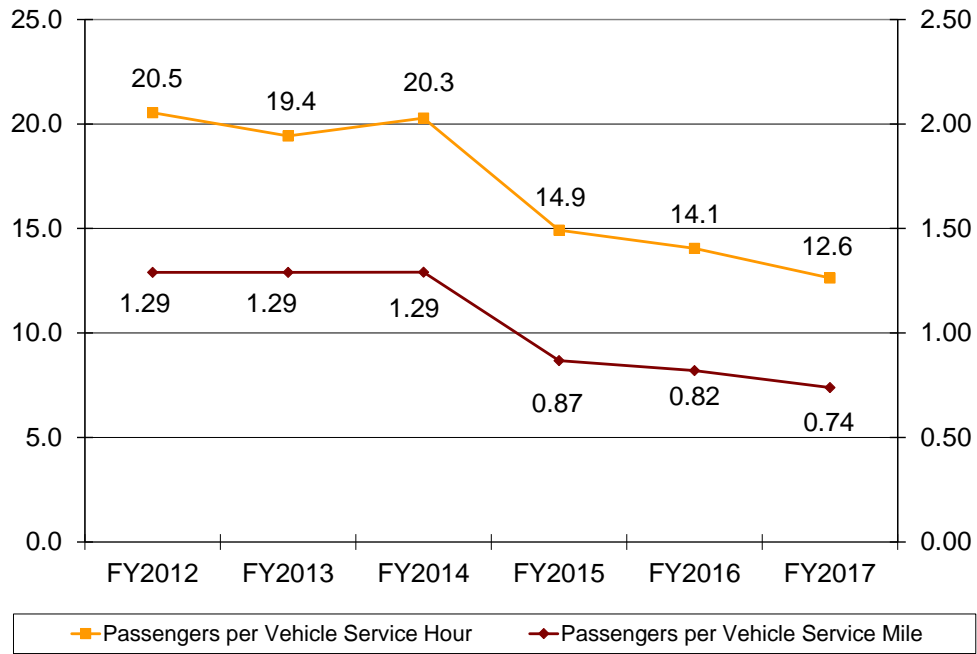
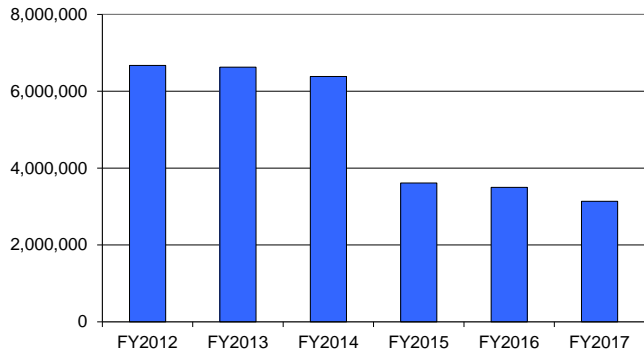


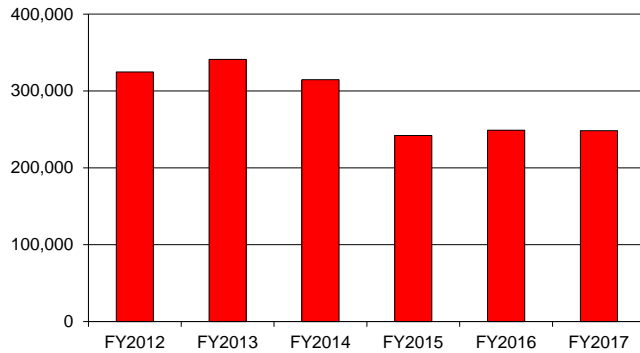
Exhibit 4.2: Passengers per Hour and per Mile –Bus Service



Unlinked Passengers



Vehicle Service Hours



Vehicle Service Miles

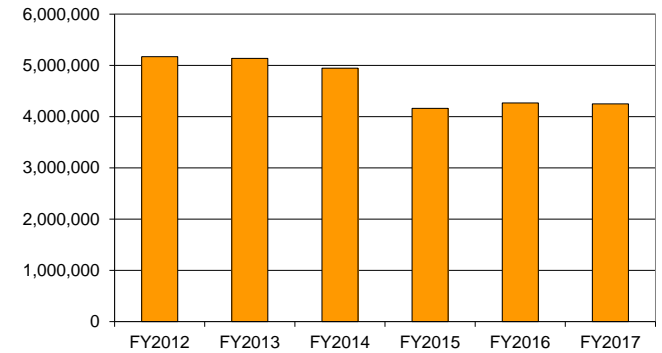
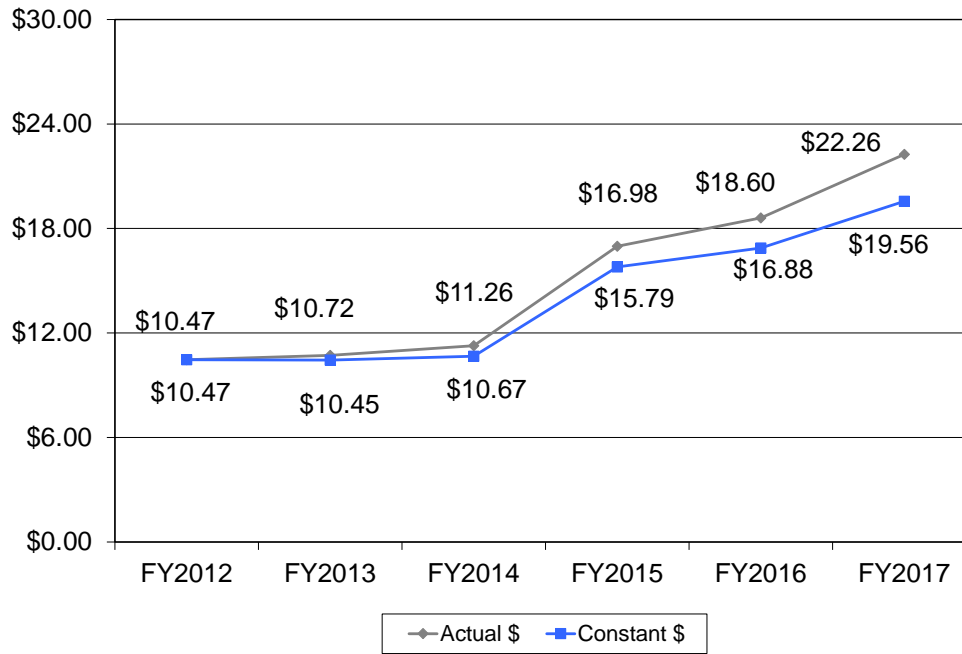
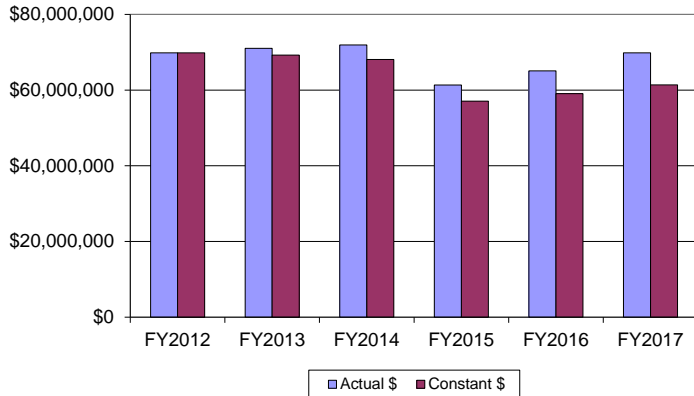


Exhibit 4.3: Operating Cost per Passenger – Bus Service



Operating Cost



Unlinked Passengers

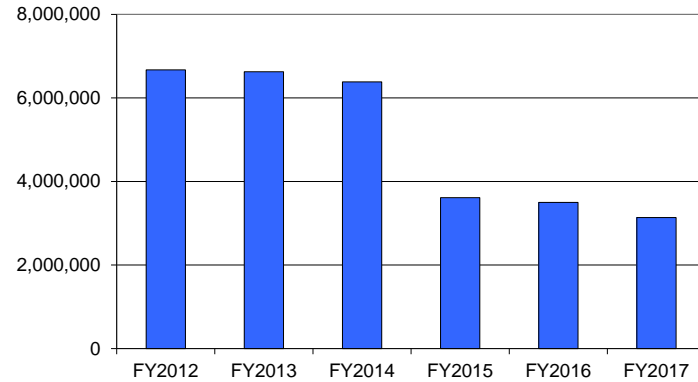
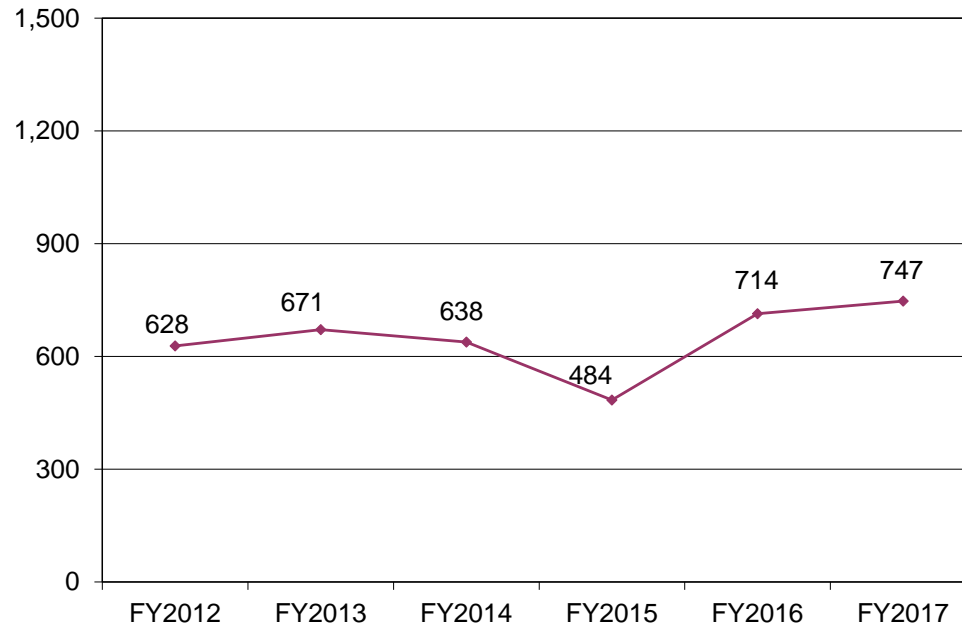
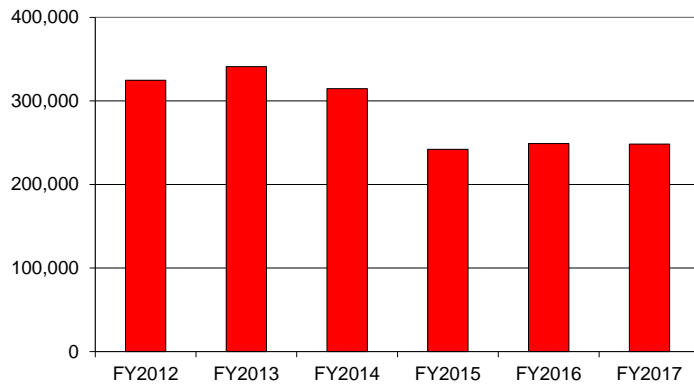


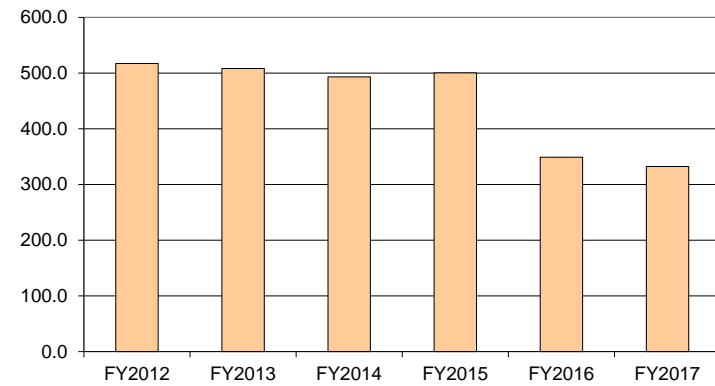
Exhibit 4.4: Vehicle Service Hours per FTE – Bus Service



Vehicle Service Hours



Full-time Equivalents



Bus Service Component Costs

Year-to-year changes in selected operating cost categories over the past six years are presented in Exhibit 4.5. Examining components of operating costs (e.g., labor, fringes, fuel, and casualty/liability) may determine what particular components had the most significant impacts on the operating costs. Exhibit 4.5 also shows the concurrent changes in vehicle service hours and Exhibit 4.6 illustrates the portion of the cost per bus service hour that can be attributed to each included cost component.

- Total operating costs were about the same in the first and last years of the review period. There were noticeable decreases in total costs and most component costs categories in FY2015, corresponding with removing Marin local bus services from GGBHTD's NTD reporting in that year.
- The most significant component cost change was an average annual increase of 16.7 percent in the casualty/liability area. There was also noticeable variability from year to year, which appears in line with the relative unpredictability of settlement activity.
- Fuels/lubricants costs decreased overall by 13.4 percent per year on average, and were reduced from about eight percent to four percent of total costs during the period.
- Labor costs decreased on average by 0.4 percent per year, while fringe benefits costs increased by 1.1 percent per year.
- Labor costs and fringe benefits costs represented the largest portion of the total costs, each contributing about 40 percent of total costs through the period.
- The remaining cost categories saw more modest changes overall, with each contributing six percent or less to the total in each year.

* * * * *

The following is a brief summary of the component operating costs trend highlights between FY2012 and FY2017:

- Noticeable decreases in total costs and most component costs categories in FY2015 corresponded with removing Marin local bus services from GGBHTD's NTD reporting.
- The most significant change was an average annual increase of 16.7 percent in the casualty/liability area. At the same time, fuel/lubricants costs decreased on average by 13.4 percent per year.
- Labor and fringe benefits costs each represented about 40 percent of the total costs, and showed little overall change over the six years.
- The remaining cost categories generally also saw modest changes, with each contributing six percent or less to total costs in each year.

Exhibit 4.5: Component Cost Trends – Bus Service

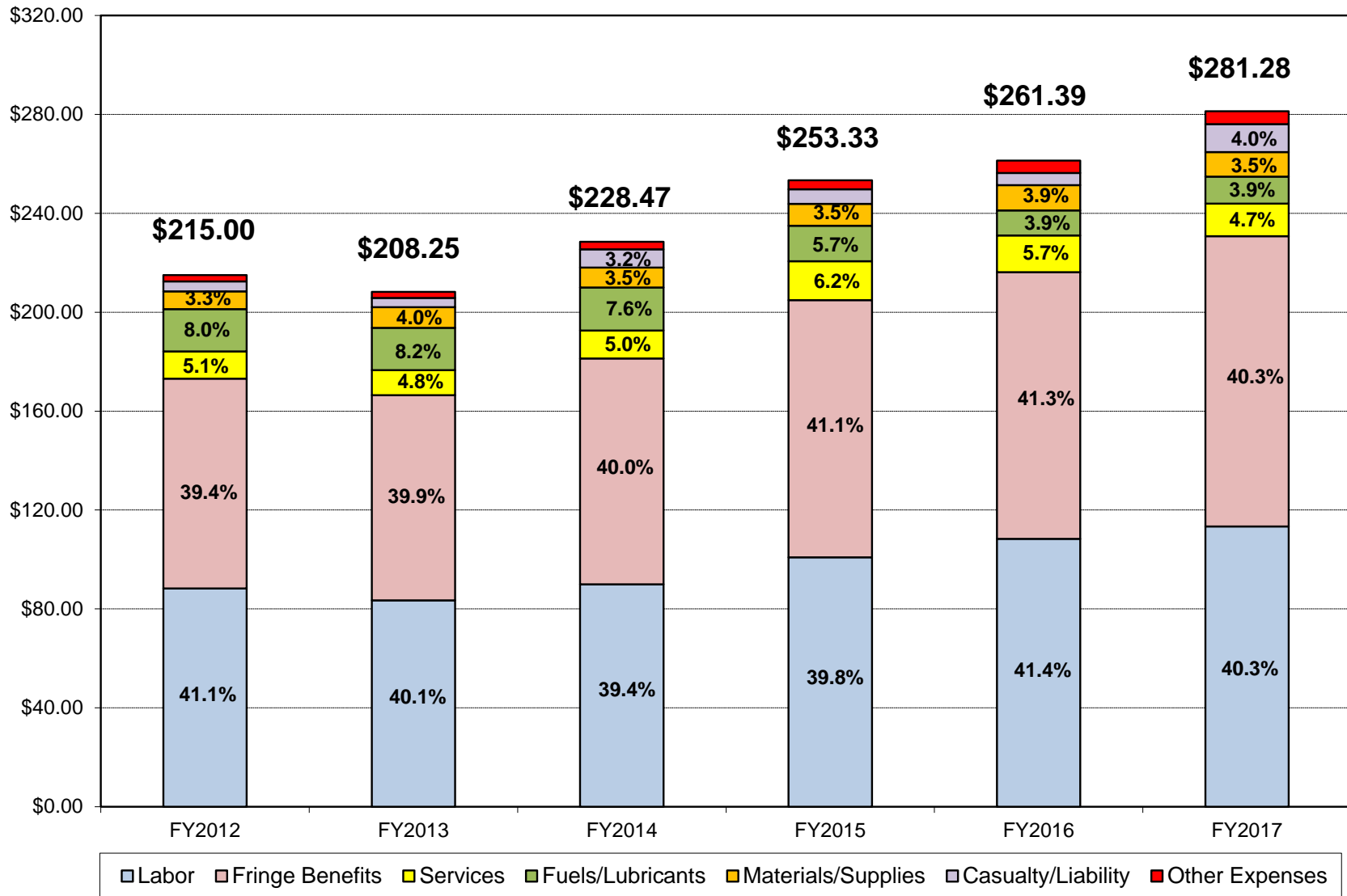
	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Av. Ann. Chg.
COST CATEGORIES							
Labor (Salaries/Wages)	\$28,689,368	\$28,469,041	\$28,323,699	\$24,418,571	\$26,966,923	\$28,153,109	--
<i>Annual Change</i>	--	-0.8%	-0.5%	-13.8%	10.4%	4.4%	-0.4%
Fringe Benefits	\$27,534,853	\$28,322,221	\$28,741,531	\$25,198,870	\$26,876,844	\$29,145,624	--
<i>Annual Change</i>	--	2.9%	1.5%	-12.3%	6.7%	8.4%	1.1%
Services	\$3,587,049	\$3,434,662	\$3,562,789	\$3,797,984	\$3,688,166	\$3,277,294	--
<i>Annual Change</i>	--	-4.2%	3.7%	6.6%	-2.9%	-11.1%	-1.8%
Fuels/Lubricants	\$5,565,235	\$5,857,413	\$5,484,885	\$3,484,642	\$2,523,432	\$2,709,588	--
<i>Annual Change</i>	--	5.3%	-6.4%	-36.5%	-27.6%	7.4%	-13.4%
Materials/Supplies (a)	\$2,332,231	\$2,827,435	\$2,544,878	\$2,138,397	\$2,552,958	\$2,445,723	--
<i>Annual Change</i>	--	21.2%	-10.0%	-16.0%	19.4%	-4.2%	1.0%
Casualty/Liability	\$1,305,075	\$1,275,774	\$2,322,116	\$1,420,606	\$1,206,330	\$2,827,056	--
<i>Annual Change</i>	--	-2.2%	82.0%	-38.8%	-15.1%	134.4%	16.7%
Other Expenses (b)	\$815,937	\$847,587	\$935,618	\$879,698	\$1,271,313	\$1,279,237	--
<i>Annual Change</i>	--	3.9%	10.4%	-6.0%	44.5%	0.6%	9.4%
Total	\$69,829,748	\$71,034,133	\$71,915,516	\$61,338,768	\$65,085,966	\$69,837,631	--
<i>Annual Change</i>	--	1.7%	1.2%	-14.7%	6.1%	7.3%	0.0%
OPERATING STATISTICS							
Vehicle Service Hours	324,783	341,103	314,768	242,130	249,002	248,288	--
<i>Annual Change</i>	--	5.0%	-7.7%	-23.1%	2.8%	-0.3%	-5.2%

(a) Includes tires/tubes, and other materials/supplies

(b) Includes utilities, taxes, and miscellaneous expenses

Exhibit 4.6: Distribution of Component Costs – Bus Service

Operating Cost per Vehicle Service Hour



Ferry Performance Trends

This section provides an overview of the performance of GGBHTD's ferry service over the past six years. The trends in the TDA indicators and input statistics are presented in Exhibit 5. The six-year trends are illustrated in Exhibits 5.1 through 5.4.

- Operating Cost per Vessel Service Hour (Exhibit 5.1)
 - GGBHTD's ferry cost per hour increased an average of 3.2 percent per year, from \$1,878 in FY2012 to \$2,195 in FY2017.
 - The cost per hour increased steadily through the first half of the review period, and then moderated somewhat for the rest of the period.
 - Inflation-adjusted results exhibit an average annual increase of 0.5 percent per year in constant FY2012 dollars.
- Passengers per Vessel Service Hour (Exhibit 5.2)
 - Passengers per vessel service hour increased an average of 1.8 percent annually, reflecting an overall increase in passengers combined with a smaller increase in service hours.
 - Passengers per hour increased overall from 162.6 in FY2012 to 177.9 in FY2017, with decreases occurring in most years.
- Passengers per Vessel Service Mile (Exhibit 5.2)
 - The six-year trend in this indicator showed increases through the first half of the review period, followed by moderate annual decreases.
 - There was an overall increase of 1.2 percent annually on average.
 - There were about 13 passengers per mile in each year.

- Operating Cost per Passenger (Exhibit 5.3)
 - The ferry cost per passenger was \$11.55 in the first year of the review period. This was followed by a general increase to \$12.34 per passenger in FY2017, or 1.3 percent annually.
 - In FY2017, there was a 5.1 percent increase over the previous year, as total operating costs increased by 4.2 percent but passengers fell by almost one percent.
 - With the impact of inflation removed, the result was an average annual decrease of 1.3 percent in the cost per passenger.
- Vessel Service Hours per FTE (Exhibit 5.4)
 - Employee productivity decreased an average four percent per year over the six years.
 - Hours per FTE decreased overall from 122 in FY2012 to 99 in FY2017.
 - Vehicle service hours increased slightly overall during the period, but FTEs increased at a higher rate. The largest increase in FTEs was 19 percent in FY2017, associated with ramping up and beginning service on the new Tiburon ferry service.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

- There was an average annual increase in the operating cost per hour of 3.2 percent, or 0.5 percent in inflation adjusted dollars. Most of the increase was in the first half of the review period.
- The cost per passenger increased on average by 1.3 percent per year, which amounted to an average annual decrease of 1.3 percent in constant FY2012 dollars.

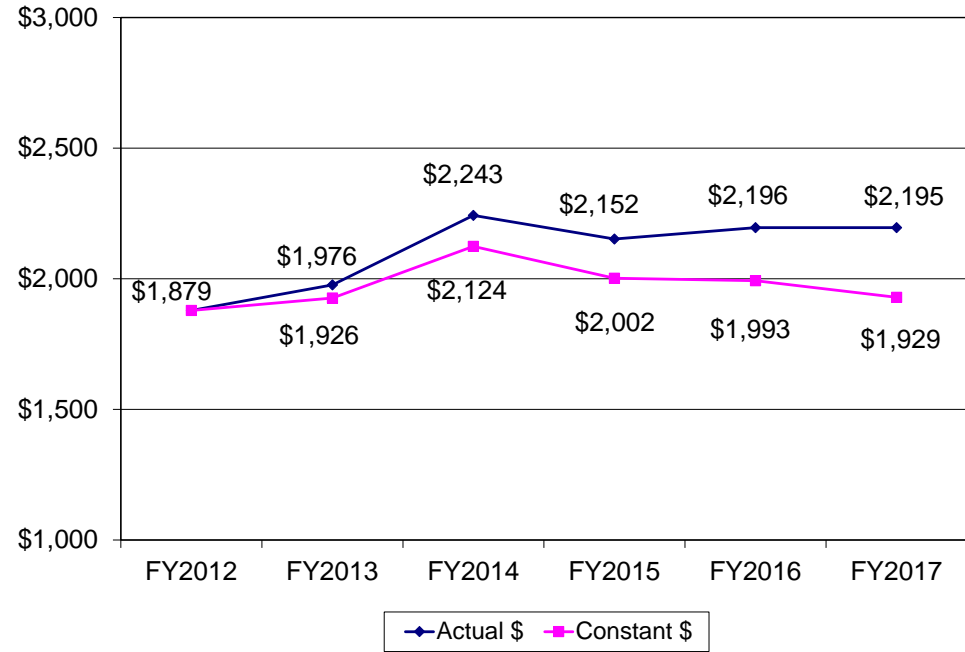
- Passenger productivity showed moderately positive trends, with passengers per vessel service hour increasing by 1.8 percent per year overall, and passengers per vehicle service mile increasing by 1.2 percent.
- Employee productivity decreased an average four percent per year.

Exhibit 5: TDA Indicator Performance – Ferry Service

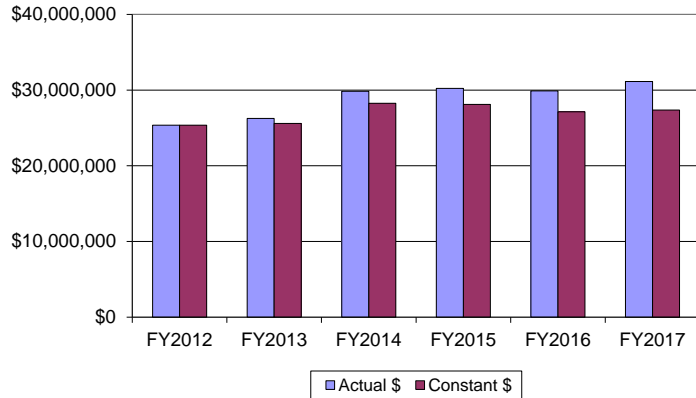
	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Av. Ann. Chg.
Performance Indicators							
Op. Cost per Vessel Svc. Hour (Actual \$)	\$1,878.53	\$1,976.13	\$2,242.56	\$2,152.25	\$2,195.81	\$2,195.30	- -
<i>Annual Change</i>	- -	5.2%	13.5%	-4.0%	2.0%	0.0%	3.2%
Op. Cost per Vessel Svc. Hour (Constant \$)	\$1,878.53	\$1,926.05	\$2,123.64	\$2,002.09	\$1,992.57	\$1,929.09	- -
<i>Annual Change</i>	- -	2.5%	10.3%	-5.7%	-0.5%	-3.2%	0.5%
Passengers per Vessel Service Hour	162.6	175.0	185.7	180.9	186.9	177.9	- -
<i>Annual Change</i>	- -	7.6%	6.1%	-2.6%	3.3%	-4.8%	1.8%
Passengers per Vessel Service Mile	12.11	13.15	13.64	13.57	13.39	12.85	- -
<i>Annual Change</i>	- -	8.6%	3.7%	-0.5%	-1.3%	-4.1%	1.2%
Op. Cost per Passenger (Actual \$)	\$11.55	\$11.29	\$12.08	\$11.90	\$11.75	\$12.34	- -
<i>Annual Change</i>	- -	-2.2%	6.9%	-1.5%	-1.3%	5.1%	1.3%
Op. Cost per Passenger (Constant \$)	\$11.55	\$11.01	\$11.44	\$11.07	\$10.66	\$10.84	- -
<i>Annual Change</i>	- -	-4.7%	3.9%	-3.2%	-3.7%	1.7%	-1.3%
Vessel Service Hours per FTE	122	116	114	124	113	99	- -
<i>Annual Change</i>	- -	-4.7%	-1.7%	8.5%	-8.6%	-12.5%	-4.0%
Input Data							
Operating Cost (Actual \$)	\$25,356,427	\$26,256,854	\$29,837,295	\$30,224,047	\$29,893,726	\$31,138,174	- -
<i>Annual Change</i>	- -	3.6%	13.6%	1.3%	-1.1%	4.2%	4.2%
Operating Cost (Constant \$)	\$25,356,427	\$25,591,476	\$28,255,014	\$28,115,393	\$27,126,793	\$27,362,192	- -
<i>Annual Change</i>	- -	0.9%	10.4%	-0.5%	-3.5%	0.9%	1.5%
Vessel Service Hours	13,498	13,287	13,305	14,043	13,614	14,184	- -
<i>Annual Change</i>	- -	-1.6%	0.1%	5.5%	-3.1%	4.2%	1.0%
Vessel Service Miles	181,337	176,831	181,161	187,179	190,060	196,380	- -
<i>Annual Change</i>	- -	-2.5%	2.4%	3.3%	1.5%	3.3%	1.6%
Unlinked Passengers	2,195,414	2,324,874	2,470,583	2,540,691	2,545,122	2,523,077	- -
<i>Annual Change</i>	- -	5.9%	6.3%	2.8%	0.2%	-0.9%	2.8%
Employee Full-Time Equivalents	110.8	114.4	116.5	113.3	120.2	143.1	- -
<i>Annual Change</i>	- -	3.2%	1.8%	-2.7%	6.1%	19.0%	5.2%
Bay Area CPI - Annual Change	- -	2.6%	2.9%	1.9%	2.5%	3.3%	- -
- Cumulative Change	- -	2.6%	5.6%	7.5%	10.2%	13.8%	2.6%

Sources: FY2012 through FY2014 - Prior Performance Audit Report
FY2015 through FY2017 - NTD Reports (FY2017 - Original Submission except Operating Costs - Revision 1)
CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

Exhibit 5.1: Operating Cost per Vessel Service Hour – Ferry Service



Operating Cost



Vessel Service Hours

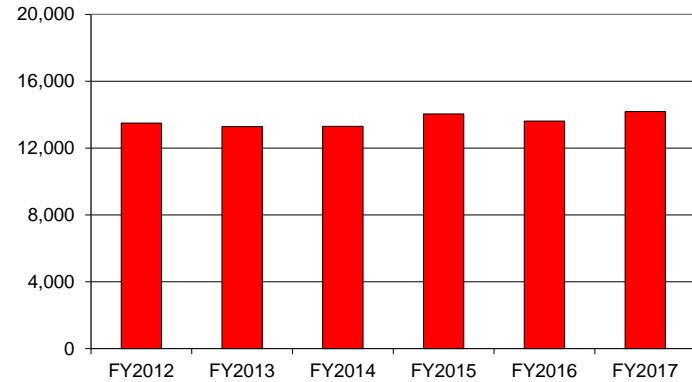
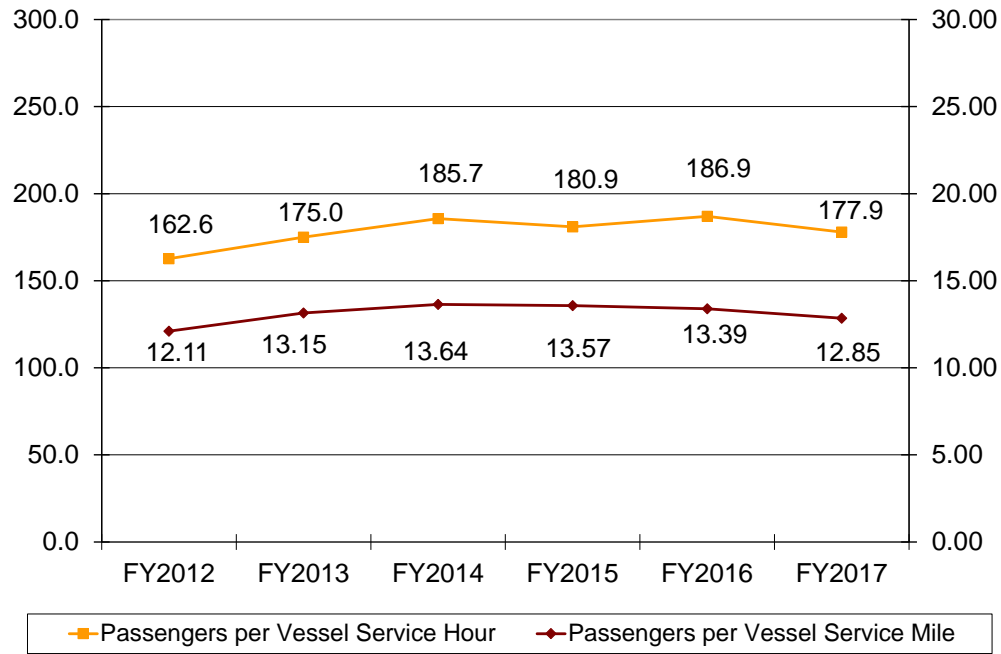
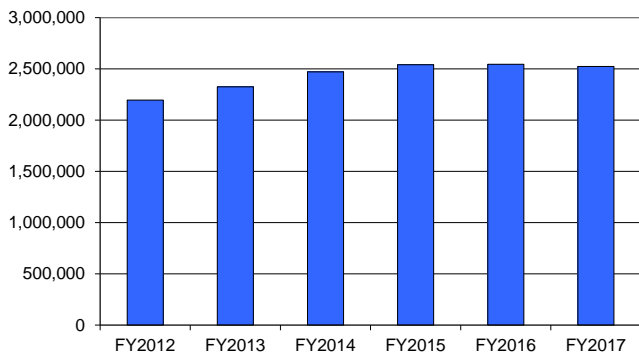


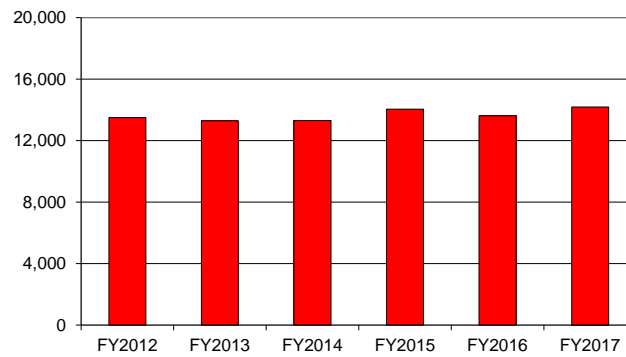
Exhibit 5.2: Passengers per Hour and per Mile – Ferry Service



Unlinked Passengers



Vessel Service Hours



Vessel Service Miles

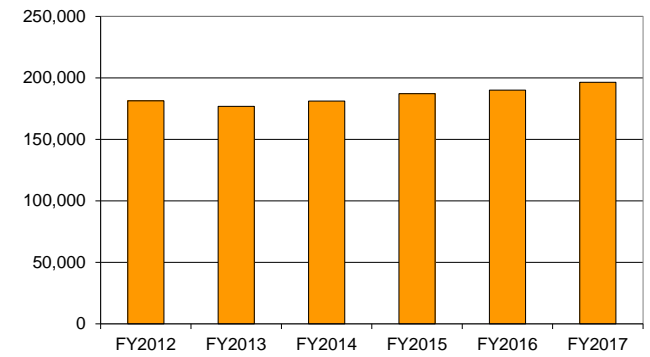
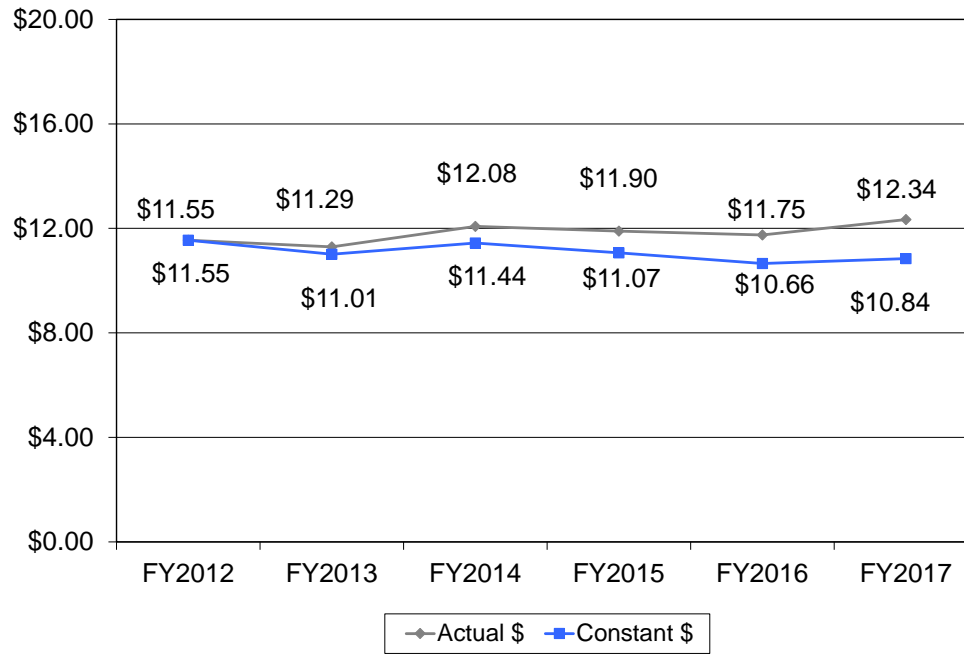
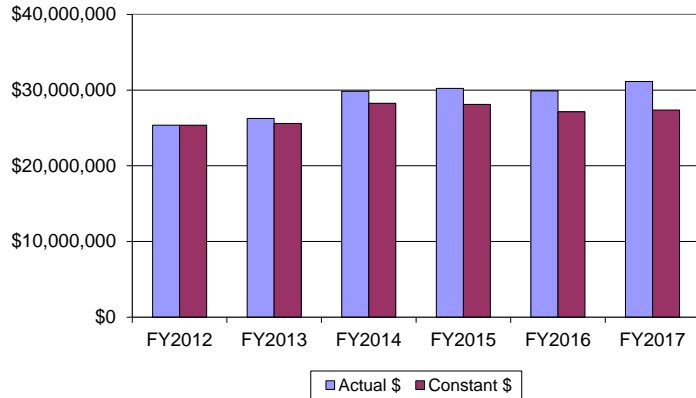


Exhibit 5.3: Operating Cost per Passenger – Ferry Service



Operating Cost



Unlinked Passengers

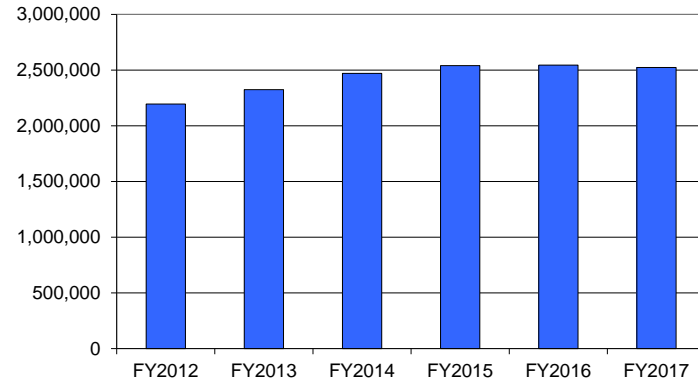
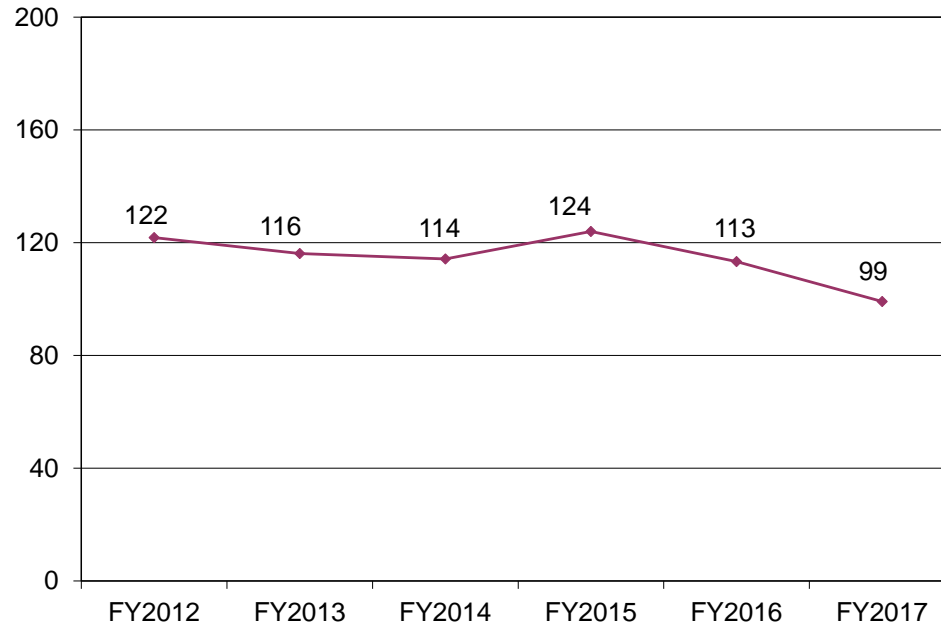
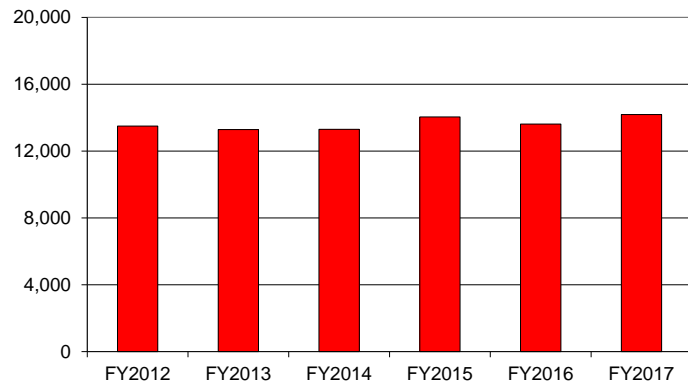


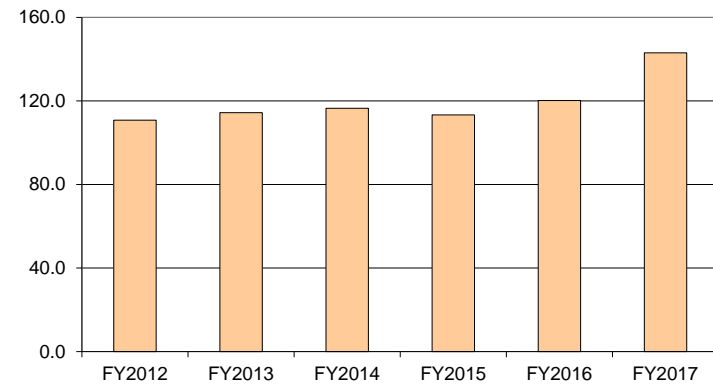
Exhibit 5.4: Vessel Service Hours per FTE – Ferry Service



Vessel Service Hours



Full-time Equivalents



Ferry Component Costs

The year-to-year changes in selected operating cost categories are presented in Exhibit 5.5, along with the concurrent changes in vessel service hours. The portions of the cost per vessel service hour that can be attributed to each included cost component are shown in Exhibit 5.6.

- Overall, between FY2012 and FY2017, ferry operating costs increased by 4.2 percent annually.
- At the same time, there were larger increases in most component cost categories, ranging from 5.5 percent on average per year for labor costs to more than 10 percent for “other expenses”.
- The only exception was the fuels/lubricants cost category, which posted a decrease of 5.8 percent annually overall, and decreased from about 23 percent of total costs in the first three years to 14 percent in the last two years.
- Labor costs represented the largest portion of the total costs, with a share that ranged from 26 to 32 percent of total costs depending on the year.
- Fringe benefits comprised the second largest portion, generally increasing from 25 to 30 percent of total costs through the period.
- Services costs contributed between 12 and 16 percent of total costs, while the remaining cost categories each contributed less than five percent, though materials/supplies increased to six percent in FY2016.

* * * * *

The following is a brief summary of the component operating costs trend highlights between FY2012 and FY2017:

- Overall, operating costs increased by 4.2 percent annually, but there were larger increases in most component cost categories.
- Fuels/lubricants costs decreased by 5.8 percent annually on average, and over the period went down from 23 to 14 percent of total costs.
- Labor costs, followed closely by fringe benefits costs, together comprised the largest share of total costs – about 50 to 60 percent depending on the year.
- Services costs contributed between 12 and 16 percent of total costs, while the remaining cost categories each generally contributed less than five percent.

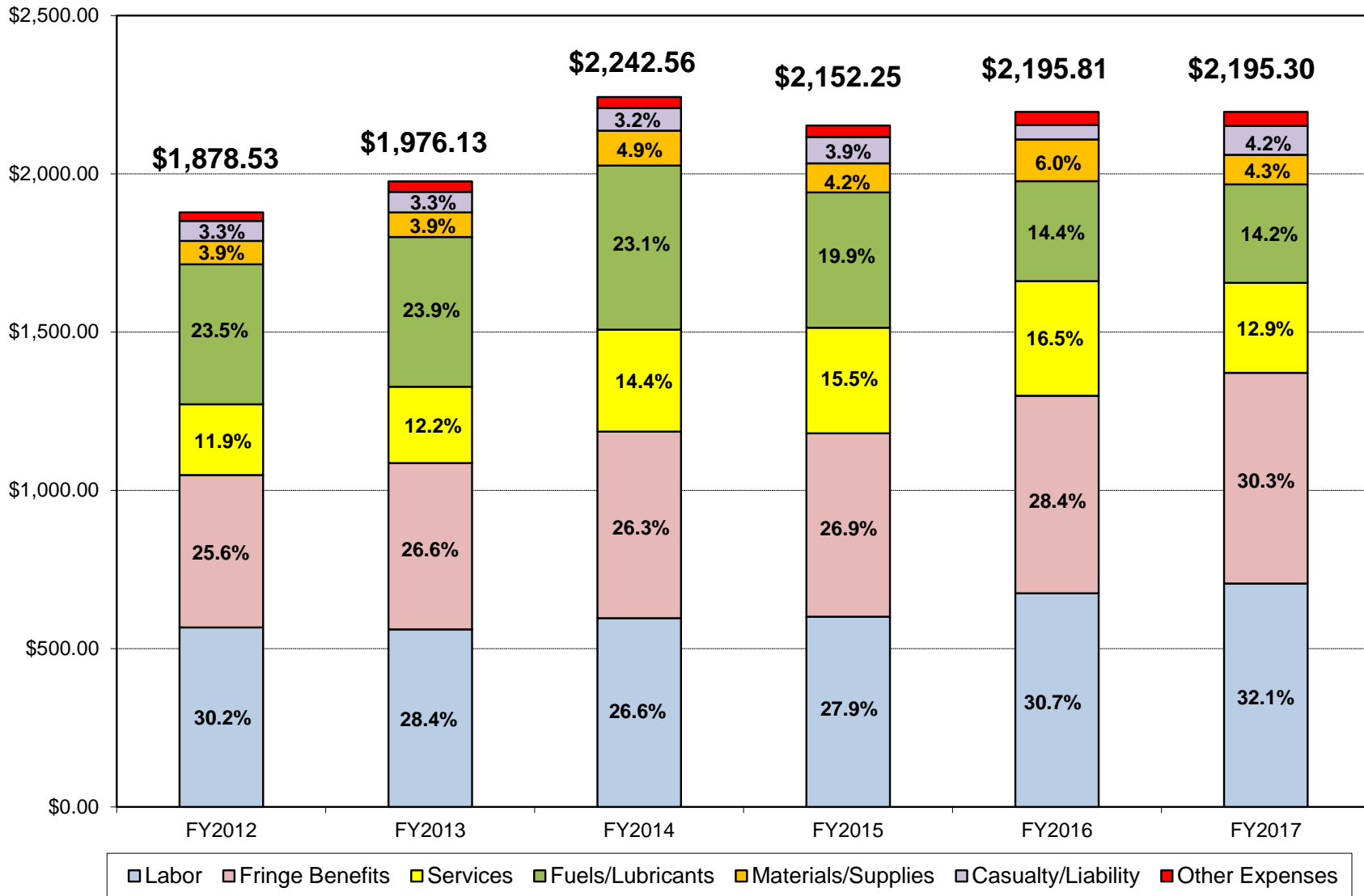
Exhibit 5.5: Component Cost Trends – Ferry Service

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Av. Ann. Chg.
COST CATEGORIES							
Labor (Salaries/Wages)	\$7,645,450	\$7,444,603	\$7,932,315	\$8,429,865	\$9,187,348	\$10,003,810	--
<i>Annual Change</i>	--	-2.6%	6.6%	6.3%	9.0%	8.9%	5.5%
Fringe Benefits	\$6,500,894	\$6,990,718	\$7,842,432	\$8,144,768	\$8,491,189	\$9,448,080	--
<i>Annual Change</i>	--	7.5%	12.2%	3.9%	4.3%	11.3%	7.8%
Services	\$3,021,212	\$3,199,463	\$4,284,835	\$4,682,717	\$4,929,912	\$4,027,091	--
<i>Annual Change</i>	--	5.9%	33.9%	9.3%	5.3%	-18.3%	5.9%
Fuels/Lubricants	\$5,967,563	\$6,284,649	\$6,894,444	\$6,008,962	\$4,301,198	\$4,416,313	--
<i>Annual Change</i>	--	5.3%	9.7%	-12.8%	-28.4%	2.7%	-5.8%
Materials/Supplies	\$999,072	\$1,035,767	\$1,464,396	\$1,282,650	\$1,795,127	\$1,324,797	--
<i>Annual Change</i>	--	3.7%	41.4%	-12.4%	40.0%	-26.2%	5.8%
Casualty/Liability	\$848,125	\$856,342	\$962,285	\$1,173,942	\$634,019	\$1,299,089	--
<i>Annual Change</i>	--	1.0%	12.4%	22.0%	-46.0%	104.9%	8.9%
Other Expenses (a)	\$374,111	\$445,312	\$456,588	\$501,143	\$554,933	\$618,994	--
<i>Annual Change</i>	--	19.0%	2.5%	9.8%	10.7%	11.5%	10.6%
Total	\$25,356,427	\$26,256,854	\$29,837,295	\$30,224,047	\$29,893,726	\$31,138,174	--
<i>Annual Change</i>	--	3.6%	13.6%	1.3%	-1.1%	4.2%	4.2%
OPERATING STATISTICS							
Vessel Service Hours	13,498	13,287	13,305	14,043	13,614	14,184	--
<i>Annual Change</i>	--	-1.6%	0.1%	5.5%	-3.1%	4.2%	1.0%

(a) Includes utilities, taxes, and miscellaneous expenses

Exhibit 5.6: Distribution of Component Costs – Ferry Service

Operating Cost per Vessel Service Hour



Paratransit Performance Trends

This section provides an overview of the performance of GGBHTD's Intercounty paratransit service over the past six years. The trends in the TDA indicators and input statistics are presented in Exhibit 6. The six-year trends are illustrated in Exhibits 6.1 through 6.3.

- Operating Cost per Vehicle Service Hour (Exhibit 6.1)
 - Paratransit cost efficiency improved an average of 1.6 percent per year from FY2012 (\$92.48 per hour) to FY2017 (\$85.19 per hour).
 - The cost per hour increased steadily through FY2015. The largest annual increase by far (27.1 percent) occurred in FY2014, when operating costs increased by about 12 percent even as service hours decreased at a similar rate.
 - A substantial 30 percent reduction in the reported cost per hour in FY2016 reflects the new paratransit contract with Marin Transit that went into effect in that year. GGBHTD is now responsible for a much larger portion (approximately 25 percent) of the intra-county paratransit trips. This growth in GGBHTD's paratransit service led to service hours increasing at more than twice the rate of operating costs in FY2016.
 - The cost per hour further reduced in FY2017, by nearly five percent compared to the previous year.
 - Inflation-adjusted results exhibited an average annual decrease in the cost per hour over the six years of 4.1 percent.
- Passengers per Vehicle Service Hour (Exhibit 6.2)
 - Passengers per vehicle service hour increased an average of 14.3 percent annually, reflecting an overall increase in passengers that was twice the rate of the increase in service hours.
 - Passengers per hour increased overall from 0.9 in FY2012 to 1.7 in the last two years. Results for the last two years again reflect GGBHTD's

major paratransit service increase per the new contract with Marin Transit that went into effect during FY2016.

- Passengers per Vehicle Service Mile (Exhibit 6.2)
 - The six-year trend in this indicator was similar to passengers per hour, but more pronounced, increasing by 21.7 percent annually on average.
 - There were 0.04 passengers per mile in the first four years, compared with 0.09 in FY2016 and 0.10 in FY2017. Results for the last two years again reflect GGBHTD’s major paratransit service increase per the new contract with Marin Transit that went into effect during FY2016.

- Operating Cost per Passenger (Exhibit 6.3)
 - The cost per passenger was \$104.97 in the first year of the review period, followed by annual increases to \$135.55 by FY2015.
 - Beginning in FY2016, the cost per passenger went down sharply, to \$53.07 in that year and \$49.48 in the following year, resulting in an average annual decrease of 14 percent over the six years.
 - The results for the last two years again reflect GGBHTD’s major paratransit service increase per the new contract with Marin Transit that went into effect during FY2016.
 - With the impact of inflation removed, the result was an average annual decrease of 16.2 percent in the cost per passenger.

* * * * *

The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

- There was an average annual decrease in the operating cost per hour of 1.6 percent, or 4.1 percent in inflation adjusted dollars.
- The cost per passenger decreased on average by 14 percent per year, which amounted to an average annual decrease of 16.2 percent in constant FY2012 dollars.
- Passengers per vehicle service hour and vehicle service mile both increased substantially -- by 14.3 percent and 21.7 percent on average per year, respectively.
- All of these results were significantly impacted by a major GGBHTD paratransit service expansion from a new contract with Marin Transit that went into effect during FY2016.

Exhibit 6: TDA Indicator Performance – Paratransit

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Av. Ann. Chg.
Performance Indicators							
Op. Cost per Vehicle Svc. Hour (Actual \$)	\$92.48	\$97.07	\$123.33	\$127.29	\$89.58	\$85.19	- -
<i>Annual Change</i>	- -	5.0%	27.1%	3.2%	-29.6%	-4.9%	-1.6%
Op. Cost per Vehicle Svc. Hour (Constant \$)	\$92.48	\$94.61	\$116.79	\$118.41	\$81.29	\$74.86	- -
<i>Annual Change</i>	- -	2.3%	23.4%	1.4%	-31.4%	-7.9%	-4.1%
Passengers per Vehicle Service Hour	0.9	0.8	1.0	0.9	1.7	1.7	- -
<i>Annual Change</i>	- -	-4.9%	20.7%	-7.1%	79.7%	2.0%	14.3%
Passengers per Vehicle Service Mile	0.04	0.04	0.04	0.04	0.09	0.10	- -
<i>Annual Change</i>	- -	-2.8%	15.4%	-2.8%	124.2%	9.2%	21.7%
Op. Cost per Passenger (Actual \$)	\$104.97	\$115.92	\$121.97	\$135.55	\$53.07	\$49.48	- -
<i>Annual Change</i>	- -	10.4%	5.2%	11.1%	-60.8%	-6.8%	-14.0%
Op. Cost per Passenger (Constant \$)	\$104.97	\$112.98	\$115.50	\$126.09	\$48.16	\$43.48	- -
<i>Annual Change</i>	- -	7.6%	2.2%	9.2%	-61.8%	-9.7%	-16.2%
Vehicle Service Hours per FTE	(a)	(a)	(a)	(a)	(a)	(a)	- -
<i>Annual Change</i>	- -	- -	- -	- -	- -	- -	- -
Input Data							
Operating Cost (Actual \$)	\$982,954	\$1,060,895	\$1,185,575	\$1,293,031	\$2,125,383	\$1,904,122	- -
<i>Annual Change</i>	- -	7.9%	11.8%	9.1%	64.4%	-10.4%	14.1%
Operating Cost (Constant \$)	\$982,954	\$1,034,011	\$1,122,704	\$1,202,820	\$1,928,660	\$1,673,218	- -
<i>Annual Change</i>	- -	5.2%	8.6%	7.1%	60.3%	-13.2%	11.2%
Vehicle Service Hours	10,629	10,929	9,613	10,158	23,726	22,351	- -
<i>Annual Change</i>	- -	2.8%	-12.0%	5.7%	133.6%	-5.8%	16.0%
Vehicle Service Miles	244,145	245,477	225,936	228,132	427,200	375,851	- -
<i>Annual Change</i>	- -	0.5%	-8.0%	1.0%	87.3%	-12.0%	9.0%
Unlinked Passengers	9,364	9,152	9,720	9,539	40,048	38,481	- -
<i>Annual Change</i>	- -	-2.3%	6.2%	-1.9%	319.8%	-3.9%	32.7%
Employee Full-Time Equivalents	(a)	(a)	(a)	(a)	(a)	(a)	- -
<i>Annual Change</i>	- -	- -	- -	- -	- -	- -	- -
Bay Area CPI - Annual Change	- -	2.6%	2.9%	1.9%	2.5%	3.3%	- -
- Cumulative Change	- -	2.6%	5.6%	7.5%	10.2%	13.8%	2.6%

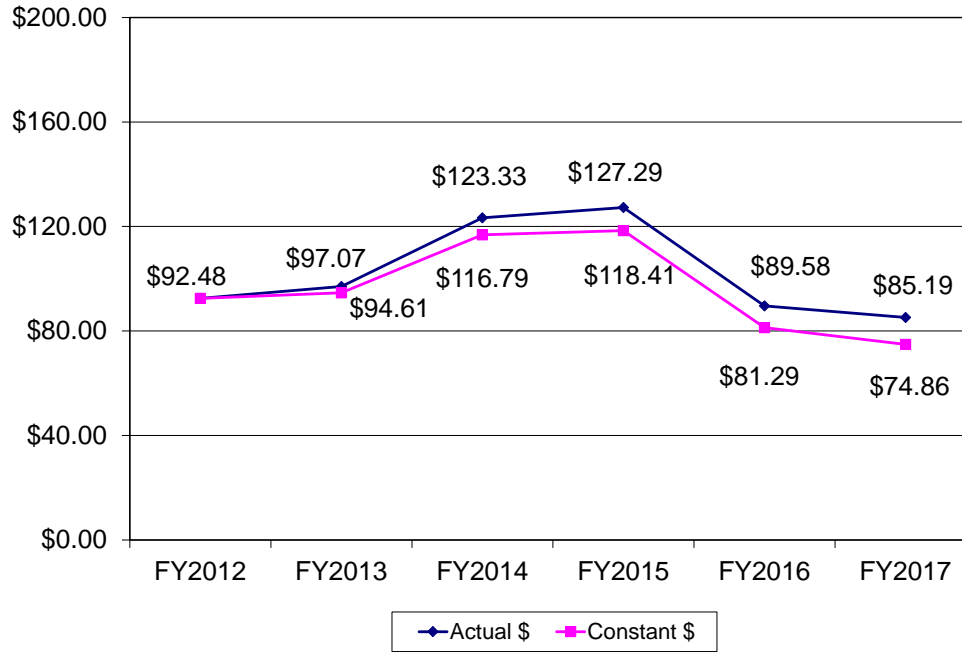
Sources: FY2012 through FY2014 - Prior Performance Audit Report

(a) Not available (contracted services)

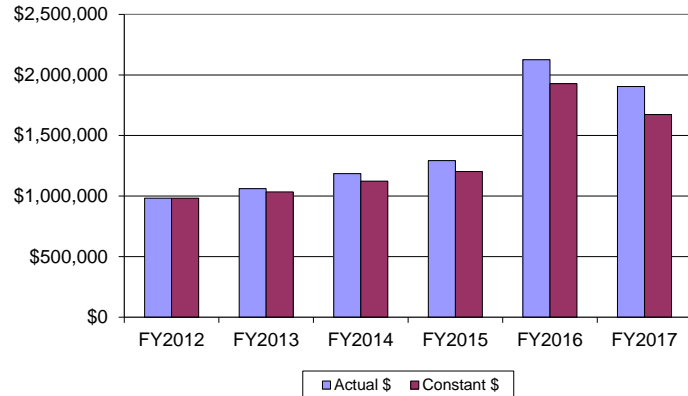
FY2015 through FY2017 - NTD Reports (FY2017 - Original Submission except Operating Costs - Revision 3)

CPI Data - U.S. Department of Labor, Bureau of Labor Statistics

Exhibit 6.1: Operating Cost per Vehicle Service Hour – Paratransit



Operating Cost



Vehicle Service Hours

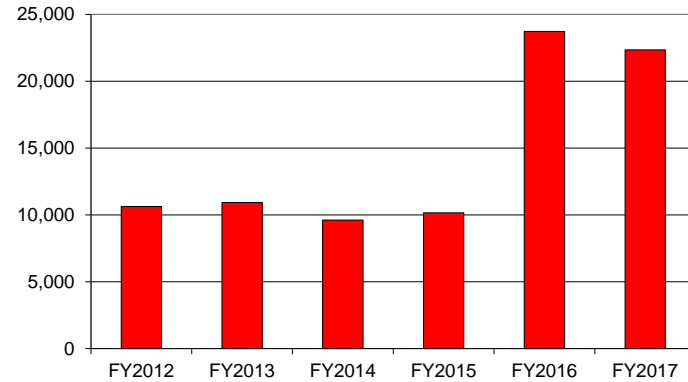
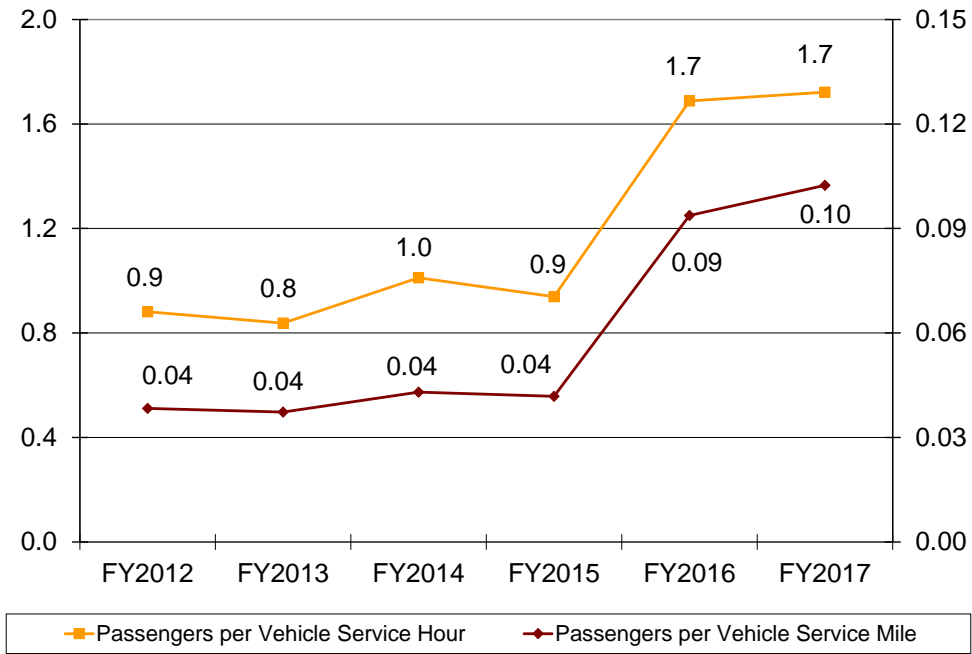
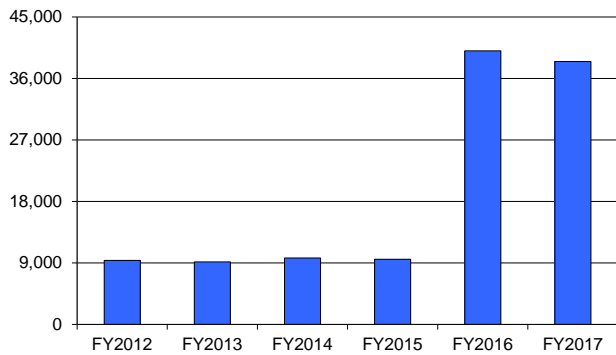


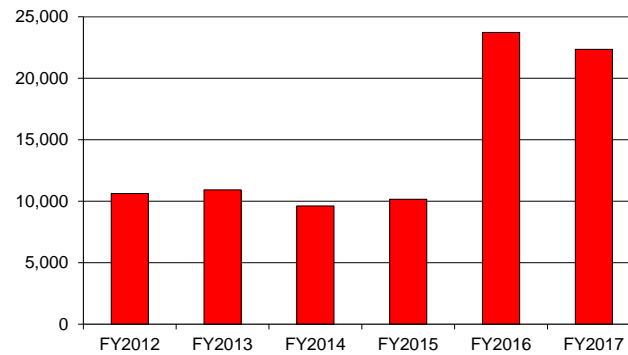
Exhibit 6.2: Passengers per Hour and per Mile – Paratransit



Unlinked Passengers



Vehicle Service Hours



Vehicle Service Miles

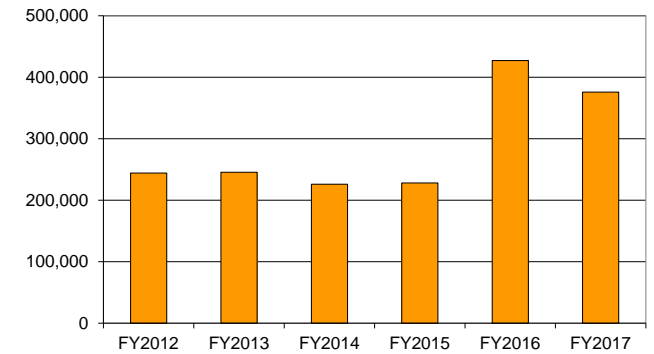
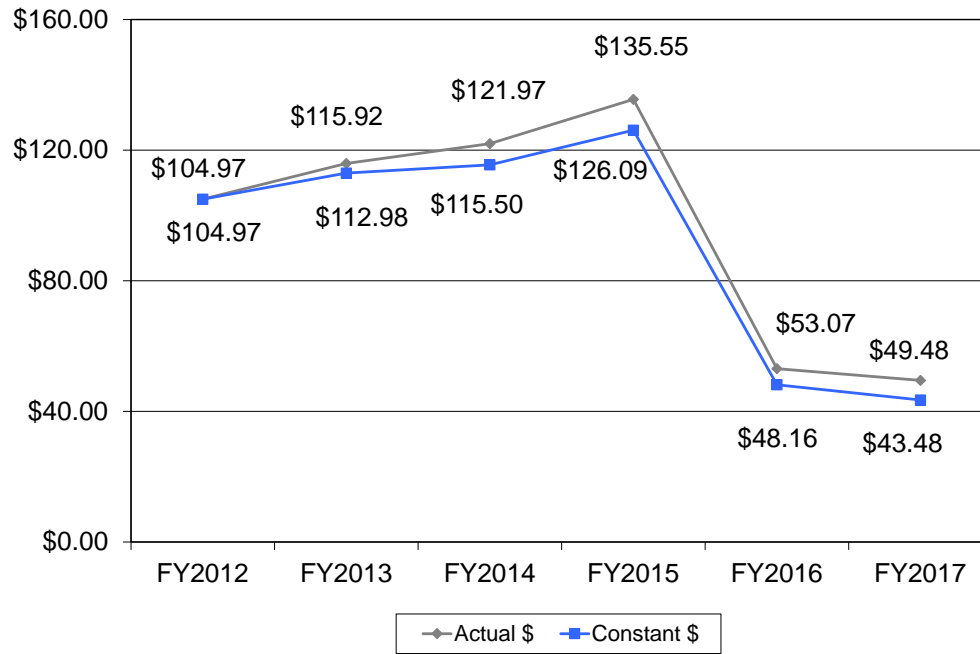
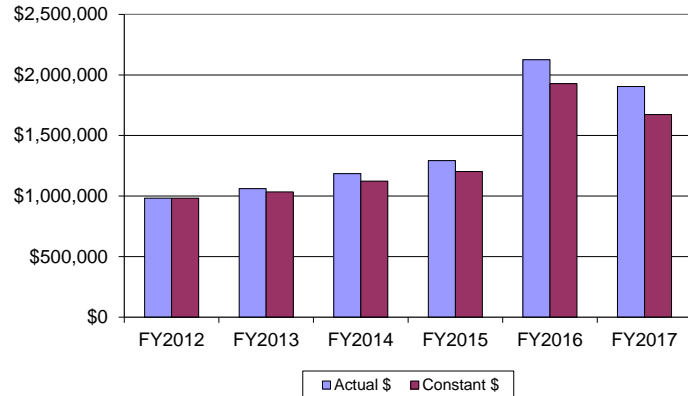


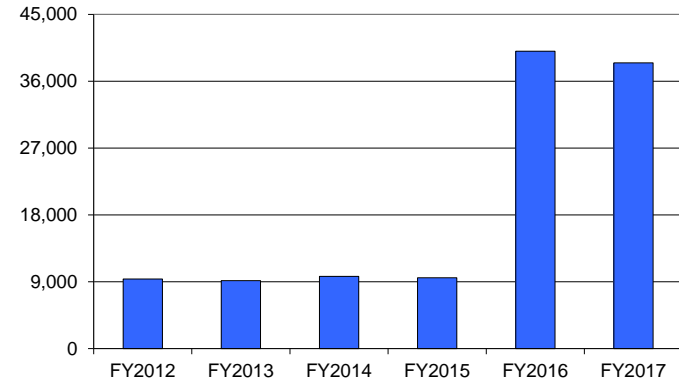
Exhibit 6.3: Operating Cost per Passenger – Paratransit



Operating Cost



Unlinked Passengers



Paratransit Component Costs

The year-to-year changes in selected operating cost categories are presented in Exhibit 6.4, along with the concurrent changes in vehicle service hours. The portions of the cost per vehicle service hour that can be attributed to each included cost component are shown in Exhibit 6.5.

- Between FY2012 and FY2017, the total annual paratransit costs increased by 14.1 percent on average. This was driven by a corresponding increase (13.8 percent) in purchased transportation costs, which is by far the largest component cost category.
- These results were significantly impacted by a major GGBHTD paratransit service expansion from a new contract with Marin Transit that went into effect during FY2016.
- Purchased transportation costs continued to be the source of at least 98 percent of all costs in all six years.
- In-house labor and fringe benefits costs showed significant percent increases in FY2014 and FY2017, but they continued to comprise a very small portion of the total hourly costs (one percent or less combined).
- Casualty/liability and “other” costs were only reported in the last two years, and even then as virtually negligible amounts.

* * * * *

The following is a brief summary of the component operating costs trend highlights between FY2012 and FY2017:

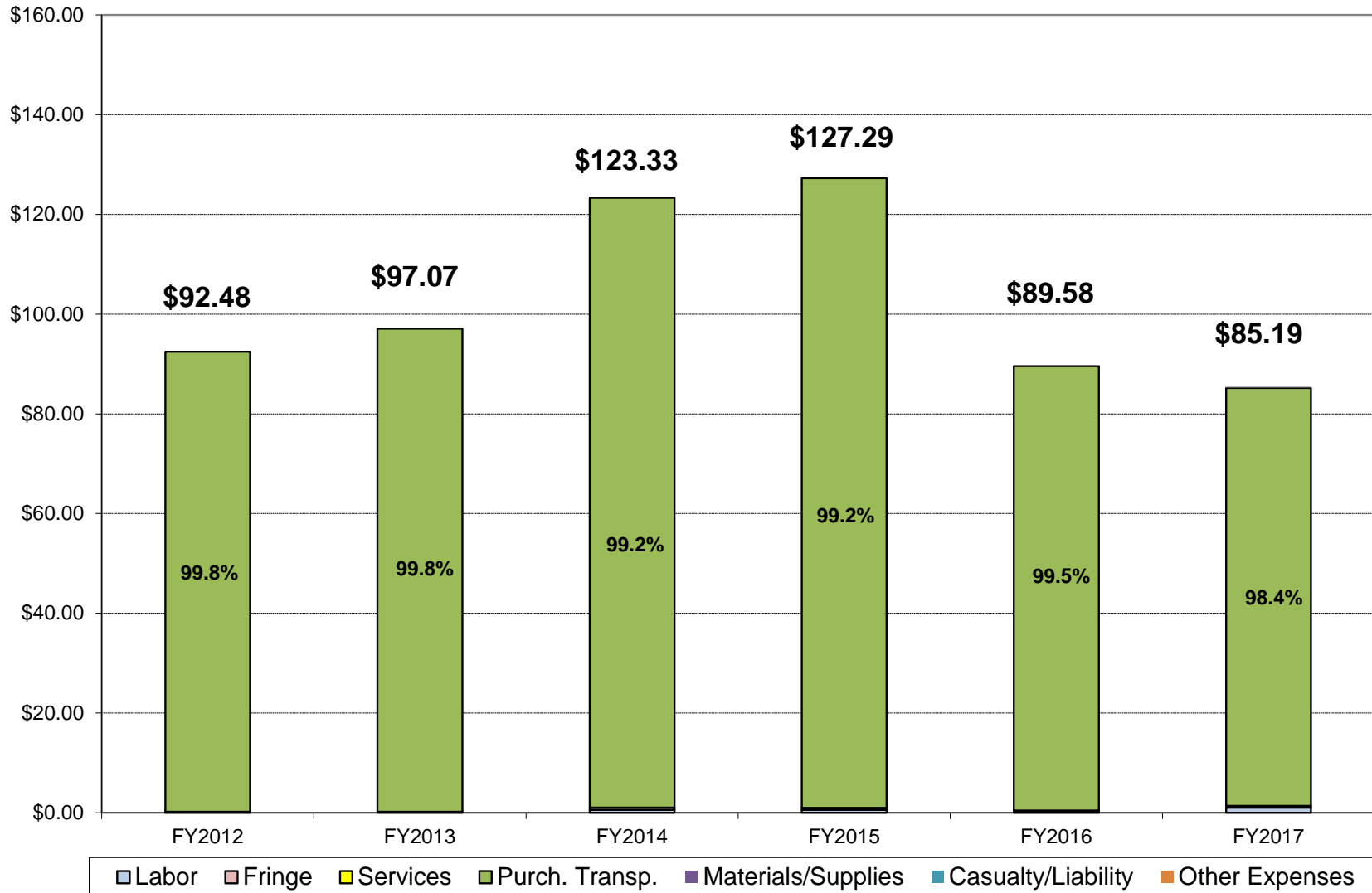
- Total annual costs increased by 14.1 percent on average, driven by a corresponding increase in purchased transportation costs – by far the largest component cost category.

- These results were significantly impacted by a major GGBHTD paratransit service expansion from a new contract with Marin Transit that went into effect during FY2016.
- Purchased transportation costs continued to be the source of at least 98 percent of all costs in all six years.
- In-house labor and fringe benefit costs showed significant percent changes as well, but they comprised a very small portion of the total costs.

Exhibit 6.4: Component Costs Trends – Paratransit

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Av. Ann. Chg.
COST CATEGORIES							
Labor (Salaries/Wages)	\$1,113	\$1,158	\$5,800	\$5,800	\$5,899	\$22,790	--
<i>Annual Change</i>	--	4.0%	400.9%	0.0%	1.7%	286.3%	82.9%
Fringe Benefits	\$773	\$798	\$4,000	\$4,000	\$3,997	\$7,667	--
<i>Annual Change</i>	--	3.2%	401.3%	0.0%	-0.1%	91.8%	58.2%
Services	\$0	\$0	\$0	\$0	\$0	\$0	--
<i>Annual Change</i>	--	--	--	--	--	--	--
Purchased Transportation	\$981,068	\$1,058,939	\$1,175,775	\$1,283,231	\$2,115,313	\$1,873,480	--
<i>Annual Change</i>	--	7.9%	11.0%	9.1%	64.8%	-11.4%	13.8%
Materials/Supplies	\$0	\$0	\$0	\$0	\$0	\$0	--
<i>Annual Change</i>	--	--	--	--	--	--	--
Casualty/Liability	\$0	\$0	\$0	\$0	\$103	\$110	--
<i>Annual Change</i>	--	--	--	--	--	6.8%	--
Other Expenses	\$0	\$0	\$0	\$0	\$71	\$75	--
<i>Annual Change</i>	--	--	--	--	--	5.6%	--
Total	\$982,954	\$1,060,895	\$1,185,575	\$1,293,031	\$2,125,383	\$1,904,122	--
<i>Annual Change</i>	--	7.9%	11.8%	9.1%	64.4%	-10.4%	14.1%
OPERATING STATISTICS							
Vehicle Service Hours	10,629	10,929	9,613	10,158	23,726	22,351	--
<i>Annual Change</i>	--	2.8%	-12.0%	5.7%	133.6%	-5.8%	16.0%

Exhibit 6.5: Distribution of Component Costs – Paratransit
Operating Cost per Vehicle Service Hour



IV. COMPLIANCE WITH PUC REQUIREMENTS

An assessment of GGBHTD's compliance with selected sections of the state Public Utilities Code (PUC) has been performed. The compliance areas included in this review are those that MTC has identified for inclusion in the triennial performance audit. Other statutory and regulatory compliance requirements are reviewed by MTC in conjunction with its annual review of GGBHTD's TDA-STA claim application.

The results from this review are detailed by individual requirement in Exhibit 7. GGBHTD is in compliance with all seven sections of the state PUC that were reviewed as part of this performance audit. These sections included requirements concerning CHP terminal safety inspections, labor contracts, reduced fares, Welfare-to-Work, revenue sharing, and evaluating passenger needs.

Exhibit 7: Compliance with State PUC Requirements

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99251	<u>CHP Certification</u> - The CHP has, within the 13 months prior to each TDA claim submitted by an operator, certified the operator's compliance with Vehicle Code Section 1808 following a CHP inspection of the operator's terminal	In Compliance	<p>Satisfactory Inspections:</p> <ul style="list-style-type: none"> • 2015: GGT - 04/02/15 Whistlestop – 02/10/15 • 2016: GGT - 03/17/16 Whistlestop - 06/08/16 • 2017: GGT - 06/29/17 Whistlestop - 06/12/17
PUC99264	<u>Operator-to-Vehicle Staffing</u> - The operator does not routinely staff with two or more persons public transportation vehicles designed to be operated by one person	In Compliance	<ul style="list-style-type: none"> • No provision for excess fixed route bus staffing in contract agreements with ATU Local 1575 (November 1, 2010 and March 1, 2015). • No provision for excess staffing in agreements with MCTD for operation of Local Fixed-Route Bus Service (May 19, 2015) and Paratransit Services (December 21, 2015).
PUC99314.5(e) (1)(2)	<u>Part-Time Drivers and Contracting</u> - If the operator receives STA funds, the operator is not precluded by contract from employing part-time drivers or from contracting with common carriers.	In Compliance	<ul style="list-style-type: none"> • <u>Part Time Drivers</u> – Article 45 (Part-Time Help) of contract agreements with ATU Local 1575 (November 1, 2010 and March 1, 2015). • <u>Contracting</u> – GGBHTD contracts with Whistlestop Wheels to provide its Intercounty paratransit service.

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
PUC99155	<p><u>Reduced Fare Eligibility</u> - For any operator who received TDA Article 4 funds, if the operator offers reduced fares to senior citizens and disabled persons, applicant will honor the federal Medicare identification card, the California Department of Motor Vehicles disability ID card, the Regional Transit Connection Discount Card, or any other current identification card issued by another transit operator that is valid for the type of transportation service or discount requested; and if the operator offers reduced fares to senior citizens, it also offers the same reduced fare to disabled patrons</p>	In Compliance	<p>Fare information in public information materials:</p> <ul style="list-style-type: none"> • Golden Gate Bus & Ferry Transit Guide (Fall 2017) • GGBHTD web site
PUC99155.1(a)(1)(2)	<p><u>Welfare-to-Work</u> - The operator coordinates with county welfare departments in order to ensure that transportation moneys available for purposes of assisting recipients of aid are expended efficiently for the benefit of that population; if a recipient of CalWORKs program funds by the county, the operator shall give priority to the enhancement of public transportation services for welfare-to-work purposes and to the enhancement of transportation alternatives, such as, but not limited to, subsidies or vouchers, van pools, and contract paratransit operations, in order to promote welfare-to-work purposes.</p>	In Compliance	<p>GGBHTD reports that, as an inter-county transit service, it does not have a welfare to work program per se. Local transit providers in the service area (e.g., Marin Transit, AC Transit, Santa Rosa CityBus and SFMTA) would handle any local human service-related transportation issues for local work or medical travel.</p>
PUC99314.7, Govt Code 66516, MTC Res. Nos. 3837, 4073	<p><u>Joint Revenue Sharing Agreement</u> - The operator has current joint fare revenue sharing agreements in place with transit operators in the MTC region with which its service connects, and submitted copies of agreements to MTC</p>	In Compliance	<p>Valid revenue sharing/transfer agreements with:</p> <ul style="list-style-type: none"> • AC Transit (1991, 1993, 1994 for Route 40/40X) • BART (1994) • MCTD (2009) • Petaluma Transit (2009)

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
			<ul style="list-style-type: none"> • SFMTA (2010 w/ GGF) • SamTrans (1991) • Santa Rosa CityBus (2009) • Sonoma Co. Interoperator Agreement (1981) • Sonoma Co. Superpass (1991) • SMART (2017) • Vallejo Transit (1994- now SolTrans) • WestCAT (2003) • Also a reciprocal revenue agreement with Blue & Gold Ferry
PUC99246(d)	<p><u>Process for Evaluation of Passenger Needs</u> - The operator has an established process in place for evaluating the needs and types of passengers being served</p>	In Compliance	<p>The following mechanisms are utilized to evaluate passenger needs:</p> <ul style="list-style-type: none"> • Census Data – Title VI requirements • Customer Comments and Complaints via, walk-ins, telephone calls, email, Facebook, Twitter, Tweets, and letters • Operations Assessments • Advisory Committees • Special Planning Projects • MTC On-board Survey • Internally conducted passenger surveys • Traffic checker ride counts

Code Reference	Operator Compliance Requirements	Compliance Finding	Verification Information
			<ul style="list-style-type: none"> • Open houses (related to service changes) • Public hearings and public comments encouraged at Board of Directors meetings • Passenger Comment Cards available on all buses and vessels

V. STATUS OF PRIOR AUDIT RECOMMENDATIONS

GGBHTD's prior performance audit was completed in May 2015. Generally, MTC has used the audit recommendations as the basis for developing the Productivity Improvement Program (PIP) projects the operator is required to complete. MTC tracks PIP project implementation as part of its annual review of the operator's TDA-STA claim application. This section provides an assessment of actions taken by TDA-STA recipients toward implementing the recommendations advanced in the prior audit. This assessment provides continuity between the current and prior audits, which allows MTC to fulfill its obligations where the recommendations were advanced as PIP projects.

This review addresses GGBHTD's responses to the recommendations made in the prior performance audit, and whether GGBHTD made reasonable progress toward their implementation. There was one recommendation made in GGBHTD's prior audit. A summary of the recommendation and the actions taken by GGBHTD in response is presented in Exhibit 8. A determination of the status of the recommendation also is provided, using one of the following four evaluation categories:

- Implemented – appropriate actions have been taken and the issue has been sufficiently addressed.
- Implementation in Progress – actions have been taken to address the issue, but the recommendation remains open until further actions are completed.
- Not Implemented – no actions have been taken to address the issue, and the recommendation remains open.
- Closed – no actions have been taken to address the issue, but changes in circumstances have impacted the need to implement the recommendation.

The recommendation from the prior audit is considered to have been implemented. During recent prior TDA audits, it was found that GGBHTD's cost efficiency was generally worsening, with the cost per vehicle/vessel service hour increasing for each mode -- largely due to reductions in service levels combined with increases in operations costs. It was recommended that GGBHTD develop mode-specific strategies to address the situation aggressively so that cost per hour increases over the next few years did not continue to spiral upwards. GGBHTD reported numerous plans in various areas were underway during the previous and current audit periods for reducing costs, and increasing service hours and ridership. Specific plans in each area continue to be active, and apply to the bus service, ferry service, bus and ferry service, and in one instance to the paratransit service.

Cost per hour trends during the current review period (FY2012 through FY2017) were more positive overall than those noted in the prior audit. Modal results indicate inflation-adjusted average annual increases of 2.8 percent for bus and 0.5 percent for ferry, but a decrease for paratransit. Annual results for FY2017 compared to FY2016 show an increase in the cost per hour for only for bus (4.2 percent, inflation adjusted), with decreases for both ferry and paratransit. Efforts to reduce bus hourly costs have been impacted by increased bus travel times associated with traffic congestion, along with severe degradation in the operation of carpool lanes in Marin County. In light of these trend results and exceptional circumstances, GGBHTD appears to be adequately controlling its cost efficiency across all service modes.

Exhibit 8: Status of Prior Audit Recommendations

Recommendation	Actions Taken	Evaluation
<p>Continue and expand mode-specific efforts to improve cost efficiency.</p>	<p>During the current audit period, GGBHTD undertook several efforts to contain the costs associated with providing its bus, ferry, and paratransit service:</p> <ul style="list-style-type: none"> • Bus schedules were adjusted quarterly to add, delete, and adjust trips based on changes in passenger demand and traffic conditions. Further, a series of more significant changes was made, many to improve service attractiveness while also increasing the efficiency of bus and driver assignments. • Ferry schedules were adjusted quarterly to add, delete, and modify trips based on passenger demand. • A new paratransit service contract was put into place, which provides service at a lower cost. In addition, ridership on the inter-county service continues to decline, lowering overall operating costs for that service type. • For all modes, GGBHTD instituted a program of annual fare increases designed to keep pace with ongoing increases in operating costs. <p>GGBHTD is also continuing a number of plans for reducing costs, and increasing service hours and ridership, in these areas:</p> <ul style="list-style-type: none"> • <u>Internal Efficiencies</u> – Reductions to be achieved to the greatest degree possible while preserving service. • <u>Increase Ridership and Service Efficiency</u> – GGBHTD is working to speed up service. 	<p>Implemented</p>

Recommendation	Actions Taken	Evaluation
	<ul style="list-style-type: none"> • <u>Capital Improvements</u> - Aimed at Reducing Operating Expenses and Increasing Ridership. • <u>Service Changes</u> - To improve efficiency and effectiveness. • <u>Negotiate Sustainable Bargaining Unit Agreements</u> – To work collaboratively to protect GGBHTD’s financial condition and liquidity. <p>Specific plans in each category apply to the bus service, ferry service, bus and ferry service, and in one instance to the paratransit service.</p> <p>Modal results in the cost per hour trends during the current review period (FY2012 through FY2017 indicate inflation-adjusted average annual increases of 2.8 percent for bus and 0.5 percent for ferry, but a decrease for paratransit. Annual results for FY2017 compared to FY2016 show an increase in the cost per hour for only for bus (4.2 percent, inflation adjusted), with decreases for both ferry and paratransit.</p> <p>Efforts to reduce hourly costs on the bus system have been impacted by increased bus travel times associated with traffic congestion in downtown San Francisco and the Richmond-San Rafael Bridge, as well as severe degradation in the operation of carpool lanes in Marin County.</p>	

VI. FUNCTIONAL PERFORMANCE INDICATOR TRENDS

To further assess GGBHTD's performance over the past three years, a detailed set of functional area performance indicators was defined. This assessment consists of a three-year trend analysis of the functions in each of the following areas:

- Management, Administration and Marketing
- Service Planning
- Operations
- Maintenance
- Safety

The indicators selected for this analysis were primarily those that were tracked regularly by GGBHTD or for which input data were maintained by GGBHTD on an on-going basis, such as performance reports, contractor reports, annual financial reports and NTD reports. As such, there may be some overlap with the TDA indicators examined earlier in the audit process, but most indicators will be different. Some indicators were selected from the California Department of Transportation's Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities as being appropriate for this evaluation. The input statistics for the indicators, along with their sources, are contained in Appendix A at the end of this report.

The trends in performance are presented over the three-year audit period to give an indication of which direction performance is moving for these indicators. The remainder of this section presents the findings from this review. The discussion presents

the highlights of performance systemwide or by mode, each followed by an exhibit illustrating the indicators by function as applicable.

Systemwide

For the purposes of this review, GGBHTD's functional indicators relating to Management, Administration and Marketing have been included generally on a systemwide basis. Audit period performance is discussed below and presented in Exhibit 9.

- Administrative costs decreased from 27 percent of total operating costs in FY2015 to about 25 percent subsequently.
- Administrative costs decreased from \$93 per vehicle service hour in FY2015 to \$91 in FY2017, with an even lower level recorded in the middle year.
- The portion of administrative costs attributed to marketing activities increased overall, from 4.7 percent in FY2015 to more than six percent in the last two years.
- Marketing costs rose steadily from \$0.19 per passenger trip in FY2015 to \$0.28 by FY2017.
- The systemwide farebox recovery ratio in FY2015 and FY2017 was just over 34 percent, despite an increase to 37.5 percent achieved in FY2016.

* * * * *

The following is a brief summary of the systemwide functional trend highlights between FY2015 and FY2017:

- Administrative costs decreased moderately to 25 percent of total operating costs, and decreased moderately overall to \$91 per vehicle service hour in FY2017.
- Marketing costs increased to more than six percent of total administrative costs in the last two years, and rose to \$0.28 per passenger trip in FY2017.
- The systemwide farebox recovery ratio was just above 34 percent in both FY2015 and FY2017.

Exhibit 9: Functional Performance Trends – Systemwide

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
MANAGEMENT, ADMINISTRATION & MARKETING			
Administrative Cost/Total Operating Cost	26.8%	24.3%	25.2%
<i>Annual Percent Change</i>	--	-9.4%	3.7%
<i>Three Year Percent Change</i>	--	--	-6.0%
Administrative Cost/Vehicle Service Hour	\$93.34	\$82.28	\$90.87
<i>Annual Percent Change</i>	--	-11.9%	10.5%
<i>Three Year Percent Change</i>	--	--	-2.6%
Marketing Cost/Total Administrative Cost	4.7%	6.6%	6.2%
<i>Annual Percent Change</i>	--	40.0%	-5.4%
<i>Three Year Percent Change</i>	--	--	32.4%
Marketing Cost/Unlinked Passenger Trip	\$0.19	\$0.25	\$0.28
<i>Annual Percent Change</i>	--	34.4%	10.9%
<i>Three Year Percent Change</i>	--	--	49.1%
Farebox Revenue/Operating Cost	34.1%	37.5%	34.5%
<i>Annual Percent Change</i>	--	9.8%	-7.9%
<i>Three Year Percent Change</i>	--	--	1.1%

Bus Service

GGBHTD's bus service functional area trends represent areas of cost efficiency, safety, productivity and service reliability. Audit period performance is discussed below and presented in Exhibit 10.

- Service Planning
 - The scheduled operator pay hour to platform hour ratio decreased from 231 percent in FY2015 to 217 percent by FY2017.
 - Operating costs per passenger mile increased from \$0.90 in the first year to \$1.19 in FY2017 (32 percent).
 - The portion of vehicle miles traveled that were in service remained at about 86 percent through the audit period. Similarly, the portion of vehicle hours in service remained at about 89 percent.
 - The bus service farebox recovery ratio in FY2015 and FY2017 was about 21.5 percent, despite an increase to 25.4 percent achieved in FY2016.

- Operations
 - Vehicle operations costs remained near 60 percent of total operating costs through the period, while vehicle operations costs per service hour increased overall from \$148 to \$169 (14 percent).
 - More than 99 percent of scheduled vehicle service miles were actually operated in all three years.
 - Operator scheduled absences remained at about 12 percent of total hours worked, while unscheduled absences remained at about 20 percent through the audit period.
 - The actual operator pay hour to platform hour ratio decreased in each year, from 260 percent to 252 percent overall.

- Schedule adherence improved from 83 percent in the first two years to 86 percent in FY2017.
 - The complaints rate (per 10,000 passenger trips) rose by 21 percent between FY2015 and FY2016, and then reversed in FY2017.
 - The incidence of missed trips decreased overall from 0.7 percent in FY2015 to 0.1 percent in FY2017.
- Maintenance
 - Total maintenance costs (vehicle plus non-vehicle) remained at about 15 percent of total operating costs.
 - Vehicle maintenance costs per service mile increased over the audit period from \$1.96 in FY2015 to \$2.33 by FY2017, 19 percent overall.
 - Maintenance pay hours increased steadily from 51.1 percent of vehicle service hours to 57.4 percent over the period.
 - Maintenance employee scheduled absences remained at about 10.7 percent of total time in each year, while unscheduled absences decreased from 6.3 percent to 4.5 percent over the period.
 - The vehicle spare ratio dropped from about 28 percent in FY2015 to 19 percent in the next year, and then rose to 22 percent in FY2017.
 - The mean distance between major failures improved moderately overall during the period, despite less positive results in FY2016. When looking at all failures, there was an overall 22 percent decline but performance improved somewhat in the last year.
 - Safety
 - The rate of reportable accidents improved steadily from 3.54 per 100,000 miles traveled in the first year, to 3.00 in FY2017.

- Casualty/liability costs per service hour and service mile both were reduced by 17 percent in FY2016, followed by 135 percent annual increases in FY2017.
- Lost days due to industrial accidents more than doubled between FY2015 and FY2016, and then increased another 12 percent to 1,975 in FY2017. However, it was noted by GGBHTD staff that these figures represent lost days from claims (or incidents) originating over multiple years. For example, the 1,975 lost days for FY2017 came from 22 claims, of which 13 were carried over from FY2015 and FY2016. In September 2016, GGBHTD moved the bus operators out of the Workers' Compensation Administrative Board (WCAB) jurisdiction into an Alternative Dispute Resolution (ADR) program. The ADR works by assigning a neutral ADR Advocate to the injured bus operator to assist them from the time the workers' compensation claim is filed until the time it is resolved. Among other goals, the ADR is designed to achieve faster closure of claims to minimize costs associated with protracted claims resolution. GGBHTD reports a net decrease in lost days since the implementation of this program.

* * * * *

The following is a brief summary of the bus service functional trend highlights between FY2015 and FY2017:

- Service Planning results showed a small decrease in the scheduled operator pay to platform ratio to 217 percent by FY2017, a 32 percent increase in the cost per passenger mile, consistently more than 85 percent of vehicle miles and hours in service, and the bus farebox recovery ratio at about 21.5 percent in both FY2015 and FY2017.
- Operations results showed about 60 percent of operating costs consistently incurred from vehicle operations but a 14 percent increase in vehicle operations costs per hour. Virtually all scheduled vehicle service miles were actually operated. Operator scheduled absences were steady at about 12 percent of total work hours, and unscheduled absences at 20 percent.

The actual operator pay to platform ratio decreased slightly to 252 percent. Schedule adherence went up from 83 to 86 percent, with little net change in the complaint rate and missed trips down to 0.1 percent in FY2017.

- Maintenance results showed total maintenance costs steady at 15 percent of total costs but vehicle maintenance costs increasing by 19 percent per mile, and maintenance pay hours increasing by 12 percent compared to service hours. Maintenance employee scheduled absences were steady at 10.7 percent with a decrease in the unscheduled rate to 4.5 percent. The vehicle spare ratio decreased overall from 28 to 22 percent. The major mechanical failure rate improved moderately, while the rate for all failures worsened overall but showed some improvement in the last year.
- Safety results showed the preventable accident rate improving steadily, but sharp increases in the casualty/liability cost rates, and lost days due to industrial accidents more than doubling. However, the latter represents lost days from claims originating over multiple years. GGBHTD recently implemented an Alternative Dispute Resolution (ADR) program which reportedly has resulted in a net decrease in lost days.

Exhibit 10: Functional Performance Trends – Bus Service

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
SERVICE PLANNING			
Operator Pay Hours/Platform Hours - Scheduled	230.8%	219.5%	217.4%
<i>Annual Percent Change</i>	--	-4.9%	-1.0%
<i>Three Year Percent Change</i>	--	--	-5.8%
Total Operating Cost/Passenger Mile	\$0.90	\$1.03	\$1.19
<i>Annual Percent Change</i>	--	13.4%	16.4%
<i>Three Year Percent Change</i>	--	--	32.0%
Vehicle Service Miles/Total Miles	86.3%	85.6%	86.3%
<i>Annual Percent Change</i>	--	-0.8%	0.7%
<i>Three Year Percent Change</i>	--	--	-0.1%
Vehicle Service Hours/Total Hours	89.8%	89.1%	89.4%
<i>Annual Percent Change</i>	--	-0.8%	0.4%
<i>Three Year Percent Change</i>	--	--	-0.4%
Farebox Revenue/Operating Cost	21.6%	25.4%	21.5%
<i>Annual Percent Change</i>	--	17.8%	-15.3%
<i>Three Year Percent Change</i>	--	--	-0.2%
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	58.4%	61.6%	60.0%
<i>Annual Percent Change</i>	--	5.5%	-2.5%
<i>Three Year Percent Change</i>	--	--	2.9%
Vehicle Operations Cost/Vehicle Service Hour	\$147.82	\$160.92	\$168.85
<i>Annual Percent Change</i>	--	8.9%	4.9%
<i>Three Year Percent Change</i>	--	--	14.2%
Actual to Scheduled Vehicle Service Miles	99.6%	99.1%	99.9%
<i>Annual Percent Change</i>	--	-0.4%	0.8%
<i>Three Year Percent Change</i>	--	--	0.3%
Operator Sched. Absences/Total Hours Worked	12.6%	12.1%	12.9%
<i>Annual Percent Change</i>	--	-3.6%	6.5%
<i>Three Year Percent Change</i>	--	--	2.7%
Operator Unsched. Absences/Total Hours Worked	20.9%	21.8%	19.8%
<i>Annual Percent Change</i>	--	4.4%	-9.4%
<i>Three Year Percent Change</i>	--	--	-5.5%
Operator Pay Hours to Platform Hours - Actual	260.3%	253.3%	252.2%
<i>Annual Percent Change</i>	--	-2.7%	-0.4%
<i>Three Year Percent Change</i>	--	--	-3.1%

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
OPERATIONS (continued)			
Trips On-Time/Total Trips	83.1%	83.2%	86.0%
<i>Annual Percent Change</i>	--	0.1%	3.4%
<i>Three Year Percent Change</i>	--	--	3.5%
Complaints/10,000 Unlinked Passenger Trips	7.5	9.1	7.2
<i>Annual Percent Change</i>	--	21.6%	-21.0%
<i>Three Year Percent Change</i>	--	--	-3.9%
Missed Trips/Total Trips	0.7%	0.8%	0.1%
<i>Annual Percent Change</i>	--	8.5%	-84.8%
<i>Three Year Percent Change</i>	--	--	-83.6%
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	15.1%	15.4%	15.8%
<i>Annual Percent Change</i>	--	1.8%	2.6%
<i>Three Year Percent Change</i>	--	--	4.5%
Vehicle Maintenance Cost/Vehicle Service Mile	\$1.96	\$2.07	\$2.33
<i>Annual Percent Change</i>	--	5.6%	12.6%
<i>Three Year Percent Change</i>	--	--	18.9%
Maintenance Pay Hours/Vehicle Service Hours	51.1%	55.0%	57.4%
<i>Annual Percent Change</i>	--	7.7%	4.4%
<i>Three Year Percent Change</i>	--	--	12.4%
Maintenance Employee Scheduled Absences	10.8%	10.7%	10.7%
<i>Annual Percent Change</i>	--	-1.1%	-0.1%
<i>Three Year Percent Change</i>	--	--	-1.2%
Maintenance Employee Unscheduled Absences	6.3%	5.2%	4.5%
<i>Annual Percent Change</i>	--	-18.74%	-12.8%
<i>Three Year Percent Change</i>	--	--	-29.1%
Spare Vehicles/Total Vehicles	27.8%	19.4%	22.0%
<i>Annual Percent Change</i>	--	-30.4%	13.6%
<i>Three Year Percent Change</i>	--	--	-20.9%
Mean Distance between Major Failures (Miles)	63,450	52,439	65,679
<i>Annual Percent Change</i>	--	-17.4%	25.2%
<i>Three Year Percent Change</i>	--	--	3.5%
Mean Distance between All Failures (Miles)	37,381	27,222	29,147
<i>Annual Percent Change</i>	--	-27.2%	7.1%
<i>Three Year Percent Change</i>	--	--	-22.0%

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
SAFETY			
Reportable Accidents/100,000 Vehicle Miles	3.55	3.11	3.00
<i>Annual Percent Change</i>	--	-12.3%	-3.4%
<i>Three Year Percent Change</i>	--	--	-15.3%
Casualty & Liability Cost/Vehicle Service Hour	\$5.87	\$4.84	\$11.39
<i>Annual Percent Change</i>	--	-17.4%	135.0%
<i>Three Year Percent Change</i>	--	--	94.1%
Casualty & Liability Cost/Vehicle Service Mile	\$0.34	\$0.28	\$0.67
<i>Annual Percent Change</i>	--	-17.2%	135.3%
<i>Three Year Percent Change</i>	--	--	94.9%
Lost Days Due to Industrial Accidents	833	1,770	1,975
<i>Annual Percent Change</i>	--	112.5%	11.6%
<i>Three Year Percent Change</i>	--	--	137.1%

Ferry Service

GGBHTD's ferry service functional area performance trends for the audit period are discussed below and presented in Exhibit 11.

- Service Planning
 - The scheduled operator pay hour to platform hour ratio decreased overall from 225 percent in the first year to 220 percent in FY2017.
 - Operating costs per passenger mile increased overall from \$1.09 in the first year to \$1.14 in FY2017 (4.2 percent).
 - The portion of vessel miles traveled that were in service decreased from 93 to 89 percent over the audit period. Similarly, the portion of vessel hours in service decreased from 95 to 92 percent.
 - The ferry service farebox recovery ratio went up from about 61 percent in FY2015 to more than 65 percent in the two later years.

- Operations
 - Vessel operations costs remained at about 55 percent of total operating costs in all three years, and vessel operations costs per service hour remained just above \$1,200.
 - Operator scheduled absences decreased slightly but remained close to 11 percent of total hours worked, while unscheduled absences went up from four percent in the first two years to seven percent in FY2017. GGBHTD staff noted the high unscheduled absence rate in FY2017 was due to unusually high FMLA and medical absences. The number and duration of these absences could not be known or planned for at the start of the budget cycle. The FMLA in particular puts numerous requirements on the employer to relieve employees as needed.
 - The actual operator pay hour to platform hour ratio increased in each year, from about 256 percent to 289 percent overall.

- Schedule adherence was reduced from nearly 97 percent in FY2015 to 92 or 93 percent in the following years.
 - The rate of complaints was reduced by 22 percent, from 1.5 complaints per 10,000 passenger trips in FY2015 to 1.2 in FY2016 and FY2017.
 - The incidence of missed trips decreased from 0.4 percent of all trips in the first year to 0.1 percent subsequently.
- Maintenance
 - Total maintenance costs (vessel plus non-vessel) remained in a range of 16 to 17 percent of total operating costs.
 - Vessel maintenance costs per service mile remained in a range of \$21 to \$22 through the audit period.
 - Maintenance pay hours were reported at about 190 percent of vessel service hours in both FY2015 and FY2017, though a higher level was reported in the interim year.
 - Maintenance employee scheduled absences remained in a range of 11 to 12 percent of total time in each year, while unscheduled absences spiked at 12.9 percent in FY2016 but were closer to five percent before and after. Similar to the ferry operator situation in FY2017, GGBHTD staff noted the high unscheduled maintenance absence rate in FY2016 was due to unusually high FMLA and medical absences in that year that could not be foreseen. The unscheduled absence results should also be understood in the context of the small size of the ferry maintenance team, wherein the impact of each individual appears magnified.
 - The vessel spare ratio was 14 percent (one spare vessel) in the first two years, but no spare in FY2017 when the new Tiburon ferry service was inaugurated.
 - There were no major failures reported in FY2015, and the mean distance between major failures more than doubled in F2017 compared with FY2016. When looking at all failures, the trend worsened overall

through the period by 56 percent, but performance did improve noticeably in the last year.

- Safety
 - There were no reportable ferry accidents during the audit period.
 - Casualty/liability costs per service hour and service mile both increased moderately overall, despite lower results in the middle year (FY2016).
 - Lost days due to industrial accidents more than doubled between FY2015 and FY2016, but then decreased by 30 percent to 4,362 in FY2017.

* * * * *

The following is a brief summary of the ferry service functional trend highlights between FY2015 and FY2017:

- Service Planning results showed a small decrease in the scheduled operator pay to platform ratio to 220 percent, a 4.2 percent increase in the cost per passenger mile, moderate decreases in vehicle miles and hours in service to 89 and 92 percent respectively, and the farebox recovery ratio rising from 61 to more than 65 percent.
- Operations results showed operating costs incurred from vessel operations steady at about 55 percent, and also steady vessel operations costs per hour. Operator scheduled absences remained at about 11 percent of total work hours, while unscheduled absences went up from four to seven percent by FY2017, the latter due to unusually high FMLA and medical leave activity. The actual operator pay to platform ratio climbed to 289 percent, schedule adherence went down a few points from 97 percent in FY2015, the rate of complaints went down by 22 percent, and missed trips decreased to 0.1 percent in FY2017.
- Maintenance results showed total maintenance costs steady at 16 percent of total costs and vessel maintenance costs at \$22 per mile. Maintenance pay hours were about 190 percent of service hours in both FY2015 and FY2017.

Scheduled absences remained near 12 percent, while the unscheduled absence rate was five percent except for a spike to 12.9 percent in FY2016 due to unusually high FMLA and medical leave activity among the small number of maintenance employees. The vessel spare ratio decreased from one vessel to none with the new Tiburon service in FY2017. The trend in major mechanical failures was generally positive, while the rate for all failures worsened overall but showed noticeable improvement in the last year.

- Safety results showed no reportable ferry accidents during the audit period, moderately increasing casualty/liability cost rates, and lost days due to industrial accidents more than doubling in FY2016 but a turnaround in FY2017.

Exhibit 11: Functional Performance Trends – Ferry

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
SERVICE PLANNING			
Operator Pay Hours/Platform Hours - Scheduled	224.7%	228.6%	219.6%
<i>Annual Percent Change</i>	--	1.8%	-4.0%
<i>Three Year Percent Change</i>	--	--	-2.3%
Total Operating Cost/Passenger Mile	\$1.09	\$1.07	\$1.14
<i>Annual Percent Change</i>	--	-1.8%	6.1%
<i>Three Year Percent Change</i>	--	--	4.2%
Vessel Service Miles/Total Miles	93.1%	90.9%	89.3%
<i>Annual Percent Change</i>	--	-2.4%	-1.8%
<i>Three Year Percent Change</i>	--	--	-4.2%
Vessel Service Hours/Total Hours	95.0%	93.5%	91.9%
<i>Annual Percent Change</i>	--	-1.6%	-1.8%
<i>Three Year Percent Change</i>	--	--	-3.3%
Farebox Revenue/Operating Cost	60.9%	65.9%	65.3%
<i>Annual Percent Change</i>	--	8.3%	-0.9%
<i>Three Year Percent Change</i>	--	--	7.2%
OPERATIONS			
Vessel Operations Cost/Total Operating Cost	56.8%	54.8%	55.5%
<i>Annual Percent Change</i>	--	-3.5%	1.3%
<i>Three Year Percent Change</i>	--	--	-2.3%
Vessel Operations Cost/Vessel Service Hour	\$1,223.08	\$1,204.30	\$1,219.10
<i>Annual Percent Change</i>	--	-1.5%	1.2%
<i>Three Year Percent Change</i>	--	--	-0.3%
Operator Sched. Absences/Total Hours Worked	11.9%	11.7%	11.2%
<i>Annual Percent Change</i>	--	-2.0%	-3.8%
<i>Three Year Percent Change</i>	--	--	-5.8%
Operator Unsched. Absences/Total Hours Worked	4.0%	4.1%	7.0%
<i>Annual Percent Change</i>	--	3.2%	69.1%
<i>Three Year Percent Change</i>	--	--	74.5%
Operator Pay Hours to Platform Hours - Actual	256.2%	273.2%	289.1%
<i>Annual Percent Change</i>	--	6.6%	5.8%
<i>Three Year Percent Change</i>	--	--	12.8%
Trips On-Time/Total Trips	96.7%	91.7%	93.1%
<i>Annual Percent Change</i>	--	-5.2%	1.5%
<i>Three Year Percent Change</i>	--	--	-3.7%

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
OPERATIONS (continued)			
Complaints/10,000 Unlinked Passenger Trips	1.52	1.17	1.18
<i>Annual Percent Change</i>	--	-22.7%	0.5%
<i>Three Year Percent Change</i>	--	--	-22.3%
Missed Trips/Total Trips	0.4%	0.1%	0.1%
<i>Annual Percent Change</i>	--	-69.4%	7.3%
<i>Three Year Percent Change</i>	--	--	-67.1%
MAINTENANCE			
Vessel + Non-Ves. Maint. Cost/Total Operating Cost	16.1%	17.4%	16.4%
<i>Annual Percent Change</i>	--	8.1%	-5.8%
<i>Three Year Percent Change</i>	--	--	1.8%
Vessel Maintenance Cost/Vessel Service Mile	\$21.50	\$22.62	\$21.32
<i>Annual Percent Change</i>	--	5.2%	-5.7%
<i>Three Year Percent Change</i>	--	--	-0.8%
Maintenance Pay Hours/Vessel Service Hours	188.6%	217.5%	190.2%
<i>Annual Percent Change</i>	--	15.3%	-12.5%
<i>Three Year Percent Change</i>	--	--	0.8%
Maintenance Employee Scheduled Absences	10.6%	12.7%	12.0%
<i>Annual Percent Change</i>	--	19.6%	-5.4%
<i>Three Year Percent Change</i>	--	--	13.2%
Maintenance Employee Unscheduled Absences	5.2%	12.9%	5.6%
<i>Annual Percent Change</i>	--	146.6%	-56.2%
<i>Three Year Percent Change</i>	--	--	8.1%
Spare Vessels/Total Vessels	14.3%	14.3%	0.0%
<i>Annual Percent Change</i>	--	0.0%	-100.0%
<i>Three Year Percent Change</i>	--	--	-100.0%
Mean Distance between Major Failures (Miles)	(a)	52,256	110,006
<i>Annual Percent Change</i>	--	--	110.5%
<i>Three Year Percent Change</i>	--	--	--
Mean Distance between All Failures (Miles)	100,478	29,860	44,002
<i>Annual Percent Change</i>	--	-70.3%	47.4%
<i>Three Year Percent Change</i>	--	--	-56.2%

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
SAFETY			
Reportable Accidents/100,000 Vessel Miles	0.0	0.0	0.0
<i>Annual Percent Change</i>	--	--	--
<i>Three Year Percent Change</i>	--	--	--
Casualty & Liability Cost/Vessel Service Hour	\$83.60	\$46.57	\$91.59
<i>Annual Percent Change</i>	--	-44.3%	96.7%
<i>Three Year Percent Change</i>	--	--	9.6%
Casualty & Liability Cost/Vessel Service Mile	\$6.27	\$3.34	\$6.62
<i>Annual Percent Change</i>	--	-46.8%	98.3%
<i>Three Year Percent Change</i>	--	--	5.5%
Lost Days Due to Industrial Accidents	2,705	6,308	4,362
<i>Annual Percent Change</i>	--	133.2%	-30.8%
<i>Three Year Percent Change</i>	--	--	61.3%

(a) No major failures reported this year

Paratransit

GGBHTD's paratransit functional area performance trends for the audit period are discussed below and presented in Exhibit 12.

- Service Planning
 - The operating cost per passenger mile decreased by more than 30 percent between FY2015 and FY2016, corresponding with the new contract with Marin Transit wherein GGBHTD is responsible for a much larger portion of the intra-county paratransit trips.
 - There was an increase in the portion of vehicle miles traveled that were in service, from 82 percent in FY2015 to about 85 percent subsequently.
 - Similar results were recorded for vehicle hours in service, which increased from 84 percent to about 87 percent.
 - The paratransit farebox recovery ratio went up noticeably in each year, from 6.4 percent in FY2015 to 8.3 percent by FY2017 (a 30 percent overall increase).

- Operations
 - Vehicle operations costs increased from 63.5 percent of total operating costs in FY2015 to 70 percent or more in the last two years, while vehicle operations costs per service hour went down in each year from \$80 to \$60 (more than a 25 percent decrease).
 - Schedule adherence improved from about 90 percent in FY2015 to 94 percent in FY2016 and FY2017.
 - The complaint rate decreased by nearly 75 percent, from 1.5 complaints per 1,000 passenger trips in FY2015 to 0.4 in FY2017. Most of the decrease occurred in FY2016.
 - The incidence of missed trips decreased from 0.04 percent in the first two years to 0.02 percent in FY2017.

- There were no ADA trip denials.
- The trip cancellation rate decreased from 67 percent of total ADA trips in FY2015 to 35 percent subsequently. This trend reflects GGBHTD’s responsibility expanding from only inter-county paratransit trips in FY2015 to also include about 25 percent of the Marin intra-county trips in the following years. It has been GGBHTD’s experience that the inter-county service has a much higher cancellation rate than the local service. Riders tend to schedule inter-county trips further in advance, with consequently more cancellations as the riders’ plans change. In addition, most of these cancellations are made several days in advance and thus have little effect on service delivery.
- Late trip cancellations went up slightly from 3.3 to 3.6 percent.
- The passenger no-show rate remained at about three percent of total ADA trips through the period.
- Maintenance
 - Total maintenance costs (vehicle plus non-vehicle) rose sharply from about five percent of total operating costs in the first year to 17 percent in the following years.
 - At the same time, vehicle maintenance costs per service mile more than doubled from \$0.21 to \$0.45.
 - The vehicle spare ratio dropped from 43 percent in FY2015 to about 15 percent in the remainder of the period, corresponding with the new paratransit contract with Marin Transit noted above.
 - No mechanical failures were reported in FY2016. In the other years, all failures were designated as major, and the mean distance between them was just under 50,000 miles.
- Safety
 - The rate of reportable accidents improved by 30 percent, from 3.6 per 100,000 vehicle miles in FY2015 to 2.5 in FY2017.

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The following is a brief summary of the paratransit functional trend highlights between FY2015 and FY2017:

- Service Planning results showed a 30 percent net decrease in the cost per passenger mile that coincided with GGBHTD's expanded intra-county paratransit service as of FY2016. There were also some increases in vehicle miles and hours in service, to 85 and 87 percent respectively, and the farebox recovery ratio steadily rose from 6.4 to 8.3 percent by FY2017.
- Operations results showed vehicle operations costs increasing moderately to 70 percent of total costs, while vehicle operations costs per service hour went down by more than 25 percent. Schedule adherence improved from 90 to 94 percent, the complaint rate was reduced by 75 percent, missed trips went down to 0.02 percent, and there were no ADA trip denials. Trip cancellations decreased from 67 percent of total ADA trips in FY2015 to 35 percent subsequently, as GGBHTD's responsibility expanded from only inter-county paratransit trips to also include some Marin intra-county trips. Inter-county trip cancellations tend to be made several days in advance and thus have little effect on service delivery. The late trip cancellation and passenger no-show rates both remained at about three percent.
- Maintenance results showed total maintenance costs rising sharply from five to 17 percent of total costs, and vehicle maintenance costs per mile more than doubling. At the same time, the vehicle spare ratio dropped from 43 percent to 15 percent, coinciding with GGBHTD's expanded intra-county paratransit service. Mechanical failure rates were similar in the first and last years, and no failures were reported in FY2016.
- Safety results showed a 30 percent improvement in the reportable accident rate.

Exhibit 12: Functional Performance Trends – Paratransit

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
SERVICE PLANNING			
Total Operating Cost/Passenger Mile	\$6.17	\$4.27	\$4.19
<i>Annual Percent Change</i>	--	-30.7%	-2.1%
<i>Three Year Percent Change</i>	--	--	-32.2%
Vehicle Service Miles/Total Miles	81.6%	85.2%	84.9%
<i>Annual Percent Change</i>	--	4.4%	-0.4%
<i>Three Year Percent Change</i>	--	--	4.0%
Vehicle Service Hours/Total Hours	83.6%	87.3%	86.7%
<i>Annual Percent Change</i>	--	4.5%	-0.7%
<i>Three Year Percent Change</i>	--	--	3.8%
Farebox Revenue/Operating Cost	6.4%	7.2%	8.3%
<i>Annual Percent Change</i>	--	12.7%	15.0%
<i>Three Year Percent Change</i>	--	--	29.6%
OPERATIONS			
Vehicle Operations Cost/Total Operating Cost	63.5%	71.1%	69.9%
<i>Annual Percent Change</i>	--	11.9%	-1.7%
<i>Three Year Percent Change</i>	--	--	10.0%
Vehicle Operations Cost/Vehicle Service Hour	\$80.85	\$63.67	\$59.51
<i>Annual Percent Change</i>	--	-21.3%	-6.5%
<i>Three Year Percent Change</i>	--	--	-26.4%
Trips On-Time/Total Trips	89.8%	94.1%	94.1%
<i>Annual Percent Change</i>	--	4.8%	0.1%
<i>Three Year Percent Change</i>	--	--	4.8%
Complaints/1,000 Unlinked Passenger Trips	1.5	0.5	0.4
<i>Annual Percent Change</i>	--	-64.9%	-22.8%
<i>Three Year Percent Change</i>	--	--	-72.9%
Missed Trips/Total Trips	0.04%	0.04%	0.02%
<i>Annual Percent Change</i>	--	-12.7%	-53.2%
<i>Three Year Percent Change</i>	--	--	-59.1%
ADA Trip Denials/Total ADA Trips	0.0%	0.0%	0.0%
<i>Annual Percent Change</i>	--	--	--
<i>Three Year Percent Change</i>	--	--	--
Trip Cancellations/Total ADA Trips	67.1%	36.1%	34.5%
<i>Annual Percent Change</i>	--	-46.2%	-4.5%
<i>Three Year Percent Change</i>	--	--	-48.6%

FUNCTION/Indicator	Actual Performance		
	FY2015	FY2016	FY2017
OPERATIONS (continued)			
Late Trip Cancellations/Total ADA Trips	3.3%	3.5%	3.6%
<i>Annual Percent Change</i>	--	7.4%	2.4%
<i>Three Year Percent Change</i>	--	--	10.0%
No-Shows/Total ADA Trips	2.9%	3.4%	3.0%
<i>Annual Percent Change</i>	--	14.6%	-11.5%
<i>Three Year Percent Change</i>	--	--	1.5%
MAINTENANCE			
Vehicle + Non-Veh. Maint. Cost/Total Operating Cost	5.3%	16.6%	17.0%
<i>Annual Percent Change</i>	--	211.5%	2.3%
<i>Three Year Percent Change</i>	--	--	218.7%
Vehicle Maintenance Cost/Vehicle Service Mile	\$0.21	\$0.43	\$0.45
<i>Annual Percent Change</i>	--	99.9%	5.0%
<i>Three Year Percent Change</i>	--	--	109.9%
Spare Vehicles/Total Vehicles	42.9%	15.0%	16.7%
<i>Annual Percent Change</i>	--	-65.0%	11.1%
<i>Three Year Percent Change</i>	--	--	-61.1%
Mean Distance between Major Failures (Miles)	46,593	(a)	49,193
<i>Annual Percent Change</i>	--	--	--
<i>Three Year Percent Change</i>	--	--	5.6%
Mean Distance between All Failures (Miles)	46,593	(a)	49,193
<i>Annual Percent Change</i>	--	--	--
<i>Three Year Percent Change</i>	--	--	5.6%
SAFETY			
Reportable Accidents/100,000 Vehicle Miles	3.58	3.39	2.48
<i>Annual Percent Change</i>	--	-5.2%	-26.7%
<i>Three Year Percent Change</i>	--	--	-30.5%

(a) No failures reported this year

VII. CONCLUSIONS AND RECOMMENDATIONS

The preceding sections presented a review of GGBHTD's transit service performance during the three-year period of FY2015 through FY2017 (July 1, 2014 through June 30, 2017). They focused on TDA compliance issues including trends in TDA-mandated performance indicators and compliance with selected sections of the state Public Utilities Code (PUC). They also provided the findings from an overview of GGBHTD's data collection activities to support the TDA indicators, actions taken to implement recommendations from the prior performance audit, and a review of selected key functional performance results.

Conclusions

The key findings and conclusions from the individual sections of this performance audit are summarized below:

- Data Collection – While this review has determined that GGBHTD is in compliance with the data collection and reporting requirements for all five TDA statistics, it was learned that delays in the schedule resulting from traffic congestion -- primarily on the Highway 101 and Interstate 580/Richmond Bridge corridors, as well as in the City of San Francisco -- are not currently captured in the calculation of vehicle service hours. Regardless, the statistics collected over the six-year review period generally appear to be consistent with the TDA definitions, and indicate general consistency in terms of the direction and magnitude of the year-to-year changes across the statistics.
- TDA Performance Trends

GGBHTD's performance trends for the five TDA-mandated indicators were analyzed by mode. A six-year analysis period was used for all the

indicators. In addition, component operating costs were analyzed for the six-year period.

Bus Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

- There was an average annual increase in the operating cost per hour of 5.5 percent, or 2.8 percent in inflation adjusted dollars. The largest annual increase (over 10 percent) occurred in FY2015.
- The cost per passenger increased on average by 16.3 percent per year, which amounted to an average annual increase of 13.3 percent in constant FY2012 dollars.
- Passenger productivity showed negative trends, with passengers per vehicle service hour decreasing overall by 9.3 percent annually, and passengers per vehicle service mile decreasing by 10.6 percent per year.
- Employee productivity increased an average 3.5 percent per year.
- All of these results were impacted by the removal of Marin local bus services from GGBHTD’s NTD reporting effective in FY2015.

The following is a brief summary of the component operating costs trend highlights for the bus between FY2012 and FY2017:

- Noticeable decreases in total costs and most component costs categories in FY2015 corresponded with removing Marin local bus services from GGBHTD’s NTD reporting.
- The most significant change was an average annual increase of 16.7 percent in the casualty/liability area. At the same time, fuel/lubricants costs decreased on average by 13.4 percent per year.
- Labor and fringe benefits costs each represented about 40 percent of the total costs, and showed little overall change over the six years.

- The remaining cost categories generally also saw modest changes, with each contributing six percent or less to total costs in each year.

Ferry Service – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

- There was an average annual increase in the operating cost per hour of 3.2 percent, or 0.5 percent in inflation adjusted dollars. Most of the increase was in the first half of the review period.
- The cost per passenger increased on average by 1.3 percent per year, which amounted to an average annual decrease of 1.3 percent in constant FY2012 dollars.
- Passenger productivity showed moderately positive trends, with passengers per vessel service hour increasing by 1.8 percent per year overall, and passengers per vehicle service mile increasing by 1.2 percent.
- Employee productivity decreased an average four percent per year.

The following is a brief summary of the component operating costs trend highlights for the ferry service between FY2012 and FY2017:

- Overall, operating costs increased by 4.2 percent annually, but there were larger increases in most component cost categories.
- Fuels/lubricants costs decreased by 5.8 percent annually an average, and over the period went down from 23 to 14 percent of total costs.
- Labor costs, followed closely by fringe benefits costs, together comprised the largest share of total costs – about 50 to 60 percent depending on the year.
- Services costs contributed between 12 and 16 percent of total costs, while the remaining cost categories each generally contributed less than five percent.

Paratransit – The following is a brief summary of the TDA performance trend highlights over the six-year period of FY2012 through FY2017:

- There was an average annual decrease in the operating cost per hour of 1.6 percent, or 4.1 percent in inflation adjusted dollars.
- The cost per passenger decreased on average by 14 percent per year, which amounted to an average annual decrease of 16.2 percent in constant FY2012 dollars.
- Passengers per vehicle service hour and vehicle service mile both increased substantially -- by 14.3 percent and 21.7 percent on average per year, respectively.
- All of these results were significantly impacted by a major GGBHTD paratransit service expansion from a new contract with Marin Transit that went into effect during FY2016.

The following is a brief summary of the component operating costs trend highlights for the paratransit service between FY2012 and FY2017:

- Total annual costs increased by 14.1 percent on average, driven by a corresponding increase in purchased transportation costs – by far the largest component cost category.
 - These results were significantly impacted by a major GGBHTD paratransit service expansion from a new contract with Marin Transit that went into effect during FY2016.
 - Purchased transportation costs continued to be the source of at least 98 percent of all costs in all six years.
 - In-house labor and fringe benefit costs showed significant percent changes as well, but they comprised a very small portion of the total costs.
- PUC Compliance – GGBHTD is in compliance with the sections of the state PUC that were reviewed as part of this performance audit. The sections reviewed included requirements concerning CHP safety inspections, labor

contracts, reduced fares, Welfare-to-Work, revenue sharing, and evaluation of passenger needs.

- Status of Prior Audit Recommendations – The recommendation from the prior audit is considered to have been implemented. During recent prior TDA audits, it was found that GGBHTD’s cost efficiency was generally worsening, with the cost per vehicle/vessel service hour increasing for each mode -- largely due to reductions in service levels combined with increases in operations costs. It was recommended that GGBHTD develop mode-specific strategies to address the situation aggressively so that cost per hour increases over the next few years did not continue to spiral upwards. GGBHTD reported numerous plans in various areas were underway during the previous and current audit periods for reducing costs, and increasing service hours and ridership. Specific plans in each area continue to be active, and apply to the bus service, ferry service, bus and ferry service, and in one instance to the paratransit service.

Cost per hour trends during the current review period (FY2012 through FY2017) were more positive overall than those noted in the prior audit. Modal results indicate inflation-adjusted average annual increases of 2.8 percent for bus and 0.5 percent for ferry, but a decrease for paratransit. Annual results for FY2017 compared to FY2016 show an increase in the cost per hour for only for bus (4.2 percent, inflation adjusted), with decreases for both ferry and paratransit. Efforts to reduce bus hourly costs have been impacted by increased bus travel times associated with traffic congestion, along with severe degradation in the operation of carpool lanes in Marin County. In light of these trend results and exceptional circumstances, GGBHTD appears to be adequately controlling its cost efficiency across all service modes.

- Functional Performance Indicator Trends

To further assess GGBHTD’s performance over the past three years, a detailed set of systemwide and modal functional area performance indicators was defined and reviewed.

Systemwide – The following is a brief summary of the systemwide functional trend highlights between FY2015 and FY2017:

- Administrative costs decreased moderately to 25 percent of total operating costs, and decreased moderately overall to \$91 per vehicle service hour in FY2017.
- Marketing costs increased to more than six percent of total administrative costs in the last two years, and rose to \$0.28 per passenger trip in FY2017.
- The systemwide farebox recovery ratio was just above 34 percent in both FY2015 and FY2017.

Bus Service – The following is a brief summary of the bus service functional trend highlights between FY2015 and FY2017:

- Service Planning results showed a small decrease in the scheduled operator pay to platform ratio to 217 percent by FY2017, a 32 percent increase in the cost per passenger mile, consistently more than 85 percent of vehicle miles and hours in service, and the bus farebox recovery ratio at about 21.5 percent in both FY2015 and FY2017.
- Operations results showed about 60 percent of operating costs consistently incurred from vehicle operations but a 14 percent increase in vehicle operations costs per hour. Virtually all scheduled vehicle service miles were actually operated. Operator scheduled absences were steady at about 12 percent of total work hours, and unscheduled absences at 20 percent. The actual operator pay to platform ratio decreased slightly to 252 percent. Schedule adherence went up from 83 to 86 percent, with little net change in the complaint rate and missed trips down to 0.1 percent in FY2017.
- Maintenance results showed total maintenance costs steady at 15 percent of total costs but vehicle maintenance costs increasing by 19 percent per mile, and maintenance pay hours increasing by 12 percent compared to service hours. Maintenance employee scheduled absences were steady at 10.7 percent with a decrease in the unscheduled rate to 4.5 percent. The vehicle spare ratio

decreased overall from 28 to 22 percent. The major mechanical failure rate improved moderately, while the rate for all failures worsened overall but showed some improvement in the last year.

- Safety results showed the preventable accident rate improving steadily, but sharp increases in the casualty/liability cost rates, and lost days due to industrial accidents more than doubling. However, the latter represents lost days from claims originating over multiple years. GGBHTD recently implemented an Alternative Dispute Resolution (ADR) program which reportedly has resulted in a net decrease in lost days.

Ferry Service – The following is a brief summary of the ferry service functional trend highlights between FY2015 and FY2017:

- Service Planning results showed a small decrease in the scheduled operator pay to platform ratio to 220 percent, a 4.2 percent increase in the cost per passenger mile, moderate decreases in vehicle miles and hours in service to 89 and 92 percent respectively, and the farebox recovery ratio rising from 61 to more than 65 percent.
- Operations results showed operating costs incurred from vessel operations steady at about 55 percent, and also steady vessel operations costs per hour. Operator scheduled absences remained at about 11 percent of total work hours, while unscheduled absences went up from four to seven percent by FY2017, the latter due to unusually high FMLA and medical leave activity. The actual operator pay to platform ratio climbed to 289 percent, schedule adherence went down a few points from 97 percent in FY2015, the rate of complaints went down by 22 percent, and missed trips decreased to 0.1 percent in FY2017.
- Maintenance results showed total maintenance costs steady at 16 percent of total costs and vessel maintenance costs at \$22 per mile. Maintenance pay hours were about 190 percent of service hours in both FY2015 and FY2017. Scheduled absences remained near 12 percent, while the unscheduled absence rate was five percent except for a spike to 12.9 percent in FY2016 due to unusually high FMLA and medical leave activity among the small number of maintenance

employees. The vessel spare ratio decreased from one vessel to none with the new Tiburon service in FY2017. The trend in major mechanical failures was generally positive, while the rate for all failures worsened overall but showed noticeable improvement in the last year.

- Safety results showed no reportable ferry accidents during the audit period, moderately increasing casualty/liability cost rates, and lost days due to industrial accidents more than doubling in FY2016 but a turnaround in FY2017.

Paratransit – The following is a brief summary of the paratransit functional trend highlights between FY2015 and FY2017:

- Service Planning results showed a 30 percent net decrease in the cost per passenger mile that coincided with GGBHTD's expanded intra-county paratransit service as of FY2016. There were also some increases in vehicle miles and hours in service, to 85 and 87 percent respectively, and the farebox recovery ratio steadily rose from 6.4 to 8.3 percent by FY2017.
- Operations results showed vehicle operations costs increasing moderately to 70 percent of total costs, while vehicle operations costs per service hour went down by more than 25 percent. Schedule adherence improved from 90 to 94 percent, the complaint rate was reduced by 75 percent, missed trips went down to 0.02 percent, and there were no ADA trip denials. Trip cancellations decreased from 67 percent of total ADA trips in FY2015 to 35 percent subsequently, as GGBHTD's responsibility expanded from only inter-county paratransit trips to also include some Marin intra-county trips. Inter-county trip cancellations tend to be made several days in advance and thus have little effect on service delivery. The late trip cancellation and passenger no-show rates both remained at about three percent.
- Maintenance results showed total maintenance costs rising sharply from five to 17 percent of total costs, and vehicle maintenance costs per mile more than doubling. At the same time, the vehicle spare ratio dropped from 43 percent to 15 percent, coinciding with

GGBHTD's expanded intra-county paratransit service. Mechanical failure rates were similar in the first and last years, and no failures were reported in FY2016.

- Safety results showed a 30 percent improvement in the reportable accident rate.

Recommendations

1. TAKE STEPS TO ACCOUNT FOR CONGESTION DELAYS IN THE CALCULATION OF VEHICLE SERVICE HOURS FOR THE BUS SYSTEM.

[Reference Section: II. Review of TDA Data Collection and Reporting Methods]

During the conduct of this review, GGBHTD staff indicated that the definitions and procedures used to derive the TDA indicator statistics generally are consistent with those used for the NTD reporting system. However, during discussions with GGBHTD staff it was learned that delays in the schedule resulting from traffic congestion -- primarily on the Highway 101 and Interstate 580/Richmond Bridge corridors, as well as in the City of San Francisco -- are not currently captured in the calculation of vehicle service hours. Rather, GGBHTD attempts to correct for delays in the system every three months during the "quarterly shake-up," by adding additional running time on routes that regularly run late due to congestion.

It is recommended that GGBHTD further investigate the issue to determine the impact congestion delays have on the reported service hours data, and determine how these hours can be accounted for in order to more accurately report vehicle service hours.

GGBHTD has recently started this process by developing a six-step corrective action plan to begin in May 2018 with a multi-departmental buy-in (Planning, Finance and Information Technology Departments) to correct the data and ensure that future reports and calculations will include congestion delays. In the final steps, appropriate upgrades to the Hastus Scheduling Software System are anticipated by October 2019, followed by submission of the first full year of accurately reported vehicle service hours to the NTD in October 2020.

**APPENDIX A:
INPUT STATISTICS FOR
FUNCTIONAL PERFORMANCE MEASURES**

Functional Performance Inputs - Systemwide (All Modes)

Data Item	FY2015	FY2016	FY2017	Source
Total Operating Costs	\$92,855,846	\$97,105,075	\$102,879,927	NTD F-40
Administrative Costs	\$24,858,984	\$23,559,082	\$25,883,204	NTD F-40
Vehicle Service Hours	266,331	286,342	284,823	NTD S-10 (all modes)
Marketing Costs	\$1,166,926	\$1,548,446	\$1,609,123	IFAS (less Bridge Allocation)
Unlinked Passenger Trips	6,162,868	6,083,797	5,698,961	NTD S-10 (all modes)
Farebox Revenue (All Modes)	\$31,695,797	\$36,378,818	\$35,506,436	NTD F-10

Functional Performance Inputs – Bus Service

Data Item	FY2015	FY2016	FY2017	Source
Operator Pay Hours - Scheduled	624,331	617,135	603,996	Hastus (scheduling software)
Operator Pay Hours - Actual	701,751	707,905	700,159	Hastus, IFAS (financial system)
Vehicle Service Miles - Scheduled	4,180,136	4,302,947	4,253,453	NTD S-10 MB
Vehicle Service Miles - Actual	4,161,563	4,266,294	4,248,934	NTD S-10 MB
Total Vehicle Miles	4,822,188	4,981,706	4,925,924	NTD S-10 MB
Platform Hours - Scheduled	270,511	281,148	277,816	Transtat
Platform Hours - Actual	269,629	279,463	277,608	NTD S-10 MB
Vehicle Service Hours	242,130	249,002	248,288	NTD S-10 MB
Total Vehicle Hours	269,629	279,463	277,608	NTD S-10 MB
Unlinked Passenger Trips	3,612,638	3,498,627	3,137,403	NTD S-10 MB
Farebox Revenue	\$13,221,360	\$16,530,973	\$15,028,292	NTD F-10
Total Operating Costs	\$61,338,768	\$65,085,966	\$69,837,631	NTD F-30 MB
Passenger Miles	67,806,831	63,440,068	58,499,672	NTD S-10 MB
Vehicle Operations Costs	\$35,792,639	\$40,069,864	\$41,922,946	NTD F-30 MB
Total Operator Time (Days)	50,881	53,774	53,031	Manpower Report, GGT+MT
Operator Scheduled Absences (Days)	6,396	6,517	6,844	Manpower Report, GGT+MT
Operator Unscheduled Absences (Days)	10,643	11,738	10,486	Manpower Report, GGT+MT
Trips On-Time	83.1%	83.2%	86.0%	Scheduling OTP Reports
Total Trips	145,234	153,432	142,555	Transtat
Complaints	2,714	3,196	2,265	Marketing
Missed Trips	1,029	1,179	166	Transtat
Mechanic Pay Hours	89,854	98,177	98,777	Bus, Director of Maintenance
Servicer Pay Hours	33,801	38,734	43,783	Bus, Director of Maintenance
Total Maintenance Employee Time (Days)	123,655	136,911	142,560	Bus, Director of Maintenance
Maint. Employee Sched. Absences (Days)	13,405	14,684	15,276	Bus, Director of Maintenance
Maint. Employee Unsched. Absences (Days)	7,841	7,054	6,406	Bus, Director of Maintenance
Vehicle Maintenance Costs	\$8,142,914	\$8,818,402	\$9,885,010	NTD F-30 MB
Non-Vehicle Maintenance Costs	\$1,119,518	\$1,186,689	\$1,134,238	NTD F-30 MB
Spare Vehicles (Total less Maximum Service)	49	31	35	NTD S-10 MB
Total Vehicles	176	160	159	NTD S-10 MB
Revenue Vehicle Mechanical System Failures - Total	129	183	169	NTD R-20
Revenue Vehicle Mechanical System Failures - Major	76	95	75	NTD R-20
Preventable (Reportable) Accidents	171	155	148	Bus Operations
Casualty/Liability Costs	\$1,420,606	\$1,206,330	\$2,827,056	NTD F-30 MB
Lost Days - Industrial Accidents	833	1,770	1,975	Risk Management

Functional Performance Inputs – Ferry Service

Data Item	FY2015	FY2016	FY2017	Source
Operator Pay Hours - Scheduled	33,296	33,296	33,936	Ferry Operations
Operator Pay Hours - Actual	37,865	39,760	44,635	Payroll (Worked & PTO)
Vessel Service Miles	187,179	190,060	196,380	NTD S-10 MB
Total Vessel Miles	200,955	209,023	220,011	NTD S-10 MB
Platform Hours - Scheduled	14,820	14,565	15,456	Transtat
Platform Hours - Actual	14,777	14,553	15,439	NTD S-10 FB
Vessel Service Hours	14,043	13,614	14,184	NTD S-10 FB
Total Vessel Hours	14,777	14,553	15,439	NTD S-10 MB
Unlinked Passenger Trips	2,540,691	2,545,122	2,523,077	NTD S-10 MB
Farebox Revenue	\$18,391,914	\$19,694,939	\$20,320,630	NTD F-10
Total Operating Costs	\$30,224,047	\$29,893,726	\$31,138,174	NTD F-30 MB
Passenger Miles	27,687,110	27,884,986	27,369,741	NTD S-10 MB
Vessel Operations Costs	\$17,175,702	\$16,395,344	\$17,291,710	NTD F-30 MB
Total Operator Time (Days)	32,655	34,322	37,742	Payroll
Operator Scheduled Absences (Days)	3,897	4,014	4,245	Payroll
Operator Unscheduled Absences (Days)	1,313	1,424	2,648	Payroll
Trips On-Time	96.7%	91.7%	93.1%	Transtat
Total Trips	17,732	17,929	18,991	Transtat
Complaints	385	298	297	Marketing
Missed Trips	71	22	25	Transtat
Maintenance Pay Hours	26,487	29,605	26,978	Payroll
Total Maintenance Employee Time (Days)	22,865	23,575	22,928	Payroll
Maint. Employee Sched. Absences (Days)	2,427	2,992	2,754	Payroll - Scheduled PTO
Maint. Employee Unsched. Absences (Days)	1,195	3,038	1,295	Payroll - Unscheduled PTO
Vessel Maintenance Costs	\$4,024,028	\$4,299,454	\$4,187,564	NTD F-30 MB
Non-Vessel Maintenance Costs	\$851,833	\$912,571	\$926,593	NTD F-30 MB
Spare Vessels (Total less Maximum Service)	1	1	0	NTD S-10 MB
Total Vessels	7	7	7	NTD S-10 MB
Revenue Vessel Mechanical System Failures - Total	2	7	5	NTD R-20
Revenue Vessel Mechanical System Failures - Major	0	4	2	NTD R-20
Preventable (Reportable) Accidents	0	0	0	Ferry Operations
Casualty/Liability Costs	\$1,173,942	\$634,019	\$1,299,089	NTD F-30 MB
Lost Days - Industrial Accidents	2,705	6,308	4,362	Risk Management

Functional Performance Inputs – Paratransit

Data Item	FY2015	FY2016	FY2017	Source
Vehicle Service Miles	228,132	427,200	375,851	NTD S-10 DR
Total Vehicle Miles	279,555	501,404	442,737	NTD S-10 DR
Vehicle Service Hours	10,158	23,726	22,351	NTD S-10 DR
Total Vehicle Hours	12,157	27,177	25,779	NTD S-10 DR
Unlinked Passenger Trips	9,539	40,048	38,481	NTD S-10 DR
Farebox Revenue	\$82,523	\$152,906	\$157,514	NTD F-10
Total Operating Costs	\$1,293,031	\$2,125,383	\$1,904,122	NTD F-30 DR
Passenger Miles	209,598	497,233	454,933	NTD S-10 DR
Vehicle Operations Costs	821,268	1,510,545	1,330,171	NTD F-30 DR
Trips On-Time	8,564	37,671	36,220	Monthly Contractor Reports
Total Trips	9,539	40,048	38,481	NTD S-10 DR
Complaints	14	21	15	Monthly Contractor Reports
Missed Trips	4	15	7	Monthly Contractor Reports
Total ADA Trips	9,539	40,048	38,481	Monthly Contractor Reports
ADA Trip Denials	0	0	0	Monthly Contractor Reports
Trip Cancellations	6,396	14,458	13,267	Monthly Contractor Reports
Late Trip Cancellations	312	1,407	1,385	Monthly Contractor Reports
No Shows	279	1,342	1,142	Monthly Contractor Reports
Vehicle Maintenance Costs	\$48,762	\$182,551	\$168,613	NTD F-30 DR
Non-Vehicle Maintenance Costs	\$20,198	\$170,573	\$155,037	NTD F-30 DR
Spare Vehicles	6	3	3	NTD S-10 DR
Total Vehicles	14	20	18	NTD S-10 DR
Revenue Vehicle Mechanical System Failures - Total	6	0	9	NTD R-20
Revenue Vehicle Mechanical System Failures - Major	6	0	9	NTD R-20
Preventable (Reportable) Accidents	10	17	11	Monthly Contractor Reports