



FY 2017-2019 Triennial Performance Audit of the Tahoe Transportation District (TTD)



Submitted to:

TAHOE REGIONAL
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Executive Summary

The Tahoe Regional Planning Agency (TRPA) engaged Michael Baker International to conduct the Transportation Development Act (TDA) triennial performance audit of the public transit operators under its jurisdiction in the Tahoe Basin. This performance audit is conducted for the Tahoe Transportation District (TTD, District) covering the most recent triennial period, fiscal years (FY) 2016–17 through 2018–19.

The audit includes a review of the following areas:

- Compliance with TDA Requirements
- Status of Prior Audit Recommendations
- Transit System Performance Trends
- Detailed Functional Review

From the review, recommendations were developed to improve the operational efficiency and effectiveness of TTD.

Compliance with TDA Requirements

The District has satisfactorily complied with eight of the nine applicable requirements. The District was in partial compliance regarding farebox recovery attainment. Two compliance requirements did not apply to TTD (blended and urbanized farebox recovery ratios¹).

Status of Prior Audit Recommendations

TTD satisfactorily implemented each of the four prior audit recommendations. The recommendations implemented pertained to the preparation and submittal of separate State Controller Reports for fixed-route and Americans with Disabilities Act (ADA) demand-response service, the adoption of an urbanized area farebox recovery ratio, inclusion of locally generated revenues in farebox recovery, and calculation of the farebox recovery ratio in the annual Basic Financial Statements.

Transit System Performance Trends

1. The farebox recovery ratio was 10.11 percent system-wide in FY 2017, 9.23 percent for fixed route and 9.65 percent for demand response in FY 2018, and 10.59 percent for fixed route and 9.62 percent for demand response in FY 2019 based on audited data. Given the Tahoe region's new urbanized status, TRPA adopted an urbanized area farebox ratio on September

¹ Although TRPA adopted an urban farebox ratio standard for TTD in September 2017, the agency granted TTD a five-year exemption allowable under TDA statute to meet the new urban ratio.

27, 2017, pursuant to Resolution 2017-14. During the audit period, the rural fare revenue ratio continued to apply.

2. Operating cost per vehicle service hour, an indicator of cost efficiency, increased 69.4 percent system-wide from \$97.20 in the FY 2016 base year to \$164.71 in FY 2019 based on audited data. Operating costs increased 13.1 percent system-wide as a result of creating a more stable operating environment from taking the service in-house such as bringing vehicle maintenance up to standard and hiring human resources staff to address driver turnover. Operating hours decreased by 33.2 percent in response to changing funding structures including from urbanized area designation and elimination of Route 21X; personnel shortages; and lack of serviceable vehicles and replacement fleet. At the modal level using a mix of audited and unaudited data, cost per hour increased 86.7 percent on the fixed-route service, and by 55.8 percent on the ADA demand-response service. Over time, in FYs 2018 and 2019, operating expenses began to level out as the agency built efficiencies under its new organizational structure.
3. Operating cost per passenger, an indicator of cost effectiveness, increased more than one-and-a-half fold, from \$6.47 in FY 2016 to \$17.47 in FY 2019 system-wide based on audited data. There was a decline in ridership from multiple factors such as the push from funding partners to shift revenue hours to increase frequency on local routes at the expense of reducing daily operating hours; elimination of visitor services (winter shuttles, trolley); shortage of commercial bus operators; lack of funding for replacement fleet; insufficient transit infrastructure; frequent safety incidents resulting from unsafe conditions related to seasonal routes; and lack of funding for general operations of expanded services. Ridership system-wide decreased 58.1 percent, from 808,334 passengers in FY 2016 to 852,968 in FY 2017, but then further declined to 643,954 in FY 2018 during first round of restructuring and to 338,726 in FY 2019 during the second round of restructuring and lack of local funding support. Winter weather conditions and visitor traffic also impacted ridership in FY 2019. At the modal level, cost per passenger on the fixed-route service increased almost two-fold, whereas on the ADA demand-response service, this indicator increased 39.2 percent. The increase in cost per passenger is a direct result of the community's choice to focus on frequency rather than ridership.
4. Passengers per vehicle service hour, which measures the effectiveness of the service delivered, decreased 37.2 percent system-wide, from 15 passengers per hour in FY 2016 to 9.4 passengers per hour in FY 2019. Fixed-route operations reflected the system-wide trend with a decrease of 35.7 percent over the same period from 16.7 to 10.8 passengers per hour. ADA demand-response operations exhibited an increase of 11.9 percent from 2.5 to 2.8 passengers per hour. The trend in this indicator reflects the higher decline in ridership as compared to the decline in vehicle service hours.
5. Passengers per vehicle service mile, another indicator of service effectiveness, decreased 40.7 percent system-wide, from 1.02 passengers per mile in FY 2016 to 0.60 passengers per mile in FY 2019. For fixed-route operations, the number of passengers per service mile

decreased 40.5 percent from 1.12 to 0.66 passengers between FY 2016 and FY 2019. For ADA demand-response services, passengers per service mile increased 15.2 percent from 0.19 to 0.22 passengers per mile. System-wide and at the fixed-route level, passenger trips decreased 58.1 and 59.4 percent, respectively, whereas vehicle service miles decreased 29.4 and 31.7 percent, respectively.

Detailed Functional Review

1. In June 2016, TTD facilitated a coordinated transition to directly operate the system regarding personnel policies and procedures. While this change had anticipated consequences such as increased operating costs impacting performance measurement, this transition was necessary and resulted in a more structured and stable transit operation with greater accountability and oversight. Nevertheless, challenges remained regarding increased maintenance costs. Many of the buses in the fleet transitioned from the prior contract operator had years of useful life remaining and have required extensive maintenance to keep them in service. Compounding this, is the inability of TTD to secure the capital funding needed to replace the fleet. As the fleet continues to age, it is anticipated that TTD will incur increased maintenance costs as replacement fleet funding remains elusive. Compounding that reality is the few replacement buses TTD has been able to procure through competitive grants are battery electric that required even more capital spending on new and upgraded facilities, new tooling, and extensive training.
2. The limited number of drivers, fleet, and funding resources made it unsustainable for TTD to provide transit services more broadly. TTD decided to restructure transit services with clear direction to increase frequency improvements for local routes. Despite insufficient funding to accommodate increased frequency and maintain the existing system, TTD's Board adopted the Regressive Track recommendation within the SRTP noting a lack of local and regional financial support for public transit.
3. TTD has 60 positions in its transit division. Nonexempt employees have been represented under the Teamsters Local 533 of Reno, Nevada. The current four-year collective bargaining agreement (CBA) is from July 1, 2016, through June 30, 2020. The CBA reflects the legal changes from a private to a public entity and included 16 side letters. TTD reports a collaborative relationship with the Teamsters.
4. Planning and design work advanced on the Mobility Hub project at the Lake Tahoe Community College (LTCC) bus stop location. LTCC and the District continued to develop a memorandum of understanding during the fourth quarter of FY 2018 into the first quarter of FY 2019. The Mobility Hub will include a new bus shelter with overhead charging, supplemented by two pedestal plug-in chargers that will enable nightly charging of new electric vehicles being procured by TTD.
5. The District relies on a variety of grants and other funding mechanisms to support its transit system. Depending on the type of grant, match limits vary, which TTD budgets for. Grant

sources are derived from local, state, and federal programs. A master grant billing summary shows the grant balance, matching requirement, and responsible manager.

Recommendations

Performance Audit Recommendation	Background
<p>1. Continue assessment of additional locally generated revenue to meet urban farebox recovery.</p>	<p>TTD has made effort when reasonably possible to include local revenues along with passenger fares in farebox recovery. According to TTD, there is only so much local revenue that can be included in the farebox recovery calculation, as local revenue is needed to match capital projects or pay for operating cost not paid for by FTA grants. The inclusion of advertising and other local revenues in the farebox as shown in the CAFR is constrained by loss of additional revenues such as from Heavenly winter ski shuttles.</p> <p>Integral to sustaining a planned fare-free system, TTD has been involved in the One Tahoe Initiative for the development and implementation of regional revenue sources for capital projects, transit services, and operations. The levy of transportation user fees is one of the measures being explored. With adoption of the higher urbanized farebox ratio and the consideration of a fare-free transit system to meet larger planning goals in the Tahoe Region, it is suggested that TTD continue exploring and securing additional local revenue as allowed by State law to support farebox recovery as well as regional planning goals, such as from regional revenue in coordination with TMPO (TRPA), and local contributions such as pre-paid passenger fares through local partnerships.</p>
<p>2. Explore additional opportunities for local partnerships with transportation advocates and providers to increase operational productivity.</p>	<p>TTD experienced a decrease in ridership for multiple reasons described in this audit such as from the restructuring of its service to focus more on the local South Lake Tahoe and commuter markets, and discontinued seasonal casino and winter ski shuttle services. These events during the audit period contributed to declining TDA performance trends such as for passengers per</p>

Performance Audit Recommendation	Background
	<p>hour which decreased 37.2 percent system-wide, from 15.0 passengers per hour in FY 2016 to 9.4 passengers per hour in FY 2019.</p> <p>The public transit industry is rooted in forging agreements and partnerships to enhance service and productivity. TTD, as part of its strategy to increase transit's presence in the community, should continue strengthening its relationships with local transportation support organizations such as the South Shore Transportation Management Association (SS/TMA) to recapture passenger trips. Collaboration with the SS/TMA could further assist with public and stakeholder outreach efforts as well as garner support from the local business community for transit through sponsorship and purchase of passes and direct subsidies for employees.</p> <p>Also, Lake Tahoe Community College (LTCC) is a local institution linked to transit. Completion of the mobility hub on the campus with an electric charging station is an example of the active partnership between LTCC and TTD. The infrastructure anchors TTD's ability to provide transit as a widely visible student service on the college campus, which can lead to other discussions such as a fare pass program.</p> <p>Further, the mobility hub at LTCC provides convenient transfer/feeder point for micromobility modes such as bikes and scooters. Connectivity between transit and micromobility could be a solution to the "first-mile/last-mile" gap pervasive in the transit industry while extending the transit network that could draw transit attraction and retention. Pilot partnerships between micromobility and transit are being tested, and case studies could provide an operating formula to develop complementary modal solutions that encourage the integration of transit with micromobility.</p>

Performance Audit Recommendation	Background
	<p>These examples highlight the recommendation for TTD to continue building local relationships with existing and potential new partners that can spark greater interest in transit which lead to increased ridership and improved operational productivity.</p>
<p>3. Seek performance metrics that measure success of the new organizational structure.</p>	<p>TTD’s transition to an in-house service is a stark change from outsourcing operations and maintenance in the past. The multitude of transit studies and regional visioning plans in the Tahoe Basin and for TTD provide a backdrop to the strategies and goals for the system. With this new organizational structure as well as restructured service during the audit period, TTD has opportunity to craft performance measures that could align with new goals that were not present under contracted operations. For example, the transit vision specifically identifies three themes of safe, reliable, and attractive. Each theme when taken in context of transit operations relate to operational functions that can be measured and directly influence overall performance such as cost efficiency and service effectiveness.</p> <p>Based on development of TTDs identity and services implementation to meet these themes, either individually or in sum, a method to define success should be established using performance trends and indicators along these themes. These indicators may already be in existing documents such as the Short Range Transit Plan, Transit Master Plan, and TRPA dashboard analytics. Safety theme might associate and define success with objective measures taken over time such as number of accidents while in revenue vehicle service, number of CHP vehicle inspection findings, and number of workers compensation claims. Reliability might include on-time performance trends and daily vehicle pull-out rates, while attractiveness might include ridership changes and customer service or social media inquiries about</p>

Performance Audit Recommendation	Background
	the service. A core set of objective measures to gauge success over time under the new agency structure would bring additional visibility to the organization and service changes made to TTD.

Section I

Introduction

California’s Transportation Development Act (TDA) requires that a triennial performance audit be conducted of public transit entities that receive TDA revenues. The performance audit serves to ensure accountability in the use of public transportation revenue.

The Tahoe Regional Planning Agency (TRPA) engaged Michael Baker International to conduct the TDA triennial performance audit of the public transit operators under its jurisdiction in the Tahoe Basin. This performance audit is conducted for the Tahoe Transportation District (TTD, District) covering the most recent triennial period, fiscal years 2016–17 through 2018–19.

The purpose of the performance audit is to evaluate the District’s effectiveness and efficiency in its use of TDA funds to provide public transportation in its service area. This evaluation is required as a condition for continued receipt of these funds for public transportation purposes. In addition, the audit evaluates the District’s compliance with the conditions specified in the California Public Utilities Code (PUC). This task involves ascertaining whether the District is meeting the PUC’s reporting requirements. Moreover, the audit includes calculations of transit service performance indicators and a detailed review of the transit administrative functions. From the analysis that has been undertaken, recommendations were made which are intended to improve the performance of transit operations.

In summary, this TDA audit affords the opportunity for an independent, constructive, and objective evaluation of the organization and its operations that otherwise might not be available. The methodology for the audit included in-person interviews with TTD transit management via videoconferencing platform, collection and review of agency documents, data analysis, and review of Board agendas during the audit period². The *Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities* published by the California Department of Transportation (Caltrans) was used to guide the development and conduct of the audit.

Overview of the Transit System

Coordinated public transit services in the South Lake Tahoe region were developed in the 1990s as a response to increased traffic congestion and environmental impacts. Ridership on the then South Tahoe Area Ground Express was stagnant and there was duplication of services from the shuttle services operated by local casinos and ski resorts. Five public entities and five private sector entities formed the South Tahoe Area Transit Authority (STATA) to administer a coordinated public transit system in the South Lake Tahoe region that was branded under the name BlueGO. STATA eventually expanded to encompass 11 public and private entities. Those entities were Douglas County (Nevada), El Dorado County (California), TTD, TRPA, City of South Lake Tahoe, Ridge Tahoe

² Due to the 2020 COVID-19 Pandemic, videoconferencing and the review of Board agendas were employed in lieu of on-site observations as part of this audit’s methodology.

Property Owners' Association, and the parent companies of Heavenly Valley, Harveys Lake Tahoe, Horizon Casino, Montbleu Resort Casino & Spa, and Lakeside Inn and Casino.

BlueGO operated several transit service modes under contract including fixed and flex routes, commuter express routes, a summer trolley, winter seasonal services, and demand-response services. STATA filed for Chapter 11 bankruptcy in September 2010 and administration of BlueGO was transferred to TTD in November 2010. Pursuant to the Congressional Compact enacted in 1980 that created the District, TTD has the authority to own and operate transportation systems and facilities that serve the region. Since assuming administration of the transit system, TTD continued to contract out operations to a private transportation services provider. Effective July 1, 2016, TTD became a direct operator of the transit system to use public funds more efficiently and be more responsive to community needs.

The Tahoe Basin encompasses two states (California and Nevada), five counties (El Dorado and Placer Counties in California, and Douglas and Washoe Counties, plus a small portion of Carson City, a consolidated municipality in Nevada), and one incorporated city (South Lake Tahoe). The region has approximately 50,000 year-round residents and receives 3 million annual visitors. Based on the 2010 US Census, South Lake Tahoe's population is 21,403, a decline of 9.34 percent since the 2000 US Census. The senior citizen population, comprising residents aged 65 and over, is 9.79 percent. The 2020 population for South Lake Tahoe is estimated to be 22,525 as reported by the California Department of Finance. Based on the 2013-2017 American Community Survey estimates, the population in the TTD service area was 34,920.

Main highways serving the Tahoe Basin include US Highway 50 (US 50), California State Routes (SR) 28, 89, and 267, and Nevada SR 28, 207, and 431. US 50 (Lake Tahoe Boulevard) is the main arterial thoroughfare through South Lake Tahoe.

System Characteristics

TTD's transit services operate primarily on the south shore of Lake Tahoe and are composed of local fixed-route bus service and commuter bus service connecting South Lake Tahoe and its environs with Carson City and the Carson Valley in Nevada. The transit system included seasonal winter ski and casino shuttles, summer trolley service to Emerald Bay, and summer bus service from Incline Village to Sand Harbor. Due to insufficient operational capacity, the winter ski and casino shuttle services and Emerald Bay Trolley were discontinued as part of the 2019 Transit Plan, effective November 1, 2018.

The transit system operates daily. Hours of operation range from 5:50 a.m. to 8:28 p.m. Route transfers are coordinated at the Kingsbury, Stateline, and "Y" transit centers. A summary of TTD fixed-route services operated during the audit period is presented in Table I-1.

**Table I-1
TTD Fixed-Route & Commuter Services**

Route Number/Name	Description	Frequency/Operation	Destinations/Timepoints
10	Heavenly Village Winter Ski Shuttle (Seasonal)	Every 15 minutes from 6:30 a.m. to 6:00 p.m. (Monday through Friday) Every 10 minutes from 6:30 a.m. to 6:00 p.m. (Weekends)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ Heavenly Village Way & Bellamy Court ▪ Pioneer Trail/Moss Road ▪ Ski Run Blvd/Pioneer Trail ▪ Wildwood Avenue
11	Casino Corridor	Every 10 minutes from 6:30 a.m. to 8:00 a.m. and every 20 minutes from 8:00 a.m. to 6:30 p.m. (daily from 6:30 a.m. to 6:30 p.m.)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ Lake Parkway/Montbleu ▪ US 50/Lake Parkway ▪ Kingsbury Transit Center ▪ US 50/Stateline Avenue
12	Ski Run (Seasonal)	Every 30 minutes (daily 8:00 a.m. to 6:00 p.m.)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ US 50/Wildwood Avenue ▪ Ski Run Blvd (Ski Run Marina) ▪ US 50/Park Avenue
13	Lake Tahoe Boulevard Winter Ski Shuttle (Seasonal)	Every 30 minutes (daily 6:00 a.m. to 8:00 a.m.)	<ul style="list-style-type: none"> ▪ South Y Transit Center ▪ US 50/AI Tahoe Blvd ▪ US 50/Johnson Blvd ▪ Ski Run Blvd/Paradise Avenue ▪ Ski Run Blvd/Pioneer Trail ▪ Wildwood Avenue ▪ Pioneer Trail/Keller Rd ▪ Stateline Transit Center
14	Upper Nevada Winter Ski Shuttle (Seasonal)	Every 30 minutes from 8:00 a.m. to 6:00 p.m. (Monday through Friday) Every 15 minutes from 8:00 a.m. to 6:00 p.m. (Weekends)	<ul style="list-style-type: none"> ▪ Quaking Aspen Lane/Stagecoach Lodge ▪ Ridge Club Dr./The Ridge Clubhouse

Route Number/Name	Description	Frequency/Operation	Destinations/Timepoints
			<ul style="list-style-type: none"> ▪ South Benjamin Dr/(Boulder Lodge)
15	Winter Ski Shuttle (Seasonal)	Every 30 minutes from 8:00 a.m. to 6:00 p.m. (Monday through Friday) Every 20 minutes from 8:00 a.m. to 6:00 p.m. (Weekends)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ US 50/Lake Parkway (Montbleu) ▪ SR 207/Market Street ▪ South Benjamin Dr/(Boulder Lodge) ▪ Quaking Aspen Lane/Stagecoach Lodge
19X	Valley Express (Carson City – Minden)	Three morning and four afternoon/evening bidirectional trips (daily from 6:15 a.m. to 7:40 p.m.)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ Douglas County Community & Senior Center ▪ Carson Valley Inn ▪ South Curry Street ▪ Washington/Plaza
20X <i>(Combined with Route 23 to create Route 22 in November 2018)</i>	Daily Express	Four morning and four afternoon/evening bidirectional trips (daily from 5:30 a.m. to 9:00 p.m.)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ Kingsbury Transit Center ▪ Foothill Park and Ride ▪ Tillman Center ▪ Herbig Park/Senior Center
22	South Shore Service & Lake Express Daily	Every 60 minutes (daily from 5:50 a.m. to 8:17 p.m.)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ Kingsbury Transit Center ▪ Tramway Drive/Tina Court ▪ Quaking Aspen Ln/Ridge Club Drive ▪ Foothill Park and Ride ▪ Douglas County Community & Senior Center
23 <i>(Combined with Route 20X to create Route 22 in November 2018)</i>	South Shore Service	Every 60 minutes (daily from 7:20 a.m. to 1:25 a.m.)	<ul style="list-style-type: none"> ▪ Stateline Transit Center ▪ Kingsbury Transit Center ▪ Market Street

Route Number/Name	Description	Frequency/Operation	Destinations/Timepoints
			<ul style="list-style-type: none"> ▪ Tramway/Tina ▪ The Ridge Resorts
28	East Shore Express (Seasonal)	From June 24 to September 4, every 20 minutes (daily 10:20 a.m. to 6:40 p.m.)	<ul style="list-style-type: none"> ▪ Incline Village ▪ Sand Harbor
30	Emerald Bay Trolley (Seasonal)	From June 25 to July 11 (daily from 8:30 a.m. to 6:00 p.m.) From July 12 to September 5 (Fri, Sat, Sun, Mon only from 8:30 a.m. to 6:00 p.m.) September 6 to October 2 (Weekends only from 8:30 a.m. to 6:00 p.m.)	<ul style="list-style-type: none"> ▪ South “Y” Transit Center ▪ Camp Richardson ▪ Vikingsholm ▪ Meeks Bay ▪ Homewood ▪ Tahoe City Transit Center
50	South Shore Daily	Every 20 to 60 minutes (daily from 6:30 a.m. to 8:28 p.m.)	<ul style="list-style-type: none"> ▪ South “Y” Transit Center ▪ Barton Memorial Hospital ▪ US 50/Al Tahoe ▪ Lake Tahoe Community College ▪ Visitor/Senior Center ▪ US 50/Johnson Blvd ▪ Stateline Transit Center
55	South Shore Daily	Every 20 to 60 minutes (daily from 6:00 a.m. to 6:50 p.m.)	<ul style="list-style-type: none"> ▪ South “Y” Transit Center ▪ Barton Memorial Hospital ▪ US 50/Al Tahoe ▪ Lake Tahoe Community College ▪ Safeway ▪ Spruce Ave/Herbert Ave ▪ Ski Run Blvd/Spruce Ave ▪ Stateline Transit Center ▪ Kingsbury Transit Center

Source: TTD

Effective October 2, 2016, service on Route 21X was discontinued and daily schedules were implemented on Routes 19X, 20X, and 23. Effective June 2017, Route 28 -East Shore Express began operating two bidirectional trips between the Kingsbury Transit Center and Sand Harbor. Effective November 1, 2018, TTD shortened its service span from 20 hours to 14 hours a day. Routes 20X and 23 were combined to create Route 22.

ADA Demand-Response Service

TTD provides complementary demand-response service, compliant with the Americans with Disabilities Act (ADA) of 1990, which is intended for persons who are unable to:

- Travel to or from transit stops or stations within the service area;
- Independently board, ride, or exit fixed-route transit vehicles; or
- Otherwise independently “navigate the system.”

The demand-response service is available for trips beginning and ending within three-quarters of a mile of any fixed route in the City of South Lake Tahoe. Baseline paratransit services available for a \$3.00 fare to persons within a one-mile radius of existing fixed routes. Extended paratransit services available for a \$6.00 fare to persons within the eligible service area, but beyond a one-mile radius of existing fixed routes.

The ADA demand-response service is a shared-ride, curb-to-curb transport service based on proof of eligibility. The service is available to seniors age 65 and older with government-issued photo identification, veterans with service-connected disability designation on their Veterans Identification Card, and persons with disabilities who meet TTD’s eligibility criteria developed under the guidelines established pursuant to the ADA.

Fares

TTD’s fares are structured according to service type and passenger category. Reduced fares are available to seniors age 65 years and older, and reduced fare identification (I.D.) holders. Free trips were offered on the ski shuttles and for personal care attendants (PCA) accompanying a passenger with reduced fare I.D. card and PCA designation. The fare structure is shown in Table I-2.

**Table I-2
TTD Transit Fare Schedule**

Fare Categories	South Shore Service/Emerald Bay Trolley	Valley & Lake Express
<i>Normal Fares (Ages 5–64)</i>		
One Way	\$2.00	\$4.00
Day Pass	\$5.00	\$10.00
20-Ride Pass	n/a	\$60.00
Monthly Pass	\$60.00	\$120.00
<i>Reduced Fares (Seniors age 65 and older, disabled persons, and veterans)</i>		

Fare Categories	South Shore Service/Emerald Bay Trolley	Valley & Lake Express
One Way	\$1.00	\$2.00
Monthly Pass	\$45.00	n/a

Source: TTD

Fares charged on the East Shore Express are \$3.00 one way for the general public and \$1.50 for seniors aged 65 and older, and persons with disabilities. In June 2018, the Emerald Bay Shuttle fare was adjusted to \$4.00 per person (\$2.00 reduced fare).

Fleet

There were 34 vehicles in the total fleet during the audit period, including 23 vehicles in revenue service. The majority of the vehicles are powered by diesel or unleaded gasoline. All TTD transit vehicles are wheelchair accessible in compliance with the ADA. Table I-3 shows the vehicle fleet information.

**Table I-3
TTD Revenue Fleet**

Year	Make & Model	Quantity	Fuel Type	Seating Capacity
2005	Bluebird Xcel	1	Diesel	38 (2 W/C)
2006	El Dorado National Aerotech	1	Diesel	14 (2 W/C)
2006	Bluebird Xcel	1	Diesel	38 (2 W/C)
2008	NABI Xcel	2	Diesel	36 (2 W/C)
2008	NABI Low Floor	2	Hybrid	38 (2 W/C)
2008	El Dorado Aerotech	1	Unleaded	16 (2 W/C)
2009	NABI Low Floor	4	Diesel	27 (2 W/C)
2010	Starcraft Starlite	1	Unleaded	10 (2 W/C)
2012	Hometown Trolley X Line	1	Diesel	27 (2 W/C)
2015	El Dorado National Aerotech	3	Diesel	16 (2 W/C)
2015	El Dorado National Aeroelite	5	Diesel	30 (2 W/C)
2016	Ford T250	1	Diesel	8 (2 W/C)
Total		23		

Source: 2020 Fleet List, TTD

Note: W/C = wheelchair

The fleet is not assigned a service mode as most of the fleet is interchangeable. In addition to the revenue fleet, there are seven service vehicles in the non-revenue fleet and four surplus vehicles in the disposal fleet, composed of two former commuter and two former fixed-route vehicles.

Section II

Operator Compliance Requirements

This section of the audit report contains the analysis of the District’s ability to comply with state requirements for continued receipt of TDA funds. The evaluation uses the guidebook *Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Agencies* to assess transit operators. The guidebook contains a checklist of 11 measures taken from relevant sections of the PUC and the California Code of Regulations. Each requirement is discussed in the table below, including a description of the system’s efforts to comply with the requirements. In addition, the findings from the compliance review are described in the text following the table.

Table II-1 Operator Compliance Requirements Matrix		
Operator Compliance Requirements	Reference	Compliance Efforts
The transit operator has submitted annual reports to the RTPA based upon the Uniform System of Accounts and Records established by the State Controller. Report is due within seven (7) months after the end of the fiscal year (on or before January 31). The report shall contain underlying data from audited financial statements prepared in accordance with generally accepted accounting principles, if this data is available.	Public Utilities Code, Section 99243	Completion/submittal dates for both general public and specialized service reports: <i>General Public:</i> FY 2017: January 18, 2018 FY 2018: January 22, 2019 FY 2019: January 10, 2020 <i>Specialized Service:</i> FY 2017: December 27, 2017 FY 2018: December 19, 2018 FY 2019: January 10, 2020 Conclusion: Complied.
The operator has submitted annual fiscal and compliance audits to the RTPA and to the State Controller within 180 days following the end of the fiscal year (Dec. 27), or has received the appropriate 90-	Public Utilities Code, Section 99245	Completion/submittal dates: FY 2017: December 8, 2017 FY 2018: December 14, 2018 FY 2019: December 13, 2019 Conclusion: Complied

Table II-1 Operator Compliance Requirements Matrix		
Operator Compliance Requirements	Reference	Compliance Efforts
day extension by the RTPA allowed by law.		
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 1808.1 following a CHP inspection of the operator’s terminal.	Public Utilities Code, Section 99251 B	<p>The District participates in the CHP Transit Operator Compliance Program in which the CHP has conducted inspections within the 13 months prior to each TDA claim.</p> <p>Inspections were conducted at the TTD operations and maintenance facility located at 1669 Shop Street in South Lake Tahoe.</p> <p>Inspection dates applicable to the audit period were September 6-7, 2016; January 5, 2017; September 19, 2017; September 12-13 and 18, 2018; and September 15-17, 2019.</p> <p>The inspections conducted on September 6-7, 2016, were rated unsatisfactory due to noncompliance with the Department of Motor Vehicle’s Pull Notice Program involving an expired medical card. In addition, the inspection cited several vehicle violations involving general maintenance issues such as a low air warning on the white needle sets and an inoperative interior wheelchair ramp warning device. A reinspection was conducted within 120 days on January 5, 2017, which was rated satisfactory. All subsequent inspections conducted were rated satisfactory.</p>

Table II-1 Operator Compliance Requirements Matrix		
Operator Compliance Requirements	Reference	Compliance Efforts
		Conclusion: Complied
The operator’s claim for TDA funds is submitted in compliance with rules and regulations adopted by the RTPA for such claims.	Public Utilities Code, Section 99261	<p>As a condition of approval, the annual claims for Local Transportation Funds (LTF) and State Transit Assistance (STA) submitted by TTD are submitted in compliance with the rules and regulations adopted by TRPA. TTD and TRPA communicate on items to be submitted.</p> <p>Once the funds have been apportioned to El Dorado County, TTD is responsible for allocating its funds for the coming fiscal year. Given that TRPA chooses to use all TDA funds for transit services, TTD must allocate 100 percent of their apportionment to transit operations, capital, and oversight.</p> <p style="text-align: center;">Conclusion: Complied</p>
If an operator serves urbanized and non-urbanized areas, it has maintained a ratio of fare revenues to operating costs at least equal to the ratio determined by the rules and regulations adopted by the RTPA.	Public Utilities Code, Section 99270.1	<p>During the audit period, TTD adhered to a rural fare recovery ratio. TTD is not subject to an intermediate ratio combining rural and urban fare ratios.</p> <p style="text-align: center;">Conclusion: Not applicable</p>
The operator’s operating budget has not increased by more than 15% over the preceding year, nor is there a substantial increase or decrease in the scope of	Public Utilities Code, Section 99266	<p>Percentage change in the transit system’s operating budget:</p> <p>FY 2017: +16.4%</p> <p>FY 2018: +10.2%</p> <p>FY 2019: -6.6%</p>

Table II-1 Operator Compliance Requirements Matrix		
Operator Compliance Requirements	Reference	Compliance Efforts
operations or capital budget provisions for major new fixed facilities unless the operator has reasonably supported and substantiated the change(s).		<p>The increases in the FY 2017 and FY 2018 transit operating budgets were attributed to start-up of operations and maintenance being brought in-house, which included increased personnel costs and enhanced maintenance oversight.</p> <p><i>Source: TTD Transit Fund Budgets for FYs 2016–2019.</i></p> <p>Conclusion: Complied</p>
The operator’s definitions of performance measures are consistent with Public Utilities Code Section 99247, including (a) operating cost, (b) operating cost per passenger, (c) operating cost per vehicle service hour, (d) passengers per vehicle service hour, (e) passengers per vehicle service mile, (f) total passengers, (g) transit vehicle, (h) vehicle service hours, (i) vehicle service miles, and (j) vehicle service hours per employee.	Public Utilities Code, Section 99247	<p>The transit system’s definition of performance is consistent with PUC Section 99247. A review of performance data reports provided by TTD confirms that correct performance data are being collected. The Reporting Solutions software gives warnings when data goes outside of parameters, and TTD staff will check the information against the trip manifests.</p> <p>Conclusion: Complied</p>
If the operator serves an urbanized area, it has maintained a ratio of fare revenues to operating costs at least equal to one-fifth (20 percent), unless it is in a City with a population of less than 500,000, in which case it must maintain a ratio of fare	Public Utilities Code, Sections 99268.2, 99268.3, 99268.12, 99270.1	<p>During the audit period, TTD adhered to a rural fare recovery ratio.</p> <p>Given the Tahoe region’s new urbanized status, TRPA adopted an urbanized area farebox ratio on September 27, 2017, pursuant to Resolution 2017-14.</p>

Table II-1 Operator Compliance Requirements Matrix														
Operator Compliance Requirements	Reference	Compliance Efforts												
revenues to operating costs of at least equal to three-twentieths (15 percent), if so determined by the RTPA.		<p>TTD is currently required by law to maintain a farebox recovery ratio of 20 percent for fixed-route services and 10 percent for demand-response services to remain eligible for TDA funds.</p> <p>PUC Section 99270.2 allows for the TRPA to grant up to a five-year exemption to operators serving a newly designated urbanized area, in order to meet the updated ratio of fare revenues to operating costs.</p> <p>The TRPA Board set the required farebox recovery ratio of TTD fixed-route services at 15 percent for purposes of the TDA and granted TTD a period of five years (through September 27, 2022) to meet the required farebox recovery ratio. The required farebox recovery ratio for demand-response services will remain at 10 percent.</p> <p>Conclusion: Not applicable</p>												
If the operator serves a rural area, or provides exclusive services to elderly and disabled persons, it has maintained a ratio of fare revenues to operating costs at least equal to one-tenth (10 percent).	Public Utilities Code, Sections 99268.2, 99268.4, 99268.5	<p>Operating ratios for the transit system using audited data were as follows:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">Fixed Route</th> <th style="text-align: center;">Demand Response</th> </tr> </thead> <tbody> <tr> <td>FY 2017:</td> <td style="text-align: center;">10.11%</td> <td style="text-align: center;"><i>(Systemwide)</i></td> </tr> <tr> <td>FY 2018:</td> <td style="text-align: center;">9.23%</td> <td style="text-align: center;">9.65%</td> </tr> <tr> <td>FY 2019:</td> <td style="text-align: center;">10.59%</td> <td style="text-align: center;">9.62%</td> </tr> </tbody> </table>		Fixed Route	Demand Response	FY 2017:	10.11%	<i>(Systemwide)</i>	FY 2018:	9.23%	9.65%	FY 2019:	10.59%	9.62%
	Fixed Route	Demand Response												
FY 2017:	10.11%	<i>(Systemwide)</i>												
FY 2018:	9.23%	9.65%												
FY 2019:	10.59%	9.62%												

Table II-1 Operator Compliance Requirements Matrix		
Operator Compliance Requirements	Reference	Compliance Efforts
		<p><i>Source: TTD Comprehensive Annual Financial Reports</i></p> <p>Conclusion: Partial Compliance</p>
<p>The current cost of the operator’s retirement system is fully funded with respect to the officers and employees of its public transportation system, or the operator is implementing a plan approved by the RTPA which will fully fund the retirement system within 40 years.</p>	<p>Public Utilities Code, Section 99271</p>	<p>TTD contributes to its staff’s retirement through a stand-alone retirement plan composed of an employer-controlled 401(a) account (a Social Security replacement plan) equal to 8% of employee compensation, an employer contribution to an employee-controlled 401(a) account equal to 4% of employee compensation, and an optional employee-funded and employee-controlled 457(b) account. For represented employees, TTD pays 6.2% of employee compensation for Social Security to the IRS, and the plan also includes an optional employee-funded and employee-controlled 457(b) account. TTD matches one-half of the employee’s contribution, up to a maximum of 3%.</p> <p>Conclusion: Complied</p>
<p>If the operator receives state transit assistance funds, the operator makes full use of funds available to it under the Urban Mass Transportation Act of 1964 before TDA claims are granted.</p>	<p>California Code of Regulations, Section 6754(a)(3)</p>	<p>As an eligible recipient of STA funds, TTD is making full use of Federal Transit Administration funds available to it.</p> <p>FY 2017: \$3,129,573 (Operations) \$53,536 (Capital) FY 2018: \$3,368,662 (Operations) \$99,198 (Capital) FY 2019: \$3,219,815 (Operations)</p>

Table II-1 Operator Compliance Requirements Matrix		
Operator Compliance Requirements	Reference	Compliance Efforts
		<p><i>Source: National Transit Database</i></p> <p>Conclusion: Complied</p>

Findings and Observations from Operator Compliance Requirements Matrix

1. Of the compliance requirements pertaining to TTD, the operator fully complied with eight of the nine applicable requirements. The District was in partial compliance regarding farebox recovery attainment. Two compliance requirements did not apply to TTD (blended and urbanized farebox recovery ratios).
2. The farebox recovery ratio was 10.11 percent system-wide in FY 2017, 9.23 percent for fixed route and 9.65 percent for demand response in FY 2018, and 10.59 percent for fixed route and 9.62 percent for demand response in FY 2019 based on audited data. Given the Tahoe region’s new urbanized status, TRPA adopted an urbanized area farebox ratio on September 27, 2017, pursuant to Resolution 2017-14. During the audit period, the rural fare revenue ratio continued to apply.
3. The TRPA Board set the required farebox recovery ratio of TTD fixed-route services at 15 percent for purposes of the TDA and granted TTD a period of five years (through September 27, 2022) to meet the required farebox recovery ratio. The required farebox recovery ratio for demand-response services will remain at 10 percent.
4. TTD participates in the CHP Transit Operator Compliance Program and received vehicle inspections within the 13 months prior to each TDA claim. Inspections conducted on September 6-7, 2016, were rated unsatisfactory due to noncompliance with the Department of Motor Vehicle’s Pull Notice Program involving an expired medical card. In addition, the inspection cited several vehicle violations involving general maintenance issues such as a low air warning on the white needle sets and an inoperative interior wheelchair ramp warning device. A reinspection was conducted within 120 days on January 5, 2017, which was rated satisfactory. All subsequent inspections conducted were rated satisfactory.
5. The TTD transit operating budget increased the first two years of the audit period, exceeding 15 percent in FY 2017. The budget increased 16.4 percent in FY 2017 and 10.2 percent in FY 2018. The increases in the FY 2017 and FY 2018 transit operating budgets were attributed to operations and maintenance being brought in-house, which included increased personnel costs and enhanced maintenance oversight. The FY 2019 operating budget decreased by 6.6 percent.

Section III

Prior Triennial Performance Recommendations

The District's efforts to implement the recommendations made in the prior triennial audit are examined in this section of the report. For this purpose, each prior recommendation for the agency is described, followed by a discussion of the District's efforts to implement the recommendation. Conclusions concerning the extent to which the recommendations have been adopted by the agency are then presented.

Prior Recommendation 1

Prepare and submit separate annual State Controller Reports for fixed-route and ADA demand-response service.

Background: TTD operates fixed-route and ADA demand-response service. ADA service is available during fixed-route service hours. The instructions for the Transit Operators Financial Transactions Report submitted to the State Controller require that separate reports be prepared for general public service and specialized service, in this case for fixed route and the specialized ADA service. The General Information sheet in the front of the Controller Report provides specific instructions to prepare separate reports for these different services. TTD should provide separate reports starting in the next reporting period.

Actions taken by the Tahoe Transportation District

TTD has started preparing and submitting separate Transit Operators Financial Transactions Reports for general public fixed route and specialized service for its ADA paratransit effective FY 2017. The State Controller office was apprised of the specialized transit services. The FY 2017 fiscal audit did not break out the farebox recovery formula according to service mode due to the audit being completed prior to the State Controller providing the form. However, the FY 2018 and FY 2019 audits do include both the fixed and specialized farebox recovery ratios.

Conclusion

This recommendation has been implemented.

Prior Recommendation 2

Work closely with TRPA to determine an updated farebox recovery ratio for TTD's transit service based on the region urbanized status.

Background: The Tahoe region received urbanized designation from the federal transportation act. One impact from this designation is that the TDA farebox recovery standard increases from a

10 percent rural standard to a 20 percent urban standard. The farebox ratio is characterized as the ratio of passenger fares plus local funds to eligible operating costs. TTD was subject to the rural farebox recovery ratio until the change in urban status. TRPA has a responsibility to update the farebox recovery standard. Several options are available for implementation of the updated standard, including resetting the ratio straight to 20 percent, allowing a certain number of years for TTD to meet the new ratio (up to five years), setting the urban ratio at a minimum of 15 percent, and/or a combination of options. The lower standard of 15 percent is allowed by the TDA as the population of the region is less than 500,000. Under law, TRPA must provide specific reasons prior to setting this lower farebox ratio. TTD and TRPA should discuss the options and provide an updated farebox ratio to meet compliance as an urbanized operator.

Actions taken by the Tahoe Transportation District

In response to this recommendation, the TRPA Board adopted Resolution 2017-14 at its September 27, 2017, meeting, which establishes an updated farebox recovery ratio for the transit operators under its purview. The TRPA Board set the required farebox recovery ratio of TTD fixed-route services at 15 percent for purposes of the TDA and granted TTD a period of five years (through September 27, 2022) to meet the required farebox recovery ratio. The required farebox recovery ratio for demand-response services will remain at 10 percent. Integral to farebox recovery attainment and implementation of a fare-free system, TTD has been involved in the One Tahoe Initiative for the development and implementation of regional revenue sources for capital projects, transit services, and operations needed to support recreation travel. At the September 2018 meeting, the TTD Board awarded a contract to a consulting firm and approved the first task order. The levy of transportation user fees is one of the tasks being explored.

Conclusion

This recommendation has been implemented.

Prior Recommendation 3

Work with the fiscal auditor to include a calculation of the farebox recovery ratio in the annual Basic Financial Statements.

Background: The farebox recovery ratio shown in Note 9 of the Basic Financial Statements does not include a calculation of how it was derived. Pursuant to the TDA, TTD will be required to maintain an urbanized farebox ratio or modified urbanized farebox ratio set by TRPA. It is suggested that TTD have the fiscal auditor include in its Note 9 analysis a calculation of the farebox recovery ratio, which would include operating costs less depreciation, farebox revenues, and any allowable exclusions pursuant to TDA.

Actions taken by the Tahoe Transportation District

A review of the TTD Comprehensive Annual Financial Reports (CAFR) for the audit period confirm that the farebox recovery is being calculated. As was stated earlier in this section, the FY 2017 CAFR did not break out the farebox recovery formula according to service mode due to the audit being completed prior to the State Controller providing the form. However, the FY 2018 and FY 2019 CAFRs do include both the fixed and specialized farebox recovery ratios.

Conclusion

This recommendation has been implemented.

Prior Recommendation 4

Include additional locally generated revenue in the farebox recovery pursuant to Senate Bill (SB) 508.

Background: SB 508 (Beall, October 2015) revised the TDA farebox recovery determination, including an allowance for other locally generated revenues in the farebox ratio. Examples of possible other local support revenues may include gains on the sale of capital assets, lease revenues generated by transit-owned property, and advertising revenues. Supplemental revenues would serve in providing a local match for state and federal grants to fund transit expansion. Both revenues and operating costs are modified under the new law in deriving the farebox ratio for TDA eligibility purposes, and TTD should work with the fiscal auditor to accurately reflect the changes to the farebox ratio criteria. As the farebox ratio for TTD was below the urban ratio of 20 percent during this triennial period, there may be opportunities to improve the ratio with local funds.

Actions taken by the Tahoe Transportation District

The TTD CAFR, and confirmed by TTD staff, shows that advertising revenue is included in passenger fares for FY 2018 and FY 2019 to align with operating revenue reported in the State Controller Report. According to TTD, there is only so much local revenue that can be included in the farebox recovery calculation. Local revenue is needed to match capital projects or pay for operating cost not paid for by FTA grants. The inclusion of advertising and other local revenues in the farebox as shown in the CAFR is constrained by the loss of additional revenue such as from Heavenly winter ski shuttles combined with the need to pay for operating costs not covered by FTA with local funds.

With recent adoption of the higher urbanized farebox ratio, TTD should continue assessing sources of locally generated revenues to sustain the system and meet farebox recovery. As was mentioned earlier, TTD is exploring the feasibility of generating local funds through the One Tahoe Initiative for the development and implementation of regional revenue sources for transit services. Any local support revenues applied towards the farebox recovery would be reflected in its audited calculation.

Conclusion

This recommendation has been implemented under existing funding constraints. Continued exploration of local funding sources is recommended to address meeting the higher urban farebox ratio.

Section IV

TDA Performance Indicators

This section reviews the District’s performance in providing transit service to the community in an efficient and effective manner. The TDA requires that at least five specific performance indicators be reported, which are shown in the following tables. Farebox recovery ratio is not one of the five specific indicators but is a requirement for continued TDA funding. Therefore, farebox calculation is also included and calculated by the performance auditor. Two additional performance indicators—operating cost per mile and average fare per passenger—are also included. Findings from the analysis are contained in the section following the tables.

Tables IV-1 through IV-3 provide the performance indicators for TTD. Graphs are also included to depict the trends in the indicators. It is noted that the system-wide operating costs and fare revenues are based on audited figures, while fixed-route and ADA demand-response costs and fare revenues are unaudited using internal TTD performance reports. The annual fiscal audits do not provide a modal breakdown.

**Table IV-1
TTD System-Wide TDA Performance Indicators**

Performance Data and Indicators	Audit Period				% Change FY 2016- 2019
	FY 2016	FY 2017	FY 2018	FY 2019	
Operating Cost	\$5,230,228	\$5,720,385	\$6,041,423	\$5,915,925	13.1%
Total Passengers	808,334	852,968	643,594	338,726	-58.1%
Vehicle Service Hours	53,808	50,733	48,312	35,918	-33.2%
Vehicle Service Miles	793,693	734,690	721,987	560,449	-29.4%
Employee FTEs	63	68	74	57	-9.5%
Passenger Fares	\$630,237	\$578,193	\$561,103	\$619,425	-1.7%
Operating Cost per Passenger	\$6.47	\$6.71	\$9.39	\$17.47	169.9%
Operating Cost per Vehicle Service Hour	\$97.20	\$112.75	\$125.05	\$164.71	69.4%
Operating Cost per Vehicle Service Mile	\$6.59	\$7.79	\$8.37	\$10.56	60.2%
Passengers per Vehicle Service Hour	15.0	16.8	13.3	9.4	-37.2%
Passengers per Vehicle Service Mile	1.02	1.16	0.89	0.60	-40.7%
Vehicle Service Hours per Employee	854.1	746.1	652.9	630.1	-26.2%
Average Fare per Passenger	\$0.78	\$0.68	\$0.87	\$1.83	134.5%
Fare Recovery Ratio	12.05%	10.11%	9.29%	10.47%	-13.1%

Source: TTD Comprehensive Annual Financial Report (CAFR); National Transit Database; State Controller Report

**Table IV-2
TTD Fixed-Route TDA Performance Indicators**

Performance Data and Indicators	Audit Period				% Change FY 2016- 2019
	FY 2016	FY 2017	FY 2018	FY 2019	
Operating Cost	\$4,387,561	\$4,734,269	\$5,195,808	\$5,175,731	18.0%
Total Passengers	792,120	834,928	625,492	321,883	-59.4%
Vehicle Service Hours	47,322	43,654	40,808	29,898	-36.8%
Vehicle Service Miles	709,543	639,926	623,622	484,583	-31.7%
Employee FTEs*	36	56	67	50	38.9%
Passenger Fares	\$557,396	\$506,765	\$479,480	\$548,224	-1.6%
Operating Cost per Passenger	\$5.54	\$5.67	\$8.31	\$16.08	190.3%
Operating Cost per Vehicle Service Hour	\$92.72	\$108.45	\$127.32	\$173.11	86.7%
Operating Cost per Vehicle Service Mile	\$6.18	\$7.40	\$8.33	\$10.68	72.7%
Passengers per Vehicle Service Hour	16.7	19.1	15.3	10.8	-35.7%
Passengers per Vehicle Service Mile	1.12	1.30	1.00	0.66	-40.5%
Vehicle Service Hours per Employee	1314.50	779.54	609.07	597.96	-54.5%
Average Fare per Passenger	\$0.70	\$0.61	\$0.77	\$1.70	142.0%
Fare Recovery Ratio	12.70%	10.70%	9.23%	10.59%	-16.6%

* FTEs derived from the State Controller Report are inclusive of the commuter service.

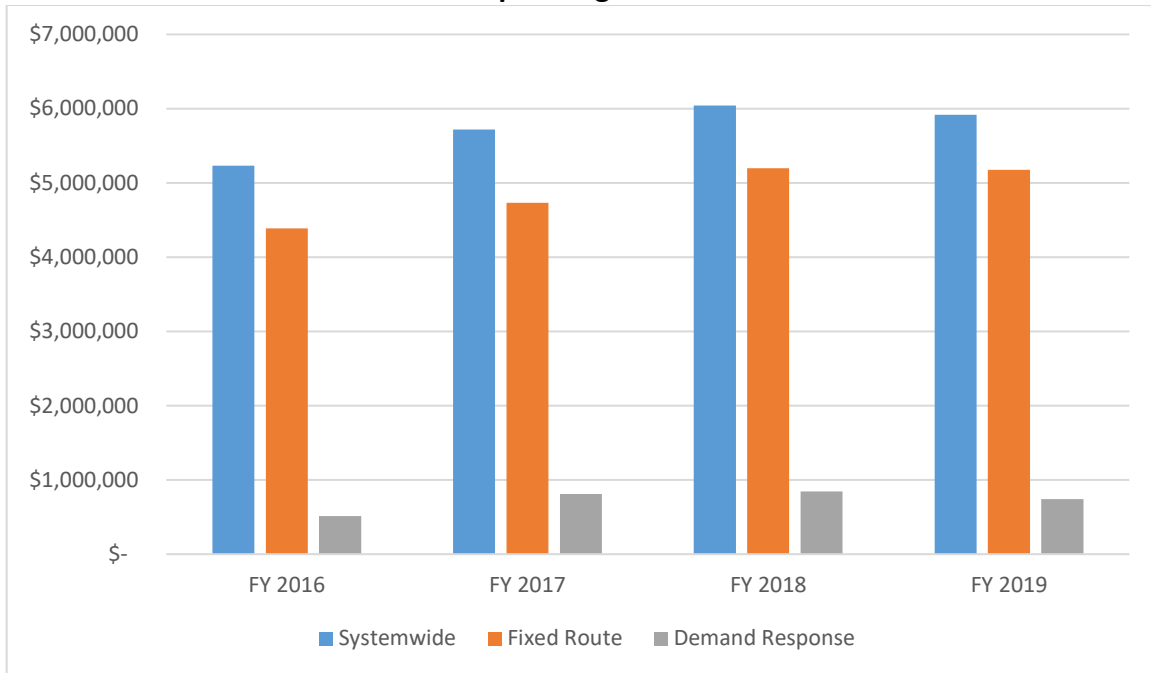
Source: FY 2018 & 2019 CAFR; National Transit Database; State Controller Report

**Table IV-3
TTD ADA Demand-Response TDA Performance Indicators**

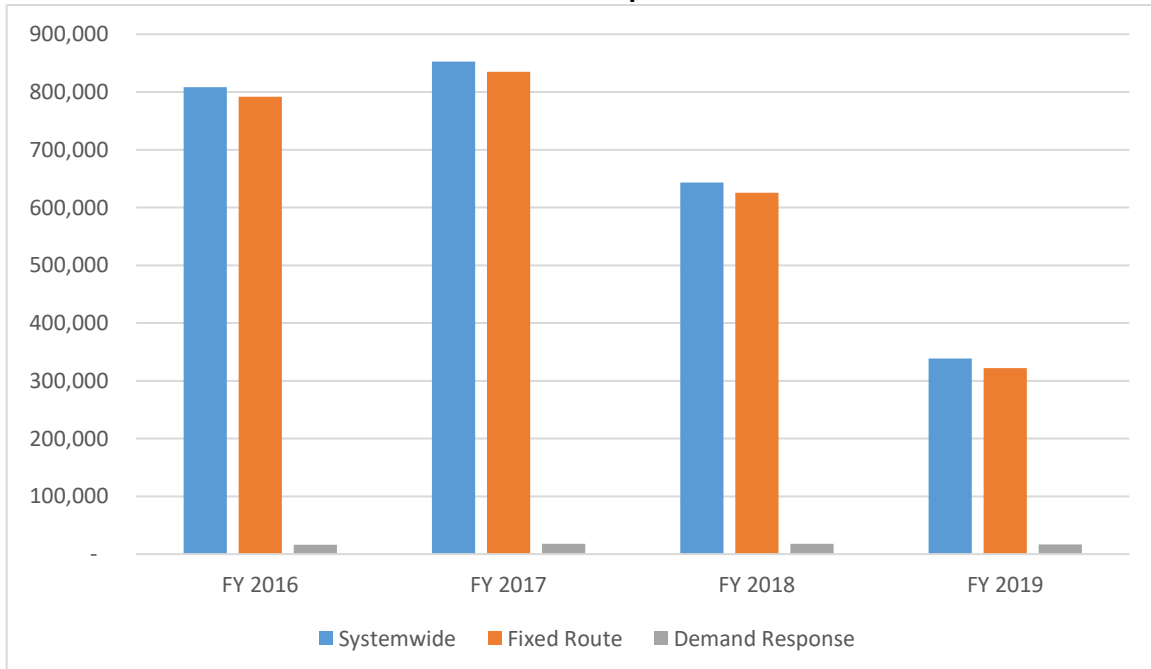
Performance Data and Indicators	Audit Period				% Change FY 2016- 2019
	FY 2016	FY 2017	FY 2018	FY 2019	
Operating Cost	\$511,767	\$811,184	\$845,615	\$740,194	44.6%
Total Passengers	16,214	18,040	18,102	16,843	3.9%
Vehicle Service Hours	6,486	7,079	7,504	6,020	-7.2%
Vehicle Service Miles	84,150	94,764	98,365	75,866	-9.8%
Employee FTEs	27	12	7	7	-74.1%
Passenger Fares	\$66,695	\$71,283	\$81,623	\$71,201	6.8%
Operating Cost per Passenger	\$31.56	\$44.97	\$46.71	\$43.95	39.2%
Operating Cost per Vehicle Service Hour	\$78.90	\$114.59	\$112.69	\$122.96	55.8%
Operating Cost per Vehicle Service Mile	\$6.08	\$8.56	\$8.60	\$9.76	60.4%
Passengers per Vehicle Service Hour	2.5	2.5	2.4	2.8	11.9%
Passengers per Vehicle Service Mile	0.19	0.19	0.18	0.22	15.2%
Vehicle Service Hours per Employee	240.22	589.92	1072.00	860.00	258.0%
Average Fare per Passenger	\$4.11	\$3.95	\$4.51	\$4.23	2.8%
Fare Recovery Ratio	13.03%	8.79%	9.65%	9.62%	-26.2%

Source: FY 2018 & 2019 CAFR; National Transit Database; State Controller Report

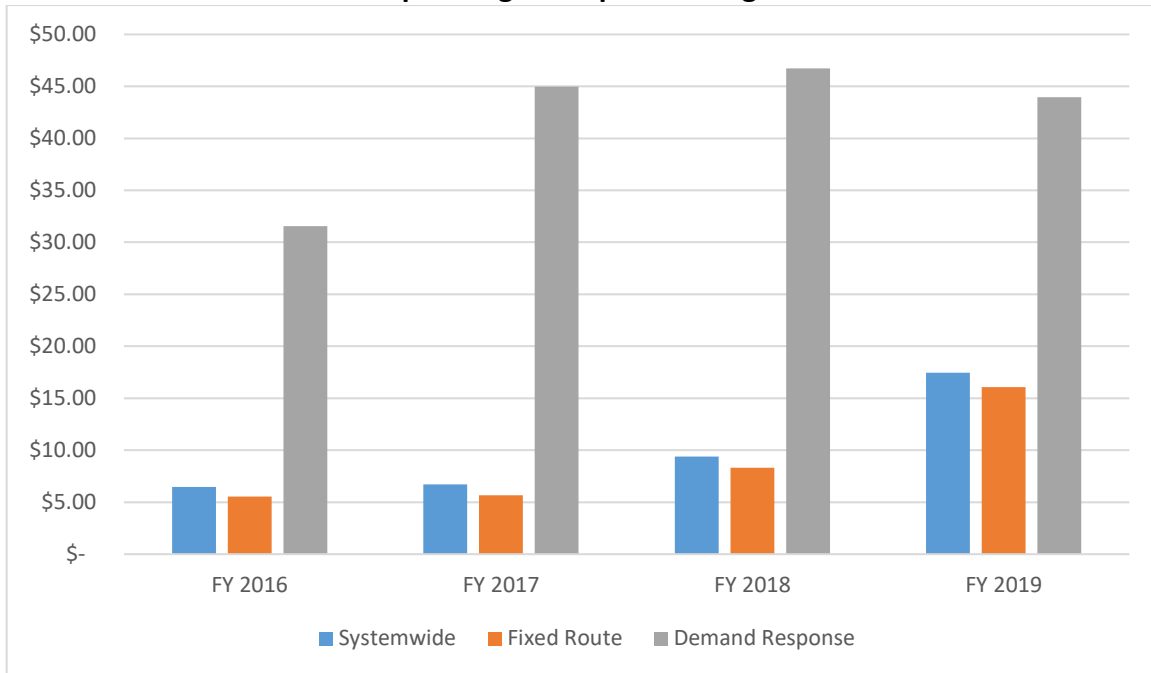
**Graph IV-1
Operating Costs**



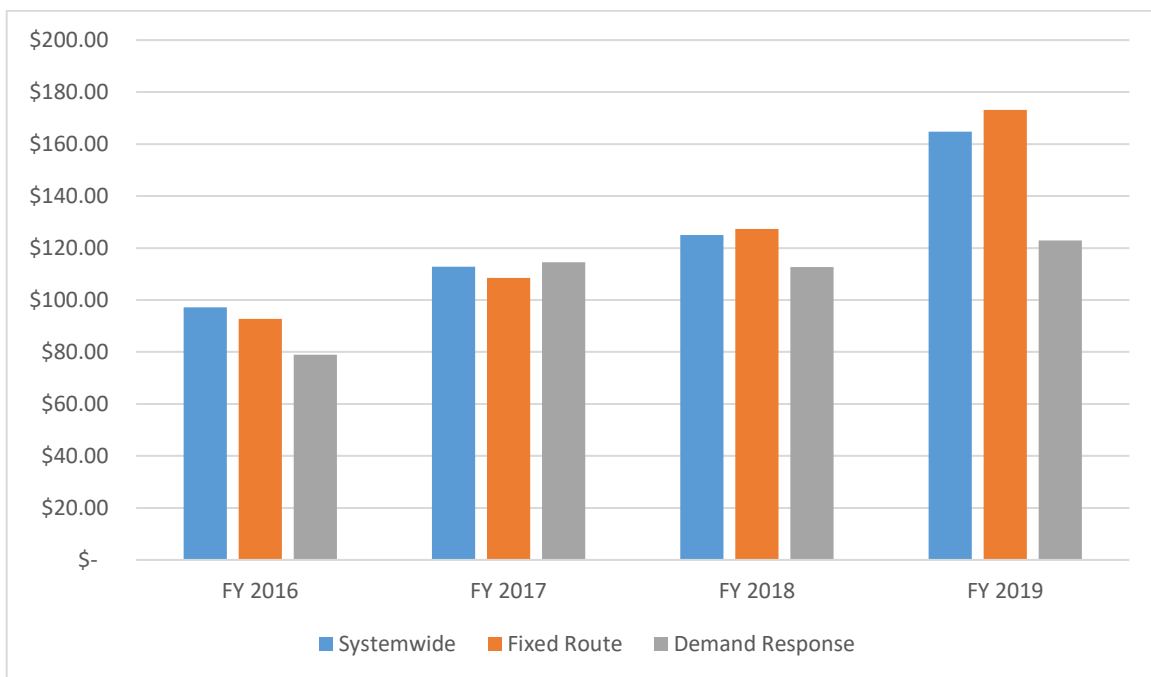
**Graph IV-2
Ridership**



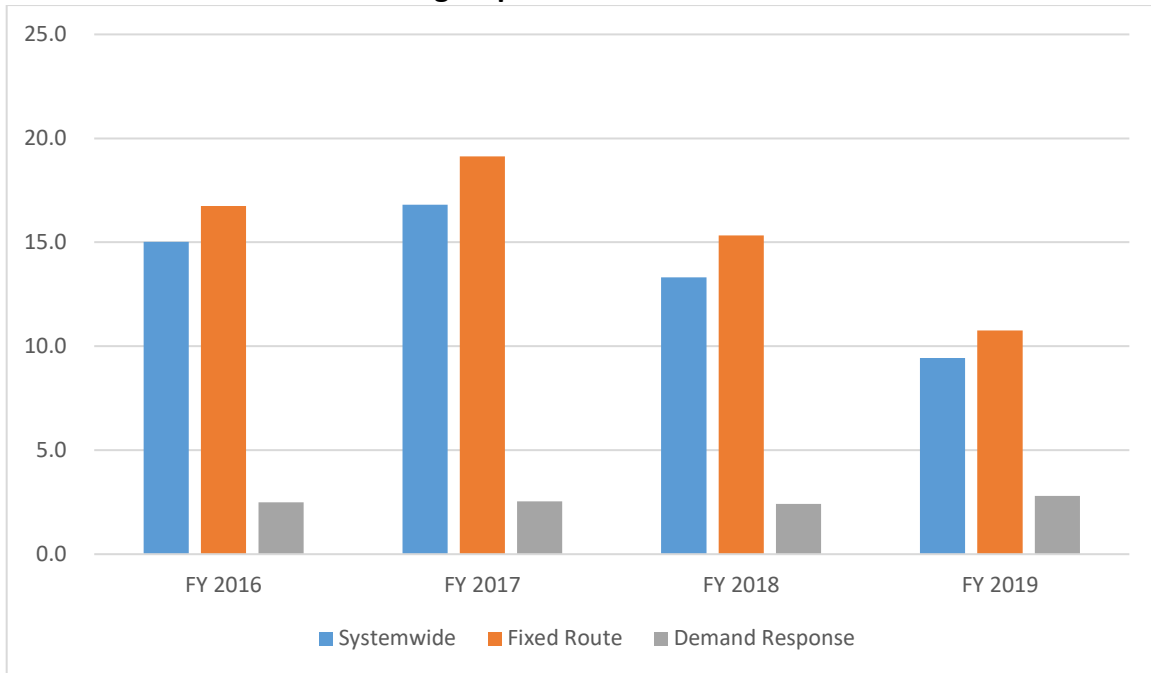
Graph IV-3
Operating Costs per Passenger



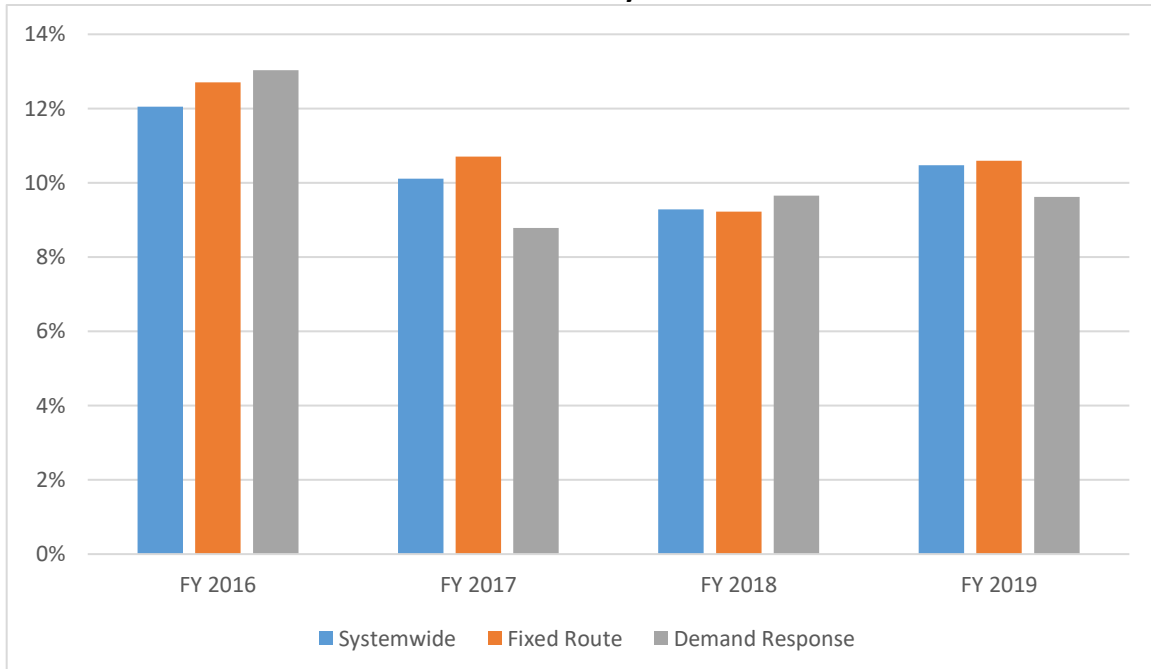
Graph IV-4
Operating Costs per Vehicle Service Hour



**Graph IV-5
Passengers per Vehicle Service Hour**



**Graph IV-6
Fare Recovery Ratio**



Note: System-wide farebox recovery uses audited figures, while modal farebox recovery are unaudited.

Findings from Verification of TDA Performance Indicators

1. **Operating cost per vehicle service hour**, an indicator of cost efficiency, increased 69.4 percent system-wide from \$97.20 in the FY 2016 base year to \$164.71 in FY 2019 based on audited data. Operating costs increased 13.1 percent system-wide, while operating hours decreased 33.2 percent. At the modal level using a mix of audited and unaudited data, cost per hour increased 86.7 percent on the fixed-route service, whereas this indicator increased 55.8 percent on the ADA demand-response service.
2. **Operating cost per passenger**, an indicator of cost effectiveness, increased 169.9 percent system-wide from \$6.47 in FY 2016 to \$17.47 in FY 2019 based on audited data. Ridership system-wide decreased 58.1 percent, from 808,334 passengers in FY 2016 to 338,726 passengers in FY 2019, while operating costs increased for the same period. At the modal level, cost per passenger on the fixed-route service increased 190.3 percent, whereas on the ADA demand-response service, this indicator increased 39.2 percent.
3. **Passengers per vehicle service hour**, which measures the effectiveness of the service delivered, decreased 37.2 percent system-wide, from 15 passengers per hour in FY 2016 to 9.4 passengers per hour in FY 2019. Fixed-route operations reflected the system-wide trend with a decrease of 35.7 percent over the same period from 16.7 to 10.8 passengers per hour. ADA demand-response operations exhibited an increase of 11.9 percent from 2.5 to 2.8 passengers per hour. The trend in this indicator reflects the higher decline in ridership as compared to the decline in vehicle service hours.
4. **Passengers per vehicle service mile**, another indicator of service effectiveness, decreased 40.7 percent system-wide, from 1.02 passengers per mile in FY 2016 to 0.60 passengers per mile in FY 2019. For fixed-route operations, the number of passengers per service mile decreased 40.5 percent from 1.12 to 0.66 passengers between FY 2016 and FY 2019. For ADA demand-response services, passengers per service mile increased 15.2 percent from 0.19 to 0.22 passengers per mile. System-wide and at the fixed-route level, passenger trips decreased 58.1 and 59.4 percent, respectively, whereas vehicle service miles decreased 29.4 and 31.7 percent, respectively.
5. **Vehicle service hours per employee** decreased by 26.2 percent system-wide between FY 2016 and FY 2019 from 854.1 hours to 630.1 hours. The system-wide full-time equivalents (FTEs) employee count decreased slightly from 63 to 57, a sign of aligning staff levels with changes in service output. FTEs are calculated for the annual Transit Operators Financial Transactions Report submitted to the State Controller. Proper calculation of this measure is based on the number of employee FTEs using employee pay hours from the State Controller Report and dividing by 2,000 hours per employee.
6. **Farebox recovery** exhibited fluctuations between the FY 2016 base year and FY 2019. Based on audited data, the system-wide farebox recovery decreased 13.1 percent from 12.05 percent to 10.47 percent in FY 2019. System-wide, passenger fare revenues decreased by 1.7 percent,

but were offset by the 13.1 percent increase in operating costs for the same period. At a modal level, farebox recovery decreased 16.6 percent for fixed-route service and decreased 26.2 percent for ADA demand-response service.

Conclusion from the Verification of TDA Performance Indicators

Performance indicators for TTD reflect the organizational and operational changes implemented during the audit period. Transit operations were brought in-house at the beginning of FY 2017 followed by service realignments and the elimination of the casino and winter ski shuttles based on the FY 2019 Transit Plan. Audited system-wide operating costs increased 9.4 percent in FY 2017 followed by a smaller increase of 5.6 percent in FY 2018 and a 2.1 percent decrease in FY 2019. The average annual increase in operating costs was 4.3 percent. The increase in operating costs was driven by higher personnel costs and enhanced maintenance oversight. Budgeted personnel costs increased more than seven-fold from \$489,239 in FY 2016 to \$4,228,324 in FY 2019. Budgeted maintenance costs increased from \$161,004 in FY 2016 to \$628,869 in FY 2019, a nearly three-fold increase.

The provision of revenue hours and miles exhibited a downward trend with vehicle service hours decreasing 33.2 percent system-wide during the audit period, while vehicle service miles decreased by a comparable 29.4 percent. Operating hours decreased in response to changing funding structures including from urbanized area designation and elimination of Route 21X; personnel shortages; and lack of serviceable vehicles and replacement fleet.

Ridership decreased 58.1 percent during the audit period including from loss of seasonal ridership on the winter shuttles. System-wide ridership increased from 808,334 passengers in FY 2016 to 852,968 in FY 2017, but then decreased to 643,954 in FY 2018 and to 338,726 in FY 2019. There was a decline in ridership from multiple factors such as the push from funding partners to shift revenue hours to increase frequency on local routes at the expense of reducing daily operating hours; elimination of visitor services (winter shuttles, trolley); shortage of commercial bus operators; lack of funding for replacement fleet; insufficient transit infrastructure; frequent safety incidents resulting from unsafe conditions related to seasonal routes; and lack of funding for general operations of expanded services. Winter weather conditions and visitor traffic impacted ridership as well in FY 2019.

These annual figures, however, do not show the seasonal service fluctuations and variability during the year. The peak winter and summer seasons complemented by the fall and spring shoulder seasons characterize TTD transit services and the regular need to alter operating schedules. Impacts to farebox recovery include the reduction of operating assistance contributions primarily from the Heavenly winter ski shuttles that were discontinued as well as the reduced farebox revenue from other routes that were eliminated or consolidated. With the implementation of the FY 2019 Transit Plan and the transition to a fare-free system, TTD will need to find alternative ways to sustain ridership and generate auxiliary revenue to support farebox recovery while improving service effectiveness that captures the local ridership market under the updated transit strategy while retaining a level of attractiveness to tourist in the Tahoe region.

Section V

Review of Operator Functions

This section provides an in-depth review of various functions of TTD. The review highlights accomplishments, issues, and/or challenges that were determined during the audit period. The following functions were reviewed with the controller and transit system program manager via video teleconference:

- Operations
- Maintenance
- Planning
- Marketing
- General Administration and Management

Within some departments are subfunctions that require review as well, such as Grants Administration that falls under General Administration.

Operations

The transit system is primarily made up of services that serve the South Shore communities of the Lake Tahoe Basin with connections to the Carson Valley in Nevada. TTD transit operations underwent changes intended to better utilize funding and capital resources. Through its enabling legislation, TTD has the authority to own and operate transportation systems and facilities that serve the region, which occurred in July 2016.

Diversified Transportation, LLC, dba Keolis Transit North America (Keolis) had been the contract operator since July 2011, for an initial three-year term with up to two one-year contract extensions. TTD exercised its option to extend its contract with Keolis for one year in 2014 and again in 2015 through October 2016.

In June 2016, TTD and Keolis entered into an addendum to the operations contract to facilitate a coordinated transition to TTD directly operating the system regarding personnel policies and procedures. This transition has resulted in a more structured and stable transit operation with greater accountability and oversight. TTD has been able to address issues that were the legacy of contracting out of the service, and there has been more focus on maintaining a reliable fleet and a stabilized source of funding.

Nevertheless, challenges remained regarding increased maintenance costs. Many of the buses in the fleet transitioned from the prior contract operator had years of useful life remaining and have

required extensive maintenance to keep them in service. Compounding this, is the inability of TTD to secure the capital funding needed to replace the fleet. As the fleet continues to age, it is anticipated that TTD will incur increased maintenance costs as replacement fleet funding remains elusive. Compounding that reality is the few replacement buses TTD has been able to procure through competitive grants are battery electric that required even increased outlays on facilities upgrades, new facilities, new tooling, extensive training.

TTD implemented what would be the first of several service changes during the audit period. During FY 2017, TTD instituted a frequency-based service in South Lake Tahoe. Early morning and late evening service hours were reduced. The former 21X route was discontinued in October 2016. The Nevada Department of Transportation (NDOT) believed TTD was ineligible to continue Route 21x because of the federal Fixing America's Surface Transportation Act (FAST Act) language making Tahoe an urbanized area. As a result, NDOT would not fund Route 21x.

The indefinite suspension of Route 21X's popular direct service to Carson City resulted in a 33 percent drop in ridership on TTD's commuter services. However, the redesigned Routes 19X and 20X exhibited ridership gains of 19 percent and 46 percent, respectively. Ridership was further impacted by a lack of snow during November and December 2017. The lack of snow resulted in a decline in ridership to the Ridge of 15 percent and a decline in Ski Shuttle service of 38 percent. These ridership declines highlight transit's dependence on visitors and the climate.

The limited number of drivers, fleet, and funding resources made it unsustainable for TTD to provide transit services more broadly. TTD decided to restructure transit services by shifting resources with clear direction to increase frequency improvements for local routes. Despite insufficient funding to accommodate increased frequency and maintain the existing system, TTD's Board adopted the Regressive Track recommendation within the SRTP noting a lack of local and regional financial support for public transit. The seasonal services to Heavenly Ski Resort were gradually scaled back and eventually discontinued in November 2018.

In March 2017, TTD transferred eight compressed natural gas (CNG) buses to Placer County's Tahoe Area Regional Transit (TART) system. As a designated Federal Transit Administration (FTA) grant recipient, TART is eligible to receive the buses. When TTD discontinued the use of CNG in late 2015, four of the District's CNG buses with federal life remaining were leased to Placer County for a nominal fee. Additionally, TTD assisted Placer County with securing a grant to obtain four Orion buses.

The full implementation of the Swiftly application for AVL and real-time arrival information took place during the audit period. All vehicles have trackers. The data is real time and available to the public immediately via Swiftly, the Transit App, and Google Transit.

One of the metrics monitored by the new technology is on-time performance. With the implementation of Swiftly, TTD reported that the parameters it used to calculate on-time performance were incorrect initially. Until recently it included times when the bus arrived to the last stop early. Layover time is built into the routes intentionally to accommodate for traffic and

poor road conditions. Additionally, it looked at all stops, not just timed stops. On-time performance is tracked on a quarterly basis and is summarized in Table V-1.

**Table V-1
On-time Performance**

	FY 2017	FY 2018	FY 2019
First Quarter	79.8%	71.8%	59.2%
Second Quarter	79.9%	74.6%	71.9%
Third Quarter	75.6%	71.8%	68.3%
Fourth Quarter	75.6%	67.5%	80.2%
Annual Average	77.7%	71.4%	69.9%

Source: TTD

On-time performance is subject to several factors such as local traffic congestion and winter weather conditions. Another factor impacting on-time performance is that one collision often impacts the schedule for the entire day. Annual average on-time performance declined during the audit period from about 78 percent of trips on time in FY 2017 to about 70 percent in FY 2019. On-time performance metrics are better during the shoulder periods.

Another metric that gauges safety is the number of preventable collisions. According to the Federal Motor Carrier Safety Administration, a preventable collision is one which occurs because the driver fails to act in a reasonably expected manner to prevent it. A summary of preventable vehicle collisions is summarized in Table V-2:

**Table V-2
Preventable Collisions**

	FY 2017	FY 2018	FY 2019
Preventable Collisions	17	17	12

Source: TTD

The number of preventable collisions reported was 17 for the first two years of the audit period before decreasing to 12 in FY 2019. The average number of preventable collisions was 15 per year. Preventable collisions in FY 2019 declined when TTD stopped operating winter shuttles. Incident investigations may lead to driver retraining and a ride along by a road supervisor.

TTD utilizes Ecolane, a dispatching and scheduling system for demand-response services. Implemented in March 2016, Ecolane has resulted in safety, efficiency, and overall quality of the service. Passengers using this service make a reservation and the new system helps to coordinate trips. Dispatchers ask additional questions when taking reservations to customize individual trips from arranged origin to set destination.

Ecolane tracks no-shows based on the client reservation and trip history. Cancellations are not tracked. Any 'cancellation' more than two hours before a scheduled trip is not recorded. A

cancellation within two hours of a scheduled trip is considered a no-show. Table V-3 summarizes no-shows for the audit period.

**Table V-3
No-shows**

	FY 2017	FY 2018	FY 2019
No-shows	974	362	562
Completed Trips	17,722	7,401	8,678

Source: TTD

The number of no-shows reported during the audit period exhibited an overall decline from 974 in FY 2017 to 362 in FY 2018 to 562 in FY 2019. As a percentage of completed trips, no-shows have ranged from 5 to 6.5 percent which are slightly above general industry averages of below 5 percent. The decrease in completed trips during FY 2018 and FY 2019 reflect the system changes that were implemented that reduced service hours.

Vehicle service hours and mileage are being properly recorded by operators and dispatchers. Drivers complete a trip sheet for each run operated, with enough space on the sheet to record trip data for up to three runs. The trip sheet includes the driver’s name, date, and day of the week at the top. Other data include the run number, start time, end time, hours, bus number, ending miles, beginning miles, total miles, and nonrevenue miles. A computer-generated paddle sheet accessed on mobile data terminals shows all driver run assignments for the day and includes the sign-in and sign-out times, yard and route pull-out times, assigned bus and route number, assigned farebox vault, and hours worked. Drivers are cross-trained on all TTD-operated services. Dispatchers log service conditions along the routes.

TTD developed stronger internal accounting controls to ensure fares were counted and handled properly. Fare vaults in the fareboxes were probed into the GFI/Oddessy system and imported into Reporting Solutions. The data derived from the GFI system was also used to track ridership. Cash fares were counted twice a week in the presence of two dispatchers and locked in a safe coded system. Security cameras were installed in the count room during the audit period. The bank also counted and reconciled the fares.

Effective November 2018, TTD moved towards using the Genfare mobile revenue vault. Fares were dumped into the secured vault daily and a cash handling security company picked up, counted the fares, and deposited into bank. The bank would perform a second count for verification of the deposit. TTD used the reports from Reporting Solutions, the cash handling company, and the bank to reconcile the fares collected.

Personnel

TTD has 60 positions in its transit division. Nonexempt employees have been represented under the Teamsters Local 533 of Reno, Nevada. The current four-year collective bargaining agreement

(CBA) is from July 1, 2016, through June 30, 2020. The CBA reflects the legal changes from a private to a public entity and included 16 side letters. TTD reports a collaborative relationship with the Teamsters. Employees are encouraged to prioritize safety, service and schedule. Routes are bid three to four times annually.

In the transition from contract operations to direct operations, most of the former Keolis employees were retained by TTD. The District instituted a new organizational culture with the emphasis on safety and professionalism. Over the course of the audit period, TTD experienced turnover of operators and mechanics, which amounted to 90 percent. Most of the departures were voluntary whereas others were performance-based. Toward the end of the audit period, 13 original operators and one mechanic remained. This required efforts to recruit and retain new operators which TTD management was able to start addressing through the hiring of a human resources manager. TTD continues to struggle to recruit and retain bus operators due to the cost of living in Tahoe, availability of housing, cost of housing, driving conditions, national demand for CDL holders, and livable wages.

The Tahoe Basin is typically a challenging recruitment environment for drivers. The audit period was particularly challenging with housing availability and affordability topping the list of concerns for prospective seasonal staff. TTD's existing drivers were able to fill in for the increased hours through overtime. Wage increases went into effect July 1, 2018.

At the end of the audit period, the transit operations division was overseen by the transit operations manager and supported by a senior road supervisor, operations specialist, transit information officer, three road supervisors, four dispatchers, 33 bus operators (25 full-time, 8 part-time), and two parking attendants. The transition from contract operations necessitated the creation of a human resources position and added payroll and accounting personnel. The pre-employment process involves an application review, drug test, background check, physical and DMV licensing procedures.

Job openings are posted on the TTD website (<https://www.tahoetransportation.org/careers/>). The District also recruits candidates through Indeed.com, local newspaper ads, job fairs, and transit industry publications. TTD has been collaborating with Lake Tahoe Community College (LTCC) to develop vocational training programs for drivers and mechanics, which could provide a steady supply of qualified candidates. The District has been working on a series of safety and attendance incentives and bonuses that were budgeted in FY 2018.

Candidates undergo 20.5 hours of classroom and 8 hours of online training focused on drug and alcohol policies. Behind-the-wheel training ranges between 30 to 45 hours depending on the candidate's experience and proficiency. Cadet training is conducted after the candidate obtains their Class B commercial license and completes DMV testing. Verification of Transit Training and air brake endorsement are required. Topics addressed during the monthly two-hour safety trainings include CPR/first aid, harassment, workplace violence, active shooter, information gathering, assault awareness, snow chain protocol and winter driving.

Maintenance

TTD’s maintenance and storage facility buildings are at 1663, 1669, and 1679 Shop Street in South Lake Tahoe. The facility is leased from the City of South Lake Tahoe and is equipped with three buildings, six service bays, two in-ground lifts, and one set of portable jacks. TTD indicated the current facility configurations is not conducive to effective transit operations. The City is planning to construct a new Public Works yard located at 1740 D Street on property that the City purchased in 2013, although according to TTD there are no plans to include transit.

Preventive maintenance inspection (PMI) schedules vary according to vehicle specifications. There are two different PMI protocols specific to service mode. Fixed-route vehicle PMIs are conducted every 6,000 miles whereas ADA paratransit vehicle PMIs are conducted every 4,500 miles. Subsequent PMI levels range from B to C (18,000 miles) to F (full fluid/filter swaps). Drivers are required to conduct a pre-trip and post-trip inspection on each vehicle assigned. It takes about 20 minutes in the winter and 15 minutes in the summer to complete the pre-trip inspection. Road supervisors check the pre-trip and post-trip inspections to ensure they are completed correctly.

Reporting Solutions software tracks PMI schedules and parts inventory. TTD procures parts from local vendors, but specialty items are ordered from outside of the area from online sources. Those vendors include New Flyer and Creative Bus Sales. Cycle counts are conducted every three months and a full inventory count is conducted annually.

Since assuming direct operations in July 2016, TTD employed one fleet facility manager, five service technicians/mechanics, two utility workers, three bus washers, and two fuelers. At the end of the audit period, the maintenance division was overseen by the fleet/facilities manager and supported by a maintenance supervisor, parts clerk, four mechanics, and four utility workers. A few service technicians are Automotive Service Excellence certified and “A” level mechanics have vendor specific certifications. The facility is staffed 20.5 hours daily from 4:00 a.m. to 12:30 a.m. the following day. Vehicles are fueled at the Flyers Petroleum station located at 2070 James Avenue in South Lake Tahoe.

Road calls are recorded when a bus does not complete its scheduled trip based on the National Transit Database (NTD) definition. Maintenance activities included the number of PMIs completed, road calls, vehicles out of service exceeding 48 hours, and work orders generated. TTD maintains a higher vehicle spare ratio due to the winter operating environment.

A road call is defined as all mechanical or other vehicle-related failures that affect the completion of a scheduled revenue trip or the start of the next scheduled revenue trip, including failures during deadheading and layover. Road calls reported during the audit period are summarized in Table V-4.

**Table V-4
Road Calls**

	FY 2017	FY 2018	FY 2019
NTD Defined Road Calls	215	281	353
Total Road Calls	271	320	445

Source: TTD

Road calls are tracked in the Solutions for Transit program. Total road calls increased during the audit period from 271 in FY 2017 to 445 in FY 2019. TTD has revised the way road calls are categorized and reported. The uptick in road calls is attributed to better reporting procedures and follow through on repair work. It is anticipated that as new vehicles are procured and placed into revenue service, it is anticipated that the number of road calls will decrease.

TTD issued a Request for Proposals (RFP) for vehicle body repair, painting, and towing in September 2016. The RFP was supplied directly to several body shops via email communications from staff and posted on TTD’s website. Welcome’s Auto Body and Towing was selected to provide vehicle body repair, painting, and towing for transit and fleet vehicles on an as-needed basis. The initial term of the contract was for 32 months (November 2016 through June 30, 2019), with two single-year options.

Planning

Transit planning and oversight are engaged through various approaches. TTD employs several efforts in concert with TRPA to improve productivity of the transit services, including short-range transit plans, the unmet transit needs process, and monitoring transportation performance improvement recommendations and measuring progress through statistical information provided by the District.

In 2018, TRPA invested in a transit monitoring dashboard on its existing Lake Tahoe Info monitoring portal. The dashboard contains data on individual routes and has a built-in platform for TTD to submit operations data online to TRPA. The District submits unaudited ridership data every month and annual operations data once per year on the Lake Tahoe Info transit website.

In updating the transit plans, TRPA sponsored a regional transit visioning study for TTD that was completed during the audit period. *Linking Tahoe: Lake Tahoe Basin Transit Master Plan* (TMP) takes a multistep approach to developing a longer-term transit system that seeks to match the anticipated travel in the Lake Tahoe area. The steps included:

- Creating a vision through review of existing plans and developing a vision statement.
- Creating and defining goals and objectives as well as performance measures.
- Undertaking a system assessment to provide an indication of how the services are utilized.

- Drafting a network of services that shows the transit services and associated infrastructure.
- Finalizing the network and making changes in the route structure or infrastructure placement, phasing, and costing.
- Compiling the final report that describes the process, the consultation, methodology, phasing, transit routes, and infrastructure that make up the master plan.

With this planning framework in place, the TTD has developed a phased service implementation plan based on the concepts in the vision plan, including expanding service to Myers and frequency improvements to Emerald Bay. A longer-term service goal proposed in the TRPA Regional Transportation Plan (RTP) is to offer a free fare system in the Tahoe region, which was implemented by TTD in April 2020. The unmet transit needs process facilitated through the Social Services Transportation Advisory Councils generate operational comments and service needs that are considered by TTD.

The *Tahoe Transportation District Short Range Transit Plan (SRTP)* was adopted in October 2017. The SRTP guides the development of TTD’s goals, objectives, and policies for the next five years of transit service within the Lake Tahoe region. The SRTP is developed within the context of the TMP. The SRTP proposes two action strategies to address current funding restraints and tailor the transit system to the current level of funding: The Progressive Track (unconstrained) or The Regressive Track (constrained). Both proposed action strategies include a path to securing a core, reliable labor force that can operate and maintain the system with minimal overtime. The SRTP is composed of nine chapters plus seven appendices containing rider survey findings, the FY 2016 Unmet Transit Needs findings, and fleet replacement schedule.

The findings from the aforementioned transit plans were analyzed and developed into the 2019 Transit Plan. TTD sought public comment from May 11 through August 10, 2018, on the following changes, which then took effect on November 1, 2018:

- New operating hours: 6:00 a.m. to 8:30 p.m.
- Increased frequency on Route 50
- Schedule and access improvements for Route 55 (formerly Route 53)
- Create commuter service to Meyers along Highway 50 (Route 18x)
- Routes 20x and 23 combined to create new Route 22 service
- Maintained Route 19x connecting Carson City with Minden/Gardnerville and Stateline
- West Shore Emerald Bay Shuttle discontinued
- Winter shuttle routes transitioned to Heavenly Village
- Implemented premium fare for paratransit service beyond one mile of fixed routes

TTD planning staff received on-site training for the new scheduling software procured from Remix, enabling efficient scheduling and route design in preparation for 2019 Transit Plan service implementation.

Planning and design work advanced on the Mobility Hub project at the LTCC bus stop location. LTCC and the District continued to develop an MOU during the fourth quarter of FY 2018 into the first quarter of FY 2019. The Mobility Hub will include a new bus shelter with overhead charging, supplemented by two pedestal plug-in chargers that will enable nightly charging of new electric vehicles being procured by TTD.

Integral to sustaining a fare-free system, TTD has been involved in the One Tahoe Initiative for the development and implementation of regional revenue sources for capital projects, transit services, and operations needed to support recreation travel and the RTP. At the September 2018 meeting, the TTD Board awarded a contract to a consulting firm and approved the first task order. The levy of transportation user fees is one of the tasks being explored.

Marketing

TTD uses a combination of printed collateral and electronic methods in marketing its services to the public. One marketing tool is the Internet. The TTD website (<http://www.tahoetransportation.org/transit>) provides links to schedules and maps of its bus routes and fares. Winter and summer schedules are updated on the website. Information about demand-response service and an application are also available. Transit brochures are available at many hotels, and the concierges are familiar with TTD transit services.

TTD has increased its presence on social media and utilizes Facebook, Instagram, LinkedIn and Twitter to engage with riders and the community. Other marketing outlets include an electronic billboard, television, and radio for personnel recruitment.

With implementation of the Swiftly application for AVL and real-time bus arrival information, TTD replaced its traditional bus stop signs with information technology signage where a customer enters a four-digit number to receive bus stop arrival information. This approach has improved customer service with the implementation of technology.

Complaints and commendations are entered into Reporting Solutions. If the complainant or commenter requests a follow-up call, staff responds within 48 hours. The complaint is distributed to management. A summary of complaints and commendations is presented in Table V-5 below.

**Table V-5
Complaints & Commendations**

	FY 2017	FY 2018	FY 2019
Complaints	89	120	66
Commendations	22	26	14

Source: TTD

Complaints fluctuated during the audit period after peaking in FY 2018. Most complaints pertain to pass ups, excessive speed, and rudeness. Most commendations pertain to driver courtesy, going above and beyond the call of duty and finding items left behind on the vehicles.

Pursuant to the federal Civil Rights Act of 1964, TTD has an adopted Title VI Program. Title VI of the Civil Rights Act of 1964 requires that no person in the United States, on the grounds of race, color, or national origin, be excluded from, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Program compliance includes Title VI notices and complaint procedures posted on the TTD website (<https://www.tahoetransportation.org/doing-business/title-vi>). Notices and complaint forms are posted in a PDF on the left-hand margin of the webpage.

General Administration and Management

TTD was created pursuant to Article IX of Public Law 96-551 (the Compact). TTD is governed by a nine-member Board of Directors composed of representatives from the two transportation management associations, El Dorado County, Placer County, Carson City, Douglas County, Washoe County, and City of South Lake Tahoe, and one at-large member representing a public or private transit operator. In addition, there are two ex officio representatives from Caltrans and NDOT. Each primary member has a designated alternate.

TTD is administered by a district manager, who is supported by a management group comprising a capital program manager, chief financial officer, transit system program manager, and human resources/risk manager. The transit system program manager serves as the de facto transit administrator for the service and has transit planning and related responsibilities beyond day-to-day transit management. The manager is supported by a transit operations manager, a transit planner/analyst, fleet/facilities manager and a safety and security training coordinator. The human resources manager/risk manager was hired at the beginning of the audit period and serves as TTD's equal employment opportunity officer.

The Tahoe Transportation Commission is a subcommittee of the TTD, established by TRPA as an advisory liaison to both TRPA and the Tahoe Metropolitan Planning Organization (TMPO). Intended to be a part of the planning process, the commission provides technical input and recommendations on transportation issues, plans, and programs to the TMPO and TRPA governing boards. The TRPA Social Services Transportation Advisory Council (SSTAC) was reconfigured to better capture the transit needs of both the North and South Shores of the Tahoe Basin. The SSTAC is composed of a South Shore and a North Shore advisory group.

TTD tracks and reports financial data using Microsoft Dynamics NAV financial software. TTD uses Kronos, a time keeping program, to track payroll hours. Employees' hours are then uploaded into Microsoft Dynamics NAV where hours are reviewed and corrections are made to the appropriate task and fund the employees are working in. The financial program allocates time off, sick, and

holiday pay based on the percentage of worked hours during that pay period. TTD splits operational, administrative, and capital expenses between the FTA Section 5307 and FTA Section 5311 grant programs based off of revenue miles each month. Contributions and TDA has been used as match between both FTA Section 5307 and FTA Section 5311 programs. The District insures its transit vehicles through the California Transit Indemnity Pool.

Pursuant to the TDA, the District receives Local Transportation Fund (LTF) proceeds and State Transit Assistance (STA) funds. TDA funding is used for both operating and capital expenses. Based on the TTD Annual TDA Claim Financial Plan, LTF revenues allocated during the audit period were \$864,591 in FY 2017; \$911,692 in FY 2018; and \$984,117 in FY 2019. STA revenues received were \$315,322 in FY 2017; \$280,993 in FY 2018; and \$588,239 in FY 2019. The County's SB 1 State of Good Repair allocation in FY 2019 for TTD was \$93,091.

Occurring just outside of the audit period, the District underwent an FTA triennial review that was conducted October 15-16, 2019. Of the 21 review areas addressed, the District was found deficient in seven areas: Financial Management and Capacity, Satisfactory Continuing Control, Maintenance, Procurement, Disadvantaged Business Enterprise (DBE) Program, Title VI, and Equal Employment Opportunity. Since this was TTD's first triennial review, there were no repeat deficiencies. Subsequent to the site visit, TTD provided corrective action responses to the deficiencies found in the Financial Management and Capacity and Procurement review areas. The District submitted its corrective responses to the remaining five deficient areas by the spring of 2020.

Grants Management

The District relies on a variety of grants and other funding mechanisms to support its transit system. Depending on the type of grant, match limits vary, which TTD budgets for. Grant sources are derived from local, state, and federal programs. A master grant billing summary shows the grant balance, matching requirement, and responsible manager. Each grant is separately tracked in detail on an Excel spreadsheet and shows key information including the grant number, application submittal date, invoice funding amount, amount booked to revenue, and balance on contract.

The federal FAST Act designates the Lake Tahoe Basin as an urbanized area with a population of 210,000 (145,000 in California and 65,000 in Nevada) for applicable grant programs. The transit systems are eligible for FTA formula funding under the Urbanized Area Formula Program (Sections 5307 and 5339). Additional rules and coordination between TRPA, serving as the metropolitan planning organization, and the two transit systems are required for successful urbanized formula grant procurement. During the audit period, the District, TRPA, and Placer County signed an MOU in September 2016 regarding the coordination of transit planning and programming of federal funds.

TRPA works cooperatively with the public transit operators to develop the RTP and the Federal Transportation Improvement Program through performance-based planning and programming for

urbanized areas. The MOU fosters a cooperative and mutually beneficial working relationship between the three agencies for the provision of coordinated transit planning, to identify the regional transit planning responsibilities for programming federal funds, and to codify the process and the criteria for selection of transit projects and sub-allocation of federal funds in the Lake Tahoe region. TRPA and the transit operators are currently working to develop and support implementation of a performance-based approach toward transportation decision-making in order to implement transit priorities identified in the RTP and apply federal transit funds toward achieving the plan's goals in a coordinated manner.

TTD has been an eligible subrecipient project sponsor for FTA Sections 5310, 5311, and 5311(f) funding. TTD became a direct recipient of FTA Section 5307 Urbanized Area Formula and FTA Section 5339 funding effective FY 2016–17, which makes federal resources available to the TTD service area for transit capital, operations, and planning assistance.

In December 2016, the Nevada and California congressional delegations were successful in getting the FAST Act language for Tahoe's urban designation corrected. Staff anticipated that the correction would result in the annual FTA Section 5307 distribution to the basin being approximately \$3.1 million, which would fully replace the FTA Section 5311 discretionary funding for transit operations serving Tahoe prior to the urban designation language. The District's FTA Section 5307 operating assistance has averaged \$1.9 million annually.

In 2018, TTD was awarded approximately \$2.08 million in Congestion Mitigation and Air Quality funds toward the procurement of electric vehicles and the construction of charging infrastructure. These funds are available without local match, as California's toll credits are available. In addition, TTD was awarded \$850,000 in FTA Section 5339(c) LoNo funding for electric vehicles in FY 2019. Under the FTA Section 5310 program, TTD was awarded about \$131,000 in capital assistance for ADA accessibility and website upgrades.

State grant funding has been derived from the Low Carbon Transit Operations Program (LCTOP) and the State Proposition 1B Public Transportation Modernization, Improvement & Service Enhancement Account (PTMISEA) program toward capital procurements and the LTCC Mobility Hub. LCTOP was established by SB 862 to provide funds to transit agencies to reduce greenhouse gas emissions and improve mobility through operating and capital grants. TTD was awarded \$126,736 in LCTOP and \$165,008 in PTMISEA funding for the Mobility Hub. For FY 2018, TTD received and expended \$31,445 of LCTOP funds for the Bijou stop bus shelter.

Section VI

Findings

The following summarizes the findings obtained from this triennial audit covering fiscal years 2017 through 2019. A set of recommendations is then provided.

Triennial Audit Findings

1. Of the compliance requirements pertaining to TTD, the operator fully complied with eight of the nine applicable requirements. The District was in partial compliance regarding farebox recovery attainment. Two compliance requirements did not apply to TTD (blended and urbanized farebox recovery ratios).
2. The farebox recovery ratio was 10.11 percent system-wide in FY 2017, 9.23 percent for fixed route and 9.65 percent for demand response in FY 2018, and 10.59 percent for fixed route and 9.62 percent for demand response in FY 2019 based on audited data. Given the Tahoe region's new urbanized status, TRPA adopted an urbanized area farebox ratio on September 27, 2017, pursuant to Resolution 2017-14. During the audit period, the rural fare revenue ratio continued to apply.
3. The TRPA Board set the required farebox recovery ratio of TTD fixed-route services at 15 percent for purposes of the TDA and granted TTD a period of five years (through September 27, 2022) to meet the required farebox recovery ratio. The required farebox recovery ratio for demand-response services will remain at 10 percent.
4. TTD participates in the CHP Transit Operator Compliance Program and received vehicle inspections within the 13 months prior to each TDA claim. Inspections conducted on September 6-7, 2016, were rated unsatisfactory due to noncompliance with the Department of Motor Vehicle's Pull Notice Program involving an expired medical card. In addition, the inspection cited several vehicle violations involving general maintenance issues such as a low air warning on the white needle sets and an inoperative interior wheelchair ramp warning device. A reinspection was conducted within 120 days on January 5, 2017, which was rated satisfactory. All subsequent inspections conducted were rated satisfactory.
5. The TTD transit operating budget increased the first two years of the audit period, exceeding 15 percent in FY 2017. The budget increased 16.4 percent in FY 2017 and 10.2 percent in FY 2018. The increases in the FY 2017 and FY 2018 transit operating budgets were attributed to operations and maintenance being brought in-house, which included increased personnel costs and enhanced maintenance oversight. The FY 2019 operating budget decreased by 6.6 percent.

6. TTD satisfactorily implemented each of the four prior audit recommendations. The recommendations implemented pertained to the preparation and submittal of separate State Controller Reports for fixed-route and Americans with Disabilities Act (ADA) demand-response service, the adoption of an urbanized area farebox recovery ratio, inclusion of locally generated revenues in farebox recovery, and calculation of the farebox recovery ratio in the annual Basic Financial Statements.
7. Operating cost per vehicle service hour, an indicator of cost efficiency, increased 69.4 percent system-wide from \$97.20 in the FY 2016 base year to \$164.71 in FY 2019 based on audited data. Operating costs increased 13.1 percent system-wide as a result of creating a more stable operating environment from taking the service in-house such as bringing vehicle maintenance up to standard and hiring human resources staff to address driver turnover. Operating hours decreased by 33.2 percent in response to changing funding structures including from urbanized area designation and elimination of Route 21X; personnel shortages; and lack of serviceable vehicles and replacement fleet. At the modal level using a mix of audited and unaudited data, cost per hour increased 86.7 percent on the fixed-route service, and by 55.8 percent on the ADA demand-response service. Over time, in FYs 2018 and 2019, operating expenses began to level out as the agency built efficiencies under its new organizational structure.
8. Operating cost per passenger, an indicator of cost effectiveness, increased nearly three-fold, from \$6.47 in FY 2016 to \$17.47 in FY 2019 system-wide based on audited data. There was a decline in ridership from multiple factors such as the push from funding partners to shift revenue hours to increase frequency on local routes at the expense of reducing daily operating hours; elimination of visitor services (winter shuttles, trolley); shortage of commercial bus operators; lack of funding for replacement fleet; insufficient transit infrastructure; frequent safety incidents resulting from unsafe conditions related to seasonal routes; and lack of funding for general operations of expanded services. Ridership system-wide decreased 58.1 percent, from 808,334 passengers in FY 2016 to 852,968 in FY 2017, but then further declined to 643,954 in FY 2018 during first round of restructuring and to 338,726 in FY 2019 during the second round of restructuring and lack of local funding support. Winter weather conditions and visitor traffic also impacted ridership in FY 2019. At the modal level, cost per passenger on the fixed-route service increased almost two-fold, whereas on the ADA demand-response service, this indicator increased 39.2 percent. The increase in cost per passenger is a direct result of the community's choice to focus on frequency rather than ridership.
9. Passengers per vehicle service hour, which measures the effectiveness of the service delivered, decreased 37.2 percent system-wide, from 15 passengers per hour in FY 2016 to 9.4 passengers per hour in FY 2019. Fixed-route operations reflected the system-wide trend with a decrease of 35.7 percent over the same period from 16.7 to 10.8 passengers per hour. ADA demand-response operations exhibited an increase of 11.9 percent from 2.5 to 2.8 passengers per hour. The trend in this indicator reflects the higher decline in ridership as compared to the decline in vehicle service hours.

10. Passengers per vehicle service mile, another indicator of service effectiveness, decreased 40.7 percent system-wide, from 1.02 passengers per mile in FY 2016 to 0.60 passengers per mile in FY 2019. For fixed-route operations, the number of passengers per service mile decreased 40.5 percent from 1.12 to 0.66 passengers between FY 2016 and FY 2019. For ADA demand-response services, passengers per service mile increased 15.2 percent from 0.19 to 0.22 passengers per mile. System-wide and at the fixed-route level, passenger trips decreased 58.1 and 59.4 percent, respectively, whereas vehicle service miles decreased 29.4 and 31.7 percent, respectively.
11. In June 2016, TTD facilitated a coordinated transition to directly operate the system regarding personnel policies and procedures. While this change had anticipated consequences such as increased operating costs impacting performance measurement, this transition was necessary and resulted in a more structured and stable transit operation with greater accountability and oversight. Nevertheless, challenges remained regarding increased maintenance costs. Many of the buses in the fleet transitioned from the prior contract operator had years of useful life remaining and have required extensive maintenance to keep them in service. Compounding this, is the inability of TTD to secure the capital funding needed to replace the fleet. As the fleet continues to age, it is anticipated that TTD will incur increased maintenance costs as replacement fleet funding remains elusive. Compounding that reality is the few replacement buses TTD has been able to procure through competitive grants are battery electric that required even more capital spending on new and upgraded facilities, new tooling, and extensive training.
12. The limited number of drivers, fleet, and funding resources made it unsustainable for TTD to provide transit services more broadly. TTD decided to restructure transit services by shifting resources with clear direction to increase frequency improvements for local routes. Despite insufficient funding to accommodate increased frequency and maintain the existing system, TTD's Board adopted the Regressive Track recommendation within the SRTP noting a lack of local and regional financial support for public transit.
13. TTD has 60 positions in its transit division. Nonexempt employees have been represented under the Teamsters Local 533 of Reno, Nevada. The current four-year collective bargaining agreement (CBA) is from July 1, 2016, through June 30, 2020. The CBA reflects the legal changes from a private to a public entity and included 16 side letters. TTD reports a collaborative relationship with the Teamsters.
14. Planning and design work advanced on the Mobility Hub project at the LTCC bus stop location. LTCC and the District continued to develop an MOU during the fourth quarter of FY 2018 into the first quarter of FY 2019. The Mobility Hub will include a new bus shelter with overhead charging, supplemented by two pedestal plug-in chargers that will enable nightly charging of new electric vehicles being procured by TTD.
15. The District relies on a variety of grants and other funding mechanisms to support its transit system. Depending on the type of grant, match limits vary, which TTD budgets for. Grant

sources are derived from local, state, and federal programs. A master grant billing summary shows the grant balance, matching requirement, and responsible manager.

Recommendations

1. Continue assessment of additional locally generated revenue to meet urban farebox recovery.

TTD has made effort when reasonably possible to include local revenues along with passenger fares in farebox recovery. According to TTD, there is only so much local revenue that can be included in the farebox recovery calculation, as local revenue is needed to match capital projects or pay for operating cost not paid for by FTA grants. The inclusion of advertising and other local revenues in the farebox as shown in the CAFR is constrained by loss of additional revenues such as from Heavenly winter ski shuttles.

Integral to sustaining a planned fare-free system, TTD has been involved in the One Tahoe Initiative for the development and implementation of regional revenue sources for capital projects, transit services, and operations. The levy of transportation user fees is one of the measures being explored. With adoption of the higher urbanized farebox ratio and the consideration of a fare-free transit system to meet larger planning goals in the Tahoe Region, it is suggested that TTD continue exploring and securing additional local revenue as allowed by State law to support farebox recovery as well as regional planning goals, such as from regional revenue in coordination with TMPO (TRPA), and local contributions such as pre-paid passenger fares through local partnerships.

2. Explore additional opportunities for local partnerships with transportation advocates and providers to increase operational productivity.

TTD experienced a decrease in ridership for multiple reasons described in this audit such as from the restructuring of its service to focus more on the local South Lake Tahoe and commuter markets, and discontinued seasonal casino and winter ski shuttle services. These events during the audit period contributed to declining TDA performance trends such as for passengers per hour which decreased 37.2 percent system-wide, from 15.0 passengers per hour in FY 2016 to 9.4 passengers per hour in FY 2019.

The public transit industry is rooted in forging agreements and partnerships to enhance service and productivity. TTD, as part of its strategy to increase transit's presence in the community, should continue strengthening its relationships with local transportation support organizations such as the South Shore Transportation Management Association (SS/TMA) to recapture passenger trips. The SS/TMA could further assist with public and stakeholder outreach efforts as well as garner support from the local business community for transit through sponsorship and purchase of passes and direct subsidies for employees.

Also, Lake Tahoe Community College (LTCC) is a local institution linked to transit. Completion of the mobility hub on the campus with electric charging station is an example of the active partnership between LTCC and TTD. The infrastructure anchors TTD's ability

to provide transit as a widely visible student service on the college campus, which can lead to other discussions such as a fare pass program.

Further, the mobility hub at LTCC provides convenient transfer/feeder point for micromobility modes such as bikes and scooters. Connectivity between transit and micromobility could be a solution to the “first-mile/last-mile” gap pervasive in the transit industry while extending the transit network that could draw transit attraction and retention. Pilot partnerships between micromobility and transit are being tested, and case studies could provide an operating formula to develop complementary modal solutions that encourage the integration of transit with micromobility.

These examples highlight the recommendation for TTD to continue building local relationships with existing and potential new partners that can spark greater interest in transit which lead to increased ridership and improved operational productivity.

3. Seek performance metrics that measure success of the new organizational structure.

TTD’s transition to an in-house service is a stark change from outsourcing operations and maintenance in the past. The multitude of transit studies and regional visioning plans in the Tahoe Basin and for TTD provide a backdrop to the strategies and goals for the system. With this new organizational structure as well as restructured service during the audit period, TTD has opportunity to craft performance measures that could align with new goals that were not present under contracted operations. For example, the transit vision specifically identifies three themes of safe, reliable, and attractive. Each theme when taken in context of transit operations relate to operational functions that can be measured and directly influence overall performance such as cost efficiency and service effectiveness.

Based on development of TTDs identity and services implementation to meet these themes, either individually or in sum, a method to define success should be established using performance trends and indicators along these themes. These indicators may already be in existing documents such as the Short Range Transit Plan, Transit Master Plan, and TRPA dashboard analytics. Safety theme might associate and define success with objective measures taken over time such as number of accidents while in revenue vehicle service, number of CHP vehicle inspection findings, and number of workers compensation claims. Reliability might include on-time performance trends and daily vehicle pull-out rates, while attractiveness might include ridership changes and customer service or social media inquiries about the service. A core set of objective measures to gauge success over time under the new agency structure would bring additional visibility to the organization and service changes made to TTD.