

INVESTIGATION

DATE: March 25, 2024

TO: Chair Nora Vargas, Board of Directors
Chair David Zito, Audit Committee
SANDAG Board of Directors
SANDAG Audit Committee
Coleen Clementson, Interim Chief Executive Officer
Ray Major, Chief Deputy CEO
John Kirk, General Counsel
Andre Douzdjian, Chief Financial Officer
Residents of San Diego County and Toll Users

FROM: Courtney Ruby, Independent Performance Auditor

SUBJECT: Office of the Independent Performance Auditor's Investigation Report
on SANDAG's State Route 125 Toll Operations

Introduction

In December 2023, the Independent Performance Auditor, Audit Committee, Board Chair, and several Board members determined that the publicly disclosed allegations of SR 125 Toll customer mischarges and accounting issues warranted an independent investigation. Given the impact on SR 125 Toll customers and the community at large, it is critical the SANDAG Board of Directors (BOD) and the public to understand what occurred and how SANDAG management can prevent this from happening in the future.

Background

SANDAG operates tolling on the Interstate 15 (I-15X) Express Lanes and State Route 125 (SR 125) Toll Road in the San Diego region using FasTrak®, the statewide toll collection system, that allows customers to pay tolls electronically in California.

The I-15X is an Express Lanes facility, whereby carpoolers do not need a SANDAG account nor transponder to use the Express lanes and single occupancy vehicles with a FasTrak account and transponder can pay a toll which is dynamically determined based on the amount of traffic in the general-purpose lanes in order to maximize traffic flow. The California Highway Patrol is responsible for enforcement of the use of the lanes.

The SR 125 is a tolled road, whereby all drivers are charged at the time of use. Customers pay by FasTrak account, cash, or credit card. Equipment on the roadway monitors use of the lanes and SANDAG sends violation notices to drivers who do not pay.

SANDAG purchased the SR 125 toll facility out of bankruptcy in December 2011. At the time of purchase, the existing back-office system (InTrans Group Inc.) and roadside equipment were dated. In addition, the I-15X was on a different system (TransCore) and the roadside equipment also needed to be replaced.

To bring the back-office system up to industry standards and consolidate the agency's two existing customer service center systems and operations (SR 125 and I-15X) into a new regional back-office system, SANDAG carried out a competitive Request for Proposals in 2016. SANDAG also carried out a competitive Request for Proposals in late 2016 to early 2017 for roadside (toll collection) equipment.

The Board approved awarding a contract to ETAN for the back-office system at its meeting on December 16, 2016, and to Kapsch TrafficCom USA, Inc. (Kapsch), for roadside equipment at its December 15, 2017, meeting. The purpose of the contract awards was to replace and consolidate the equipment and back-office system between the two toll facilities.

Additionally, HNTB was awarded a task order (Task Order 8), on June 28, 2013, to act as the Tolling Systems Advisory Services consultant to facilitate implementation of both the roadside and back-office systems. HNTB's Task Order 8 detailed a scope of work (SOW) specifying nine assignments including overall project management, engineering design, procurement and contracting support, and construction management. The SOW covered these efforts for both the Back-Office System and the Roadway Systems. To continue work beyond the task order expiration, HNTB was awarded a new non-competed contract to continue providing implementation and support services over ETAN for the BOS project, including additional oversight tasks for installation, training, testing, transition, Go-Live and post Go-Live support services. The SOW for this contract specifies two tasks in which HNTB was responsible for oversight of ETAN's scope of work and providing oversight on the effectiveness of the BOS.

ETAN's contract with SANDAG provides services for the provision of the Regional Back-office System (BOS) and associated Maintenance and Software Support Services. The BOS serves SANDAG's I-15 Express Lanes and South Bay Expressway toll facilities.

Kapsch's contract with SANDAG provides system design, building and maintenance services to replace SANDAG's two existing Roadway tolling facilities, the I-15 Express Lanes and SR 125, with a new Toll Collection System and to maintain the new system.

History

In October 2023 the SANDAG's Board of Directors (BOD) was notified during a closed session of extensive issues related to ETAN's Back-office Tolling System serving the I-15X and SR 125 and the immediate need to procure another tolling system vendor to replace ETAN.

In November 2023, SANDAG's former Director of Accounting and Finance filed a lawsuit against SANDAG after she was terminated. Her lawsuit and the media coverage of her lawsuit

publicly reported concerns as to the accuracy of SANDAG FasTrak customer account balances and SR 125's financial accounting records.

In December 2023, the Independent Performance Auditor, Audit Committee, Board Chair, and several Board members believed the issues raised publicly warranted an investigation. The Office of the Independent Performance Auditor conducted the investigation.

Objectives

The objectives of the investigation were to determine:

1. If SANDAG's SR 125 financial accounting can be relied upon;
2. If SANDAG rectified the publicly reported errors with customer accounts shared with the Board of Directors in December 2023, and
3. If there were other significant matters noted during the investigation

Findings

1. ETAN's Fastlane¹ financial reporting cannot be relied upon.
2. SANDAG's Finance department lacks adequate internal controls including proper review and supervision to ensure SR 125 financial information is accurately recorded, accounted for, and reported accurately.
3. For the publicly disclosed general ledger errors, none of the underlying software programming or configuration issues in ETAN's Fastlane (ETAN's BOS) have been fixed. Some errors have been adjusted in both ETAN's BOS general ledger and SANDAG's QuickBooks, while others have only been fixed in QuickBooks for financial statement purposes. Lastly, some errors continue to be researched.
4. ETAN's implementation of the Back-Office System (BOS) Fastlane was headed for trouble from the beginning. SANDAG executive management failed to address the situation in a timely manner, including informing the Board of Directors.
5. SANDAG has suffered significant revenue losses due to a lack of adequate and timely monitoring.
6. At least \$1 million in revenue has been lost due to a function in ETAN BOS not being turned on.
7. The beginning customer account balance changed, no longer matching the original beginning balance, in a subset of accounts tested.

¹ Etan's Fastlane is the Back-office System for tolling transaction management.

SECTION ONE: SR 125 Accounting Issues

FINDING 1: ETAN's Fastlane financial reporting cannot be relied upon

FINDING 2: SANDAG's Finance department lacks adequate internal controls including proper review and supervision to ensure SR 125 financial information is accurately recorded, accounted for, and reported accurately.

SR 125 went live on June 6, 2022 with the knowledge that ETAN did not fulfill many of its contractual requirements. A SANDAG project management report titled *Combined Roadway/Back-office Status Report* dated May 23, 2022, identified key risks and the response to such risks. The status report listed the first key risk as:

ETAN BOS will not be ready to Go-Live in time to avoid delay to Kapsch RS installation.

This risk was categorized as "High" and the SANDAG's response to mitigate the risk was to reduce level of functionality delivered for the BOS and balance the risk of BOS go live with risk of further delays on the Roadway (Kapsch roadway system).

Once the decision was made to go live, the data was migrated from the Legacy BOS system, and SANDAG was reliant on ETAN for reliable reporting, including financial reporting.

We reviewed status reports from HNTB and ETAN at the time SR 125 went live with Fastlane and they all document a project suffering from significant risks, including being delayed by 30 months and not meeting many of the contractual requirements initially set out for the Go-Live to SR 125, yet the decision to go-live with SR 125 was made.

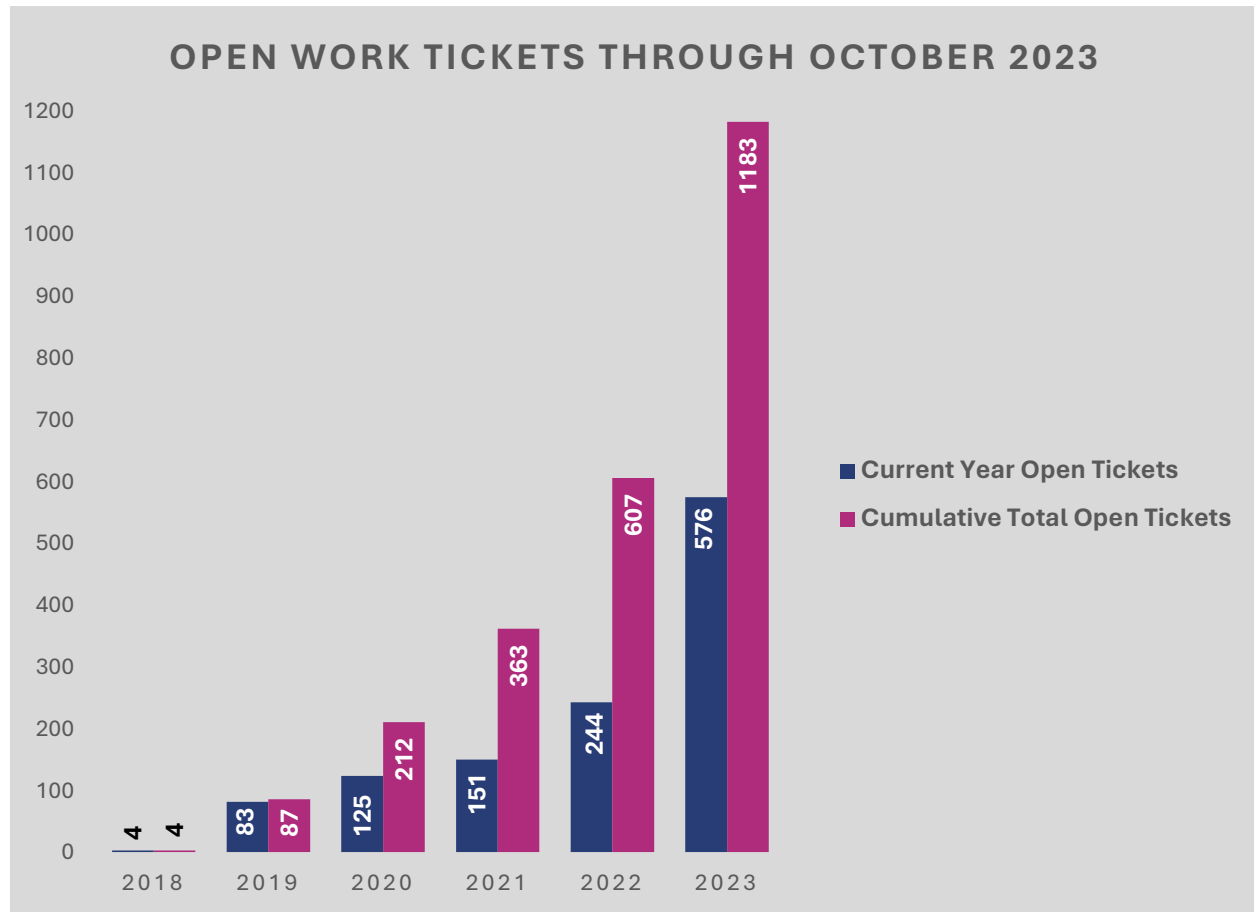
SANDAG's May 23, 2022 Status report also listed the following key risk, categorized as "high" risk:

Inadequate system monitoring or performance issues following Go-Live and major deployments.

SANDAG's plan to mitigate this risk was to conduct daily system check meetings and require contractors to submit regular monitoring reports. When SR 125 went live, it was clear SANDAG and ETAN had not anticipated the volume of system issues. SANDAG Toll Operations and the Finance department began submitting a high number of work tickets² and the volume impaired ETAN's ability to address the system issues in a timely or effective manner. Given the level of documented performance issues, monitoring would not have been a sufficient solution to mitigate this high risk. By October 2023 there were almost 1200 open work tickets, see exhibit 1 below. While it is not uncommon for a system implementation to include a work ticket system with known performance issues and errors, it is uncommon for work tickets to continually build without the system implementor/developer (ETAN) having the capacity or sufficient knowledge of their own system to address them in a timely manner, or at all.

² A work ticket could be submitted by the toll operations team, or the finance team, to report performance issues including the system not working as designed, known errors, or concerns.

Exhibit 1: Open Work Tickets through October 2023



Source: ETAN JIRA from 2018-2024.xlsx, provided by ETAN or ETAN Internal Ticketing system

Other risks were listed in the *Combined Roadway/Back-office Status Report* dated May 23, 2022, however, we selected only a few identified as “high” risk to demonstrate SANDAG’s mitigation strategy was insufficient given the significance and volume of issues Fastlane was experiencing.

Significant ETAN Concerns Were Noted by SANDAG’s Finance Staff

SANDAG Finance staff was aware the first month after SR 125 goes live that Fastlane’s trial balance was not working. In an email dated, July 25, 2022, from the senior accountant to his direct supervisor and the CFO, he stated:

At this point, I need them (ETAN) to make a functional trial balance³ work...

³ A trial balance is a summary report listing the balances of all general ledger accounts of an organization at a certain point in time. Each general ledger account records the financial transactions related to the particular accounts. The general ledger transactions include the transaction date, description, and amount. The account totals for general ledgers account are summarized and presented in the organization’s trial balance.

SANDAG Finance staff noticed something wrong with the deferred revenue and account receivable accounts in the fall of 2022. However, they did not have the capacity to investigate it until the spring of 2023 as they were working on FY22 year-end financial statements for the annual audit, and the FY23 second quarterly bond disclosures. This matter was the start of a series of issues identified by Finance and HNTB surrounding the accuracy of Revenue, Deferred Revenue, and Accounts Receivable. These issues continued beyond the Fall of 2023 and are discussed later in this section and in section 2 of the report.

ETAN Did Not Prioritize SANDAG's Finance Staff Needs

Early in 2023, SANDAG's finance staff become more frustrated with ETAN's inability to prioritize their needs and provide reliable reports. Project meeting notes from SANDAG's project manager on February 9, 2023 include references to "System before the cutover in May was ok", "Finance is not "prioritized" and told too often to work around." The Finance team responsible for producing SR 125 financials are tasked with performing workarounds to record financial information and reconcile the books while ETAN is still struggling to deliver baseline accounting functionality. Additionally, the Finance staff, like Toll Operations staff, and HNTB are relied upon to assist ETAN in troubleshooting Fastlane.

On March 2nd the following email is sent from an ETAN Tolling staff member to the SR 125 Senior Accountant:

March 2, 2023

Hi SANDAG Finance staff person,

I am requesting the following information to facilitate the financial needs of your department. As discussed in our meeting on 2/28/23 we would like to put together a financial project calendar to track all key accounting deadlines and reporting needs so that ETAN can better support the SANDAG finance team.

1. List of daily reports needed from FL to reconcile – Ex: Deposit Detail report; GL Detail report; Interface Merchant Settlement report. Please list any other reports used for daily reconciliations and provide the date needed for these reports – Ex: following business day.
2. List of monthly reports that are used to prepare monthly close – Trial Balance report, GL Summary report, Customer reports, CTOC Summary and Detail reports, CTOC Agency invoice, Nuvei statements from ETAN. Please list any other reports from FL that are needed, and the date needed – example: 2nd business day of month.
3. List of quarterly reports and the date needed – KPI reporting.
4. List of annual reports needed – Bond reporting requirements that need to be addressed.
5. Important dates – I know that you need to close the Financial Period on the 10th day after month end. Are there any other dates that are critical for meeting deadlines?

Please reach out to me if you have any questions. Thank you for your assistance.

Kind regards,

ETAN Tolling staff person

The email exchange illustrates Fastlane’s limited accounting functionality at the beginning of March 2023, nine months after SR 125 went live. ETAN made little progress to address Finance’s concerns from March 23 forward, and in January 2024, at the request of SANDAG staff, the Board authorized the CEO to execute a sole source contract for a new back-office system.

SANDAG Initiated Workarounds to Reconcile the Information Outside the Back-Office System

SANDAG Finance department addressed the lack of reliable financial reporting from ETAN’s BOS by initiating workarounds to reconcile the information outside the BOS. For example, Finance relied upon the bank statements and credit card company records to record revenue. This method allowed SANDAG to record revenue for tolling transactions where cash or credit was involved. However, it would not be able to identify if transactions were missed by the bank or the credit card company. A reconciliation is a process of comparing an organization’s records against a bank’s records or vendor’s records. Both sets of records should agree with each other. If not, the organization needs to figure out why and fix any errors in the accounting records.

Both SANDAG Toll Operations and Finance employed the use of queries as a workaround to compensate for the lack of reliable reports. This workaround utilizes a few SANDAG staff analysts and ETAN to run queries to extract needed operational and financial data when researching issues or accumulating various data points from the system. However, queries can be limited in their usefulness as analysts relied upon the ad-hoc documentation produced by an ETAN developer. This documentation may not represent the complete design or parameters necessary to extract the correct data from the system. This workaround, for example, was used immediately prior to SR 125 going live. The HNTB Combined Roadway/Back-office System Status Report for May 23, 2022 stated:

ETAN made good progress on the data migration and provided an initial validation of the finance starting balances, which included queries of customer account balances. These queries were provided in place of reports which are currently not functioning as designed.

HNTB's Validation Issues Related to ETAN's Back-Office System Reports

Meeting notes from a February 28th project meeting with HNTB state:

Reports are messy—needs to be accurate and formatted better. Performance problems. Test procedures should include validating and reconciling relevant reports.”

In May of 2023, HNTB was responsible for validating reports provided by ETAN as part of HNTB's contractual responsibilities. Most of the reports ETAN provided could not be successfully validated, meaning they failed, and for some of the requested reports, ETAN was unable to run in the system.

ETAN's Reporting System is Inconsistent and Balances Cannot Always be Relied Upon

In one example we reviewed the beginning balance used in the reconciliation failed to match the final ending balances from the prior year trial balance by almost \$150,000. It was explained the trial balance amounts changed because there were discrepancies on how the reports were run; sometimes prior dates were inserted into the apply date field, which reports used, when the posting date should have been used for reporting. The lack of consistency in how dates are applied, and how reports are run is concerning, and indicates a lack of consistency and stability in Fastlane accounting system. Accounting systems are designed to accurately post transactions in the proper accounting period to ensure financial reports accurately report financial information in the correct accounting period.

The ETAN system was unable to consistently close the books in the Fastlane general ledger system. This inconsistency to close the books was referenced in meeting notes, interviews, and in email exchanges, including an email stating the account balances for month-end changed because transactions were allowed to be posted in prior periods.

SANDAG's Control Environment over SR 125 Financial Reporting was Insufficient to Ensure Reliable Reporting

Several examples of poor internal controls and concerning accounting issues involving both ETAN and SANDAG were noted during our investigation:

- Unearned revenue is only reconciled at year end for the year-end financial statements. If the unearned revenue was appropriately reconciled monthly, or quarterly, errors could be identified sooner, and it would be easier to research the differences. The fact that it took SANDAG months to reconcile the differences between the Customer Account Balance Summary and the General Ledger demonstrated the difficulty in researching a large number of discrepancies over a long period of time.
- Financial statements are produced quarterly or annually to satisfy bond disclosures and the annual financial statement audit requirements instead of ensuring financial information is reported in a timely manner. Controls need to be in place to ensure accounting information is accurately recorded and reported. Timely month end reconciliations are an important part of this process to ensure accurate financial statements, fraud detection, better cash management, compliance with regulatory requirements, improved planning and better relationships with investors and lenders.
- Some year-end journal entries were posted without supporting documentation, and upon request for such supporting documentation for this investigation, the accountant in charge needed to retrace their steps and gather or prepare the supporting documentation. Some journal entries were provided that did not have adequate supporting documentation, but instead were numbers recorded to true up or true down an account balance, in essence a number is plugged in to balance the journal entry.
- Common fee revenues and expenses for both the SR 125 and I-15X are recorded in common general ledger accounts in ETAN's Fastlane BOS and then allocated to the individual books for each toll way in QuickBooks based upon account numbers on SR 125 and I-15X from 2019. When requested, no documentation could be provided to support how the allocation percentage was determined, instead Finance staff had to interview other Finance staff and then prepare an analysis to support the 64/36 percentage allocation. This analysis demonstrated a 64/36 allocation split of common fee revenue and expenses based upon 2019 account numbers. It is important that such an allocation methodology is clearly documented and reviewed for reasonableness by management on a regular basis to ensure the allocation method remains reasonable. The allocation method should be captured in a department standard operating procedure.
- Accounts Receivable Policy does not exist, instead an analysis was provided to us during the investigation documenting how accounts receivable was accrued for the June 30, 2023 year-end. From our review of the documentation, it is clear the methodology applied is consistent from previous years, and the accrual appears reasonable. However, this year the ETAN BOS system could not produce an accounts

receivable aging report, which is a problem. The accountant in charge included the ETAN's BOS ending trial balance amount of \$68 million in the A/R analysis. This balance cannot be verified as accurate. Fortunately, this balance does not have an impact on the financial statements because it is netted against a contra asset of the same amount.

- Daily monitoring of trips from the Kapsch roadside system into ETAN's Fastlane BOS is not being done. A SANDAG finance staff member creates a report for management with daily traffic numbers from the Kapsch roadside system, however it is not compared to the trips being posted in the ETAN Fastlane BOS. Daily monitoring would allow for early detection and prevent errors not only from occurring, but from going months unnoticed. Such errors are discussed in more detail in the next section of the report.

Materiality vs Accuracy

The SANDAG Board, the public and other stakeholders have raised concerns to SANDAG's CFO regarding the SR 125 accounting errors and issues that were made known at the end of 2023. The CFO has used the phrase "not material" to describe the financial impact on SANDAG and the public related to these matters. Materiality is a Generally Accepted Accounting Principle (GAAP) that determines whether misstatements in financial reporting, such as an omission or misstatement, would impact a reasonable user's decision-making. This is a principle that is used in preparation of an organization's audited financial statements. Materiality, however, is not a principle applied to an organization's financial record keeping. An accounting system should record transactions accurately and to the penny. For example, a line item in the financial statements may be misstated by \$100,000, however the total line item may equal \$40 million, therefore the misstatement is only .25 percent. This would not be considered a material misstatement. On the other hand, if an organization's accountant failed to record \$500 hotel reimbursement, the accounting records would be inaccurate and would not reconcile.

Other Issues

Another example illustrates ETAN's inability to produce reliable reports and the Finance department prioritizing its need to meet an SR 125 financial statements deadline over first ensuring the reliability of the financial information. While the Customer Account Balance Summary (CABS) report was a required report per ETAN's contract, the report could not be run in the system until July 2023, thirteen months after SR 125 went live, and even then, it was not accurate, and did not reconcile to Fastlane's general ledger.

One of the errors reported to the Board in October 2023 was related to Fastlane's general ledger not reconciling to the customer account balances in the CABS. These errors are discussed in Section 2 of the report.

ETAN's system posted incorrect data when it was inaccurately programmed. Such errors required Toll Operations staff, ETAN, Finance and HNTB to work together to figure out what happened and how to correct it. It was found that the accounts have discrepancies in the

general ledger, and some of the discrepancies occurred because of incorrect posting. These publicly disclosed customer account errors are explained in the next section of the report.

It was reported by consultants and SANDAG staff that it was not uncommon for ETAN to fix one problem, and another problem would occur from the fix, requiring additional SANDAG staff and HTNB time. ETAN reported in their August 2022 BOS Monthly Progress Report the “As-Built Documentation” of the BOS system was 10% complete.” We were informed in December 2023 that ETAN was still writing system documentation as they were being interviewed by SANDAG consultants hired to determine if Fastlane data could migrate to a new BOS system.

ETAN’s contract with SANDAG included having system documentation, and when asked why they only had 10% of the documentation complete for their baseline system, they responded that their government project before SANDAG required “minimal if any” documentation. Regarding SANDAG, they confirmed “We had very little documentation on the system,” and there was very limited baseline documentation.

It appeared that ETAN personnel did not always know how to fix system problems and the lack of system documentation, or poorly written documentation, made fixing the problems difficult and time-consuming. ETAN also experienced significant personnel turnover during the project, contributing to a lack of historical knowledge, and at times insufficient experience to effectively manage and deliver the system they were contracted to provide as discussed earlier.

Conclusion

The investigation found that the financial information in the ETAN Fastlane BOS cannot be relied upon and that SANDAG executive management was aware of the system’s inability to produce reliable financial reports. Additionally, the Finance department lacked sufficient internal controls including proper supervision and timely reconciliation. Senior Financial Management allowed the situation to persist and did not intercede at an operational level to ensure the reliability of the financial information, instead they dismissed concerns as not material.

Recommendation I:

We recommended an independent assessment of the Finance department’s policies, procedures, and practice to ensure adequate internal controls including proper review and supervision over all of SANDAG’s financial operations.

SECTION TWO: Status of Publicly Reported Errors with Customer Accounts

On December 8, 2023, the SANDAG CFO presented an overview of the implementation of the back-office system for the SR 125 in which he stated:

SANDAG currently services approximately 90,000 customer accounts. In August, SANDAG discovered approximately 55,000 of those accounts did not accurately reconcile to the internal accounting general ledger by a total of \$87,000. It was found certain types of transactions were responsible for the improper posting of transactions from 45,000 of those accounts to the internal general ledger, which has since been corrected. The accounts not currently reconciling to the general ledger are now down to 10,000 accounts. But the variance of \$8,771[sic].

An example of other variances was also noted by the CFO:

For example, approximately 100 recent transactions were posted to the incorrect customer accounts. And charged with incorrect customer credit card.

Of the 88,445 customer accounts referenced as approximately 90,000 by the CFO that existed on June 30, 2023, there were 48,620 accounts, identified by ETAN, HNTB and SANDAG, that had different amounts in ETAN's Fastlane general ledger versus ETAN's Fastlane's Customer Account Balance Summary (CABS) report. The CABS report total should equal the customer's prepaid balance which is reported in SANDAG's financial statements as Unearned Revenue. SANDAG was able to reconcile these accounts in Fastlane with ETAN's and HNTB's assistance. The remaining 8,851 accounts continue to be researched.

SANDAG Finance calculated \$90,646 as the net revenue loss attributed to the errors in the 48,620 accounts. The exhibit below quantifies the impact of each category of error as increasing or decreasing revenue. Next, we will go through the steps ETAN and SANDAG took to rectify each category or error.

Exhibit 2: General Ledger Issues

General Ledger Errors	Debit ⁴	Credit ⁵
Manual Data Fix Error	24,732	
System Generated Errors:		
Penalty Reversal		52,514
Pay by Plate Cancellation	92,519	
Fare Adjustment	62,008	
Invalid System Configuration:		
Missing Transaction Codes/Posting Rules		19,547
Check Payment Cancellation		16,552
TOTAL	179,259	88,613
Net Effect to Revenue	90,646	-

Source: Finance's correcting journal entries to QuickBooks for FY2023

FINDING 3: For the publicly disclosed general ledger errors, none of the underlying software programming or configuration issues in ETAN's Fastlane (ETAN's BOS) have been fixed. Some errors have been adjusted in both ETAN's BOS general ledger and SANDAG's QuickBooks, while others have only been fixed in QuickBooks for financial statement purposes. Lastly, some errors continue to be researched.

General Ledger Errors Impacted 48,620 Customer Accounts

The general ledger errors related to the 48,620 customer accounts were either system generated by incorrect posting rules due to software programming or configurations, or the result of an ETAN programmer making a manual data fix. A manual data fix is when a programmer fixes the data directly in the Fastlane database to correct erroneous data. When the data fix was performed, the corresponding general ledger entries were not included. SANDAG finance staff and HNTB worked with ETAN to identify the accounts affected by each issue.

In a proper operating environment, the maintenance team of a software product would have the knowledge and expertise to perform data fixes that would correct data errors in the customer database while ensuring the general ledger accounts were also corrected to maintain data consistency and financial reliability.

For all the system generated and configuration errors described below, the error was only corrected in QuickBooks for financial statement reporting and, in some cases, the Fastlane general ledger. The underlying software or configuration errors were not addressed. The Fastlane general ledger errors will likely persist, and QuickBooks adjustments will be needed for future fiscal year reporting.

⁴ Debit: an accounting entry to decrease revenue in the general ledger.

⁵ Credit: an accounting entry to increase revenue in the general ledger.

General Ledger Errors

The errors discovered in the general ledger were a result of:

- Manual data fix error
- System generated errors
- Invalid system configurations

This section summarizes the FY2023 financial impact when known, however, some errors occurred before FY2023, and some may still be occurring.

Manual Data Fix Error

Monthly Minimum Toll (MMT) Reversal Data Fix Error

The MMT requires that customers spend at least \$3.50 plus \$1 per transponder in tolls each month or a fee is assessed. The fee is the difference between a customer's total amount of tolls used and the MMT. ETAN's data fix reversed MMT fees on the Fastlane customer accounts, but the reversals were not posted to the Fastlane general ledger for 9,084 accounts in the amount of \$24,732.

This error was corrected in both the Fastlane's general ledger in June 2023 and in SANDAG's QuickBooks in November, 2023.

System Generated Errors

Penalty Reversal

The system posted incorrect general ledger entries when violation penalties were reversed by customer service representatives (CSRs). For example, CSRs attempted to waive \$10 from the \$40 violation payment but the system instead cancelled the \$40 penalty and added a \$30 payment for each violation to Fastrak unearned revenue. This error affected 131 accounts in the amount of \$52,514.

This is a configuration error not fixed in Fastlane's general ledger, yet a journal entry was recorded in SANDAG's QuickBooks in November, 2023 to address the error.

Pay by Plate Cancellation

A Pay by Plate (PBP) trip is created when a customer, who does not have a FasTrak account, uses the SR 125 toll road and later pays for the trip within four business days of their trip. For example, a PBP was paid and then cancelled due to a mis-reported trip or duplicate payment. The error occurred when a customer payment in Fastlane was reversed but the corresponding reversal was not posted in Fastlane's general ledger. This error affected 27,401 accounts in the amount of \$92,519.

This is a software programming error not fixed in Fastlane's general ledger, yet a journal entry was recorded in SANDAG's QuickBooks in November, 2023 to address the error.

Fare Adjustment

During normal business operations, FasTrack, PBP and violation trip fares may be lowered. For example, a FasTrack customer's account balance may be negative and they were charged the cash rate for a toll due to insufficient funds, and when they call a CSR to bring their balance positive, the CSR lowers their toll to the FasTrack rate. Consequently, such lowered trip rates on the customer accounts were not posted in Fastlane's general ledger for 4,041 accounts in the amount of \$62,008.

This error was corrected in both the Fastlane's general ledger in August, 2023 and SANDAG's QuickBooks in November, 2023.

Invalid System Configurations

Missing Transaction Codes and Posting Rules

Some financial transactions had no rules on how they should be posted to Fastlane's general ledger, including not having an associated transaction code or a posting rule that would determine what account to post the transaction to in the general ledger. Transactions were posted to Fastlane's customer account but not to the General Ledger. This affected 1,146 accounts in the amount of \$19,547.

This is a configuration error not fixed in Fastlane's general ledger, yet a journal entry was recorded in SANDAG's QuickBooks in November, 2023 to address the error.

Check Payment Cancellation

The cancellation of a payment was recorded as the cancellation of a refund check. This error caused the system to post amounts to incorrect accounts in the general ledger. This affected 30 accounts in the amount of \$16,552.

This is a configuration error not fixed in Fastlane's general ledger, yet a journal entry was recorded in SANDAG's QuickBooks in November, 2023 to address the error.

As stated earlier, SANDAG Finance calculated \$90,646 as the net revenue loss attributed to the errors in the 48,620 accounts. The numbers were taken from Finance's correcting journal entries to QuickBooks for FY2023.

Remaining 8,851 Errors Impacting Customer Accounts in the General Ledger

The remaining 8,851 accounts are still being researched. FAGAN was contracted by the CFO in late 2023 to investigate these remaining differences.

We met with FAGAN to understand the first version of their analysis dated February, 7, 2024. Their work did not include reconciling the information from the KAPSCH system to ETAN's BOS system. Instead, they reconciled information inside ETAN's BOS system. This investigation has documented many challenges inside ETAN's system. FAGAN issued a second version of their analysis dated March 15, 2024 that more clearly qualifies the limitations of their analysis. Their conclusion includes the following qualifiers:

...the correctness of the posted transactions remains to be verified as it was not in the scope of this audit to validate if all tolls, credit cards payments, violation fees, etc. were correctly populated on customer accounts.

While no transaction posting errors were found in the customer accounts, there were several anomalies found regarding the BOS GL2255 entries.

During our investigation, we identified customer account discrepancies that have been provided to SANDAG management, who is currently researching the source of these discrepancies. These discrepancies are included in Section 3.

100 Transactions Posted to Incorrect Customer Accounts

There were 110 customer accounts the system closed with an outstanding balance owed to SANDAG. The Fastlane system attempted to charge the credit cards on the closed accounts, however the system instead incorrectly charged other customers' accounts with active credit cards. The customer service team was notified of this error by a customer who called in to report an incorrect charge on their credit card that was not applied to their FasTrack account balance. The customer service team, Finance and ETAN researched this issue to isolate its impact on only these 110 accounts for a total of \$3,271. All identified impacted customers were sent refund checks.

Conclusion

The results of this investigation demonstrate many system limitations must be overcome to arrive at a desired level of accuracy, which may or may not be possible, and even, if possible, may be cost prohibitive given the level of effort that would need to occur.

Recommendation 2:

We recommend that SANDAG reconciles the data from the KAPSCH system to ETAN's BOS daily to ensure accurate transmission and posting of customer account data to ETAN's Fastlane.

SECTION THREE: Other Significant Reportable Matters

FINDING 4: ETAN's implementation of the Back-Office System (BOS) Fastlane was headed for trouble from the beginning. SANDAG executive management failed to address the situation in a timely manner, including informing the Board of Directors.

Warning signs related to ETAN's ability to deliver on this project were well documented from early on and an effective project management system with adequate leadership and requisite skills was not in place to avert ETAN's development of a poorly functioning Back-Office system (BOS). The ETAN BOS to this day does not meet many of its requirements, fails to provide most required financial reports,⁶ and overall ETAN's BOS has not reached system acceptance.⁷ Per ETAN's contract, System acceptance was scheduled for September 19, 2018. Instead, ETAN's BOS continues to require excessive amounts of SANDAG's staff and consultants time to keep it operational until SANDAG can transition to a new back-office system.

In January 2024, due to the well documented failures of the ETAN back-office system, SANDAG Management requested the SANDAG BOD approve a sole source contract to Deloitte and A-to-Be to implement a new back-office system to replace ETAN. The sole source justification stated:

Development of the BOS began in 2017. The vendor selected in 2016 has been unable to deliver a BOS to the specifications of the contract; as a result, the toll operation which includes customers for both roadway facilities has experienced ongoing outages, errors in customer accounts, inability to process transactions accurately or timely and resulting in lost revenues. The vendor has conceded that it is not capable of delivering a BOS that meets the needs of the agency or the requirements of its contract.

The Board of Directors approved the sole source solicitation with Deloitte and A-to-Be on January 12, 2024. The migration to a new Back-Office System, per SANDAG management, is anticipated to take 7 months to complete.

Events Leading Up to the Sole Source Procurement in January 2024

SANDAG's CFO was assigned senior executive oversight responsibility of the SR 125 tolling operation in February 2022. In 2022, Fagan Consulting produced a series of reports for SANDAG at the direction of SANDAG's CFO. One of the reports was to assess SANDAG's prior BOS RFP process that led to the selection of ETAN.

⁶ Other required reports are not being provided as well; however, the objectives of this investigation focus primarily on financial reporting.

⁷ System acceptance is when a system meets the requirements set out in the contract and has been tested to verify in an operational environment (either simulated or actual production) that the complete system (i.e., the full complement of application software running on the target hardware and systems software infrastructure) satisfies specified requirements.

FAGAN's summary of findings stated:

There are numerous issues with the content and approaches used in the SANDAG BOS RFP, which almost certainly contributed to the difficulties encountered on the project.

The types of problems found include:

1. Vague, duplicate, or contradictory requirements
2. Untestable requirements
3. Questions about the actual evaluation process
4. Poor system engineering processes applied in developing the RFP

FAGAN's analysis stated:

At the time of the SANDAG RFP, the winning bidder was already experiencing significant financial, schedule, and development issues on at least one other project. Unfortunately, this concern was not discovered or dismissed.

The investigation revealed a system that never worked as designed, and SANDAG staff and consultants as a result became responsible for testing and troubleshooting Fastlane constantly to bring it to its current state of functionality while relying upon workarounds, such as data queries, to meet some of SANDAG's business needs including financial reporting.

FAGAN was contracted in spring 2022 to perform an operational risk assessment of SANDAG's back-office project with ETAN. The report stated:

The SANDAG staff is concerned about ETAN's ability to fully deliver the current system. Additionally, the Otay Mesa project is scheduled to open in two years. Given the issues encountered on the current project, the SANDAG staff has reservations that ETAN will deliver for Otay Mesa.

In June 2022, FAGAN briefed and recommended to members of SANDAG's Senior Executive Management to begin researching alternative procurement options due to significant concerns with ETAN. Shortly after this briefing, SANDAG's CFO communicated to FAGAN in an email:

it was really determined that we need to move away from ETAN (in particular for the new OME Port of Entry, but also in time for SR-125 and I-15). So we need to take an item to our BOD (SANDAG Board of Directors) sooner than later so that we can get the team moving in a direction to prepare a new tolling RFP...

Senior Management did not take an item to the Board of Directors until October 2023, almost 16 months after FAGAN's June 2022 briefing. The former Director of Accounting and Finance, per the published lawsuit, was alleged to have alerted the external financial statement auditors of the financial accuracy issues related to SR 125 in October 2023.

The June 2022 briefing discussed above was delivered before the July 2022 release of the operational risk assessment. FAGAN's risk assessment includes an extensive list of significant cons if SANDAG continues with ETAN including:

- ETAN required considerable support from SANDAG staff to test and bring their system online.
- ETAN software development staff is limited (possible single point of failure if that person leaves ETAN).
- ETAN seemed to significantly under-estimate the actual development cost of the project, leaving them in a precarious financial position on this project.
- Based on a review of the project-level documents, it is not clear that ETAN knows how to manage a project of this magnitude.
- Much of the project and technical documentation is poorly written.
- ETAN has limited experience in this type of software development (i.e., only two (2) operational back-office systems projects).
- ETAN seriously misrepresented the amount of development needed to implement SANDAG's system (RFP compliance matrix indicated >90% of the SANDAG requirements existed in their baseline software, while SANDAG staff told us that > 90% new development was a more realistic assessment).

Many of these points were reiterated in the interviews OIPA conducted, and the documents we reviewed. While all the points are troubling, we would like to highlight four of the points.

Point 1: ETAN software development staff is limited (possible single point of failure if that person leaves ETAN).

ETAN's project manager left the project in August 2022, less than 2 months after the SR 125 Go-live date. As documented by FAGAN in its risk assessment, the loss of this key staff person at ETAN had the potential to be an insurmountable loss to the project as this was ETAN's primary subject matter expert for the project.

Point 2: ETAN has limited experience in this type of software development (i.e., only two (2) operational back-office systems projects).

Point 3: ETAN seriously misrepresented the amount of development needed to implement SANDAG's system (RFP compliance matrix indicated >90% of the SANDAG requirements existed in their baseline software, while SANDAG staff told us that > 90% new development was a more realistic assessment).

Point 4: Much of the project and technical documentation is poorly written.

ETAN started the BOS project without technical documentation for its Fastlane product. ETAN developed the system documentation, with HNTB and SANDAG editing it, well beyond the initial projected finish dates, and as of this date, the System Detailed Design Documentation has not been accepted.

These points illustrate ETAN lacked the requisite experience going into the project, and it is unclear why these issues were not surfaced earlier or taken more seriously.

When the former CEO Hassan Ikhata was questioned at the December 8, 2023, Board of Directors meeting as to why they were not informed sooner, he responded:

You hire your staff to do their job and we were doing our jobs and we knew there were issues...Yeah, we knew there were some operational issues, but we thought the best approach is to overcome the mantle to get to the point where we couldn't get the financial statement, that's when we came to you in October. But yes, I made those decisions based on the authorities you offer me to make. And I don't think you want every time we have an operate small operational issue.

Conclusion

The reasons SANDAG senior management did not address the serious concerns with ETAN's ability to perform sooner is not a part of this investigation, but it is a matter that should be reviewed in detail by SANDAG senior management with the Board of Directors to ensure matters of this magnitude are handled expeditiously with accountability and transparency at the forefront. Such matters should be presented to the Board of Directors and the public in a timely manner.

Recommendations 3 through 6:

We recommend:

3. The Board and the public should be provided with an explanation as to why an RFP process was not initiated a year sooner, and why the Board was instead presented with a request to authorize a sole source contract award on January 12, 2024.
4. The Board should consider a policy that requires a Board report when a multimillion-dollar project is failing to meet its deadlines and deliverables. Such a policy should clearly state under what conditions a report is required, as well as when a report will no longer be required.
5. The Board review SANDAG's sole source awards semi-annually to ensure adherence with public procurement laws and practices.
6. The Board request the Audit Committee and the IPA to include SANDAG's sole source procurement process be included in the IPA's annual work plan for FY 24-25.

FINDING 5: SANDAG has suffered significant revenue losses due to a lack of adequate and timely monitoring.

Revenue Losses

Tolling systems suffer from toll revenue losses, called leakage, due to missing or mis-classified vehicle transactions, unrecoverable owner of record information, and transactions that fail to process. To curb their losses, most Toll Operations departments rely upon daily monitoring to ensure all systems are operating and communicating with each other correctly. Daily monitoring of systems helps alleviate toll revenue leakage by identifying and addressing system issues in a timely manner.

SANDAG's Toll Operations suffered revenue losses from Kapsch roadway system errors, ETAN Fastlane errors and missing system functionality, and SANDAG's lack of adequate and timely monitoring. SANDAG has the option to include these revenue losses in addition to their calculated liquidated damages⁸ for both KAPSCH and ETAN, however the systemic issue of a lack of adequate and timely monitoring has not been addressed. These losses are not limited to FY2023.

KAPSCH ETAN Interface

The Kapsch Roadway system captures vehicle transactions on the SR 125, processes them into trip data and sends the information to the Fastlane Back-office System for customer billing. We have included four notable reported issues when the Kapsch roadway system sent trips to the ETAN Fastlane system with improper charges or failed to send trips to the ETAN Fastlane system. HNTB, Kapsch and SANDAG estimated losses from these issues. The issues were not identified by active daily monitoring of the systems, but instead by system users indicating a problem may exist based on observations or through HNTB's historical data analysis.

1. From May 27, 2022, to October 11, 2022, trips were not properly charged in the Kapsch system, resulting in a minimum fare being billed to customers instead of a higher fare. HNTB estimated this resulted in approximately 200,000 trips being undercharged by \$234,900, which is the average of three separate analyses from SANDAG and Kapsch.
2. From September 14, 2022 to November 3, 2022, three plus axle vehicles were charged the fare for two axle vehicles at two plazas on the SR 125. HNTB calculated 39,562 trips were undercharged by \$116,175.
3. From September 16, 2022 to November 7, 2022, the Kapsch system stopped a subset of trips from being sent to the ETAN Fastlane system. HNTB calculated this impacted 203,451 trips and estimated the impact to be \$508,655.
4. From May 20, 2023 to June 20, 2023, the Kapsch roadway system sent trips to the legacy roadside system as opposed to the ETAN Fastlane system after a system reboot due to a configuration issue. HNTB calculated 35,017 Away Agency Fastrak trips and 310,488 violation trips were not processed and billed for approximately \$948,428.

FASTLANE Error

From January 2022 to October 2023, a specific government agency's trips were not posting to its account. These trips were deemed too old to post when discovered. ETAN provided a list of 10,090 trips totaling \$35,194 that were not charged to the agency.

⁸ Liquidated damages are damages whose amount the parties designate during the formation of a contract for the injured party to collect as compensation upon a specific breach. Google Wikipedia printed page.

Conclusion

SANDAG has sustained significant revenue losses due to their lack of adequate and timely monitoring of toll operations, and even with the knowledge of such losses, a comprehensive monitoring system was not implemented. To curb revenue leakage, SANDAG must carefully monitor Toll Operations daily to help identify and address system issues in a timely manner.

Recommendation 7:

We recommend SANDAG immediately implements daily monitoring to ensure all systems are operating and communicating with each other correctly.

FINDING 6: At least \$1 million in revenue has been lost due to a function in ETAN BOS not being turned on.

Missing DMV Hold Functionality

A DMV hold occurs after a customer has received several notifications for failing to pay their tolls and escalating violation amounts. While this is not an error in the system, if the DMV Hold functionality in Fastlane is not turned on for placing registration holds, revenue is lost.

Violation escalation consists of a first notice and \$40 penalty, a second notice and \$60 additional penalty, followed by forwarding to a collections agency and placing a DMV registration hold on a vehicle's registration. The DMV Hold placement process was turned off from April, 2020 to September, 2021 following the Board of Director's decision to stop issuing violations during the COVID pandemic. From September 2021 until April 2022, the DMV Hold placement process was turned on in the legacy system but was then turned off when ETAN went live on SR 125.

The average net revenue generated by the DMV Holds from July 2016 to August 2020 was \$95,678 per month. At the time the DMV Hold process was turned off in the legacy system for ETAN's SR 125 go-live, the monthly revenue was trending upwards. Since the DMV Hold placement process was never turned on in Fastlane, the DMV Hold monthly revenue decreased over time. The DMV Hold functionality will not be implemented in the new Deloitte and A-to-Be system until the basic system functionality has been established. We estimate at least \$1 million dollars has been lost due to the missing DMV Functionality. This is based upon a conservative monthly revenue of \$75,000 for 21 months (from June 2022 to February 2024) less fees assessed from the DMV for holds placed. These losses will continue until this function has been implemented in the new system.

Conclusion

The DMV Hold functionality not being turned on for ETAN's BOS will result in continuing revenue losses. To quickly begin capturing revenue, SANDAG should prioritize turning on the DMV Hold placement process once Deloitte and A-to-B basic system functionality is established and implemented.

Recommendation 8:

We recommend SANDAG evaluates with Deloitte and A-to-Be if the DMV Hold Functionality can be implemented sooner.

FINDING 7: The beginning customer account balance changed, no longer matching the original beginning balance, in a subset of accounts tested.

Customer Account Balances

Given the concerns regarding customer account balances, we analyzed a subset of customer account balances in the Fastlane system. The subset of accounts included 62,564 FasTrack accounts that had a balance other than zero when the accounts were migrated from the SR 125 BOS legacy system to ETAN's Fastlane system when SR 125 went live in June 2022. Three separate tests were conducted comparing the legacy account balance to the Fastlane account balance and the Fastlane account balance to the transactions that were posted to the Fastlane account. Our review found that 2% of the account balance tests failed, while 98% passed. We conducted a random sampling of failed tests and found that when SR 125 went live, the Legacy customer account balance was confirmed to match Fastlane's new customer account balance, however, one of our tests revealed the beginning balances no longer match. The discrepancies range from \$.02 to \$862.82. We shared these discrepancies with management to research and determine why the beginning customer account balances changed and why transactions do not add up to the customer balance for the accounts that failed the tests.

Conclusion

Great care must be taken to address customer account balances so that confidence can be restored with SANDAG's customers, the Board, and the public. To address customer concerns about account balances, SANDAG executive management should continue to research and determine why the beginning customer account balances in the Fastlane system for the subset of customer accounts changed and why transactions do not add up to the customer balance for the accounts that failed the IPA tests.

Recommendations 9 and 10:**We recommend:**

9. SANDAG implement a daily reconciliation process between the KAPSCH roadway system and the ETAN Fastlane system be put in place immediately to verify the accuracy of customer charges going forward. This should be coordinated with toll operations and Finance.
10. SANDAG establish a process to address customer concerns related to past account balances that have not been verified or that are not able to be verified. If additional discrepancies in customer account balance are identified, these accounts should be included in this process.

Next Steps

The report will be presented to SANDAG's Audit Committee and the Board of Directors for discussion and possible action. SANDAG Management should provide a written response to the report's recommendations within two weeks.

The Office of the Independent Performance Auditor will publicly report on the status of the recommendations to the Audit Committee, and Board of Directors, at a time to be determined by the Audit Committee with consultation from the Independent Performance Auditor.

Methodology

We conducted an investigation to arrive at the findings and conclusions in this report. The following work was completed:

- Attending and reviewing SANDAG board meetings
- Reviewing HNTB and ETAN various project status reports, meeting notes
- Reviewing SANDAG Project Manager meeting notes
- Reviewing SANDAG legislative records
- Reviewing current and former SANDAG staff members emails
- Interviewing HNTB and ETAN representatives
- Interviewing current and former SANDAG staff members
- Analyzing ETAN Fastlane data
- Analyzing SANDAG Finance data
- Reviewing FAGAN reports
- Reviewing ETAN System Documentation