

Lyon County School District Board Memo

Date: April 22, 2025
To: Board of School Trustees
From: Harman Bains, Executive Director of Operations
Re: Transportation Camera and Student Tracking upgrades

Recommendation:

The Board of Trustees approve the proposed upgrades to the school bus camera systems and the student tracking and transportation management software. The total one-time cost for these upgrades is \$657,345, with an ongoing annual cost of \$116,125.

Background Information:

School Bus Cameras:

The Lyon County School District (LCSD) Transportation Department has recognized critical deficiencies in the current onboard camera systems provided by Provision. A significant portion of the equipment is outdated, with over half of the fleet operating on systems that are more than eight years old, some nearing 25 years. This aging technology has resulted in ongoing reliability issues and inconsistent performance. In multiple serious incidents, the district learned after the fact that video footage was unavailable due to system failures that went undetected, as Provision's systems lack real-time diagnostic capabilities. Acknowledging the substantial investment required to modernize this outdated hardware and software, the district made the decision to thoroughly evaluate alternative vendors and solutions before proceeding.

The current process with Provision for accessing footage is labor-intensive and prone to error. Staff are required to manually remove SD cards from each bus, search through footage on a desktop, and then replace/return the cards. This has resulted in human error, card damage, and delayed access to essential video. Over the past year, the LCSD Transportation team has collaborated extensively with Provision to identify viable solutions to our current system challenges. While Provision does offer newer technology however these features remain largely untested in school transportation environments and do not offer seamless integration with essential driver inspection practices. Despite multiple meetings and discussions, the district continues to have concerns about the reliability and practicality of Provision's upgrades and, as a result, cannot confidently recommend moving forward with their proposed solutions.

The LCSD Transportation team is confident in the solution offered by Gatekeeper. Gatekeeper camera systems have been evaluated firsthand not only by our transportation staff but also by the district's IT Manager and Lead Mechanic. Gatekeeper has a well-established reputation in K-12 transportation surveillance, both nationally and within Nevada, with neighboring districts such as Douglas, Elko, Nye, and Washoe County School District's currently using their services. Gatekeeper's system features a fully integrated, web-based platform that provides live video streaming, real-time system health diagnostics, and automated alerts, capabilities that are currently absent in LCSD's existing setup. Additionally, their equipment includes pre-trip diagnostic indicators that allow

***Mission Statement** Lyon County School District fosters learning for life, empowers connected learners, promotes student ownership, and encourages discovery learning for success in a rapidly evolving world.*

drivers to verify system functionality within seconds, promoting greater accountability and ensuring that any technical issues are resolved before students are onboard. The platform's remote access capabilities also allow transportation staff to view and retrieve footage quickly and efficiently, reducing response times and minimizing the risk of human error.

Similar to the benefits of modern camera systems in our school buildings, the benefits of a modern system on school buses cannot be overstated. They enhance student safety by deterring misconduct and bullying, assist in resolving disputes and incidents, and provide critical evidence in the event of accidents or emergencies. Upgrading to Gatekeeper ensures our fleet is equipped with dependable, future-ready technology that supports our commitment to student well-being and operational excellence.

The district is recommending several key enhancements to the current school bus fleet to significantly improve safety, monitoring, and accountability. These upgrades include the installation of 4 to 7 additional interior audio/visual cameras per bus, depending on bus configuration and comparison, to ensure full coverage of all students. Currently, only 15–20% of students are reliably monitored by existing camera systems. A dedicated camera at the front entrance is also proposed to capture students entering and exiting the bus, as well as interactions with the driver. This addition would offer valuable support in the investigation of incidents and workers' compensation claims that have arisen over the years. Furthermore, the installation of both dash and rear-view cameras is recommended to provide comprehensive video documentation during loading and unloading, support for incident reviews, driver training, and protection against liability. Lastly, the District proposes equipping each bus with an exterior stop arm camera to capture footage of vehicles that illegally pass while the stop arm is extended. This not only strengthens the enforcement of traffic laws but also enhances student safety by deterring dangerous behavior and enabling follow-up actions with the Lyon County Sheriff Office when violations occur.

The LCSD Safety and Risk Management department has conducted a comprehensive assessment of the existing risks and potential liabilities associated with the district's current school bus camera systems. The findings and recommendations of this investigation are detailed in the attached report.

Student Tracking and Transportation Management System:

LCSD has historically lacked a comprehensive, all-in-one student tracking and transportation management system. Instead, the District has relied on a patchwork of solutions, each funded through separate one time grant opportunities over the years, to meet basic operational needs. While these efforts were sufficient for a time, they are no longer adequate. As the District has experienced steady growth in both student enrollment and residential development across all attendance areas and the need for a unified and reliable transportation software platform has become increasingly urgent. In response, LCSD Transportation department over the past 6 months has done extensive research into possible solutions which have included on site visits to other in-state and out of state K-12 school districts to view and experience their software solutions firsthand. Having experience several possible solutions, the district is making the recommendation to adopt a fully integrated solution provided by Tyler Technologies that meets the evolving needs of our students, families, and transportation operations.

Currently the District Transportation department is utilizing a student tracking and transportation software called Treker. Since its adoption the district has experienced several ongoing challenges. Treker proprietary NFC readers provided for student ID check-in and check-out have proven highly unreliable, frequently malfunctioning and requiring ongoing service or temporary repairs. The parent-facing mobile application, intended to deliver real-time bus ETAs and notifications of student boarding and departure, has never been functional enough to release to LCSD families. This has caused continued frustration among students, families,

***Mission Statement** Lyon County School District fosters learning for life, empowers connected learners, promotes student ownership, and encourages discovery learning for success in a rapidly evolving world.*

and school staff. Furthermore, the system has experienced repeated issues with incomplete and inaccurate student data transfers, including duplications and removals of student records. Similar problems have occurred with the transfer of bus route data, resulting in duplicated or missing routes and rendering onboard tablets incapable of accessing necessary routing information. In addition, Treker's software demands labor-intensive manual routing processes, contrary to initial assurances of automation. Key features such as pre-trip inspections and route editing tools remain either non-functional or difficult to use. Efforts to resolve these issues have been further hampered by delayed customer support, often leading to extended system outages and operational disruptions.

In contrast, Traversa by Tyler Technologies offers a comprehensive, reliable, and fully integrated transportation management solution. With automated routing, dependable student tracking via NFC/RFID tablets, real-time parent communication through the My Ride K-12 app, and integrated tools for fleet maintenance, trip scheduling, and driver management, Traversa is built to address the operational inefficiencies that have long hampered the district. It also provides customer support, unlimited staff training, and a strong national track record of successful implementation. Notably, Traversa enhances student safety by offering accurate, real-time visibility of student ridership, reducing the risk of unaccounted-for students, and enabling better emergency response.

Given the persistent shortcomings of Treker and the substantial benefits offered by Traversa, including improved service reliability, automation, and enhanced safety, the district recommends transitioning to Traversa. This upgrade is essential to modernizing our transportation operations, alleviating workload burdens, and delivering a safer and more dependable experience for students, staff, and families. LCSD Transportation team was able to view and firsthand experience this software and its capacities during their research trips to other K-12 school districts.

Budget Considerations:

LCSD currently operates without an annual contract for a dedicated camera service provider, opting instead to replace equipment on an as-needed basis and manual SD cards. Moving forward, the district recommends establishing an annual contract for hosted cloud storage and cellular capabilities at a cost of \$61,812 per year. This investment would enable automated storage and cellular downloading of all video footage captured on any bus in the fleet, significantly enhancing operational efficiency and accessibility of video records. Additionally, due to the age and condition of the current equipment, LCSD recommends a full fleet refresh, which includes the installation of new cameras along with five-year warranties covering interior cameras, DVRs, and hard drives. The total cost for this comprehensive upgrade is \$504,666.

LCSD incurs annual costs totaling \$71,582 for multiple separate software programs used to support its transportation operations. This fragmented approach not only leads to inefficiencies but also places an ongoing financial burden on the district. Transitioning to Traversa would involve a one-time startup cost of \$152,679; however, it would result in long-term savings, reducing the annual software expense to \$54,313, an annual savings of \$17,269. Furthermore, this calculation does not account for the significant labor hours expended by the Transportation team on troubleshooting, rebooting systems, and manually managing and correcting student data and bus routes. By consolidating into a single, reliable platform, the district would benefit from both cost savings and improved operational efficiency.

All upgrades to be paid from the general fund.

***Mission Statement** Lyon County School District fosters learning for life, empowers connected learners, promotes student ownership, and encourages discovery learning for success in a rapidly evolving world.*

Discussed at Previous Meeting:

N/A

Attachment(s):

Gatekeeper Proposal

Traversa Tyler Technologies Proposal

Traversa Tyler Technologies - Student Transportation Software slide deck

LCSD Safety and Risk Management Form - Bus Cameras 4.15.25



***Mission Statement** Lyon County School District fosters learning for life, empowers connected learners, promotes student ownership, and encourages discovery learning for success in a rapidly evolving world.*