SCHOOL DISTRICT OF JEFFERSON COUNTY PUBLIC SCHOOLS

AN ASSESSMENT OF THE TRANSPORTATION PROGRAM AND TRANSPORTATION ACTIVITIES OF AUGUST 9, 2023

PHASE 2 REPORT

JCPS

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Chapter 1
Introduction

In October 2023, Jefferson County Public Schools (JCPS) contracted with Prismatic Services to undertake an assessment of the transportation activities of August 9, 2023 (Phase 1) and the transportation program (Phase 2). As noted in the district's request for proposals (RFP), the goals of Phase 2 were to:

- *Perform a comprehensive evaluation of the Transportation Program. This may include, but not be limited to, an assessment of the following:*
  - *Contemporary Use of Technology*
  - *Methodologies*
  - *Resources within and external to JCPS and the K-12 Industry*
- *Identify deficiencies and opportunities for improvement in the Transportation Program*
- *Provide recommendations for remediation of deficiencies*
- *Provide recommendations to improve the Transportation Program*

This report is provided in fulfillment of Prismatic's contract for Phase 2. It is important to note that JCPS voluntarily undertook this work.

Project Approach

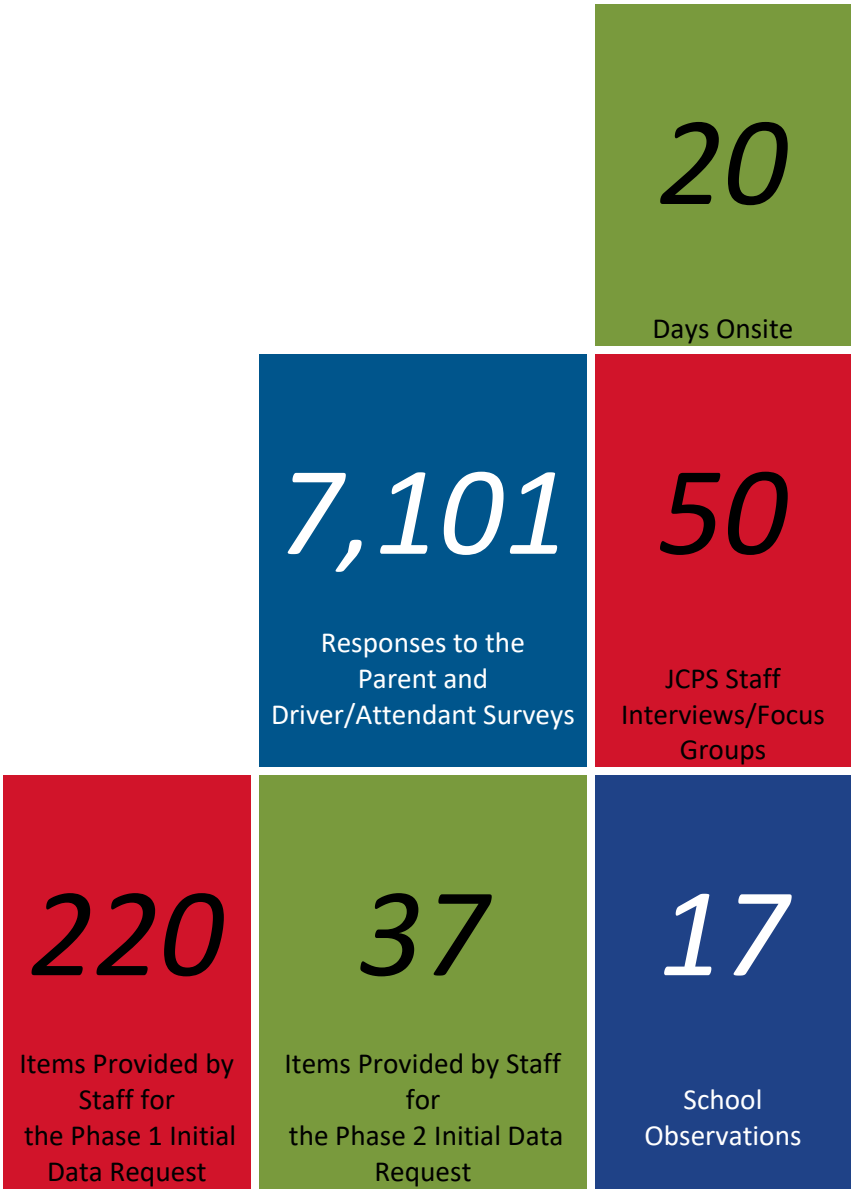
Prismatic proposed and followed a 6-task work plan to meet the district's requirements for Phase 2:

1. Initiate Phase 2
2. Collect Incident transportation department data
3. Solicit constituent input
4. Conduct Phase 2 assessment
5. Draft Phase 2 report
6. Develop and present Phase 2 final report

Throughout Phase 2, Prismatic coordinated with the JCPS director of internal audit to discuss activities completed, review challenges or changes in project progress, review activities scheduled, and review upcoming project products and deadlines. Project activities, activities, and report writing occurred from October 2023 through June 2024. However, the project activities for Phase 2 prior to February 2024 were those that overlapped with activities for Phase 1, including data collection, observations, and interviews that served both phases.

As part of this project phase, Prismatic:

- collected data from the district in response to a Phase 1 initial data request of 55 items, a Phase 2 initial data request of 32 items, then additional data items as the study progressed
- completed 50 interviews, most with district staff (some staff were interviewed multiple times)
- visited 17 schools to observe morning bus drop-offs or afternoon bus pick-ups
- administered a parent survey that received 6,840 responses
- administered a bus driver/attendant survey that received 261 responses
- spent a total of 20 days onsite across all Prismatic staff, conducting interviews, conducting focus groups, and completing transportation observations
- developed draft and final reports



Project Limitations

All projects of this nature have time and resource constraints. Beyond those typical constraints, this project had these limitations:

- One transportation department staff member declined an invitation for an interview, citing pending retirement. It is not known whether the information that person might have provided was gathered in interviews with other staff or whether that person would have contributed unique knowledge to the project.
- The district's late decision to require IRB review and approval of all Phase 2 activities delayed onsite work. Instead of the originally

planned week of March 25th, onsite activities had to be rescheduled to the week of April 29th and later.

Report Organization

The remainder of this report is organized as follows:

- Chapter 2 – Stakeholder Input
- Chapter 3 – Department Review
- Chapter 4 – Conclusions and Recommendations
- Appendices

Chapter 2

Constituent Input

Overview

Prismatic offered a survey input option regarding current transportation operations to parents, transportation staff, and principals as part of this project. Detailed aggregate results, as well as summarized responses to each open-ended question are provided in the appendices. This chapter provides an overview of selected results. **Exhibit 2-1** provides the number of responses received for each survey.

Exhibit 2-1
Number of Responses by Stakeholder Type

Group	# of Respondents
Parents	6,840
Transportation Department	261
Principals	109

Survey processing included:

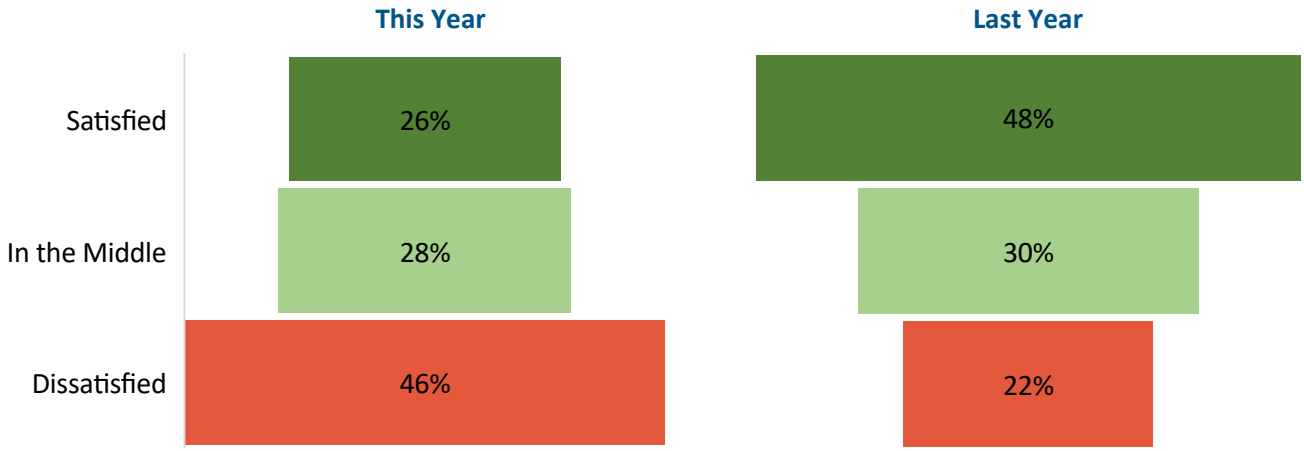
- eliminating substantially incomplete responses
- analyzing the survey response pattern for any cluster of 10+ parent surveys from the same IP address to ensure there were no attempts by interest groups to distort results
- verifying receipt of only 1 response per school for the principal survey
- reviewing and thematic coding of responses to open-ended questions

Parent Survey Results

The survey input of JCPS parents was received between April 22, and May 21, 2024. Parents from across the district provided survey input. Most schools had at least 20 parent responses, while some schools had 100+ parent responses.

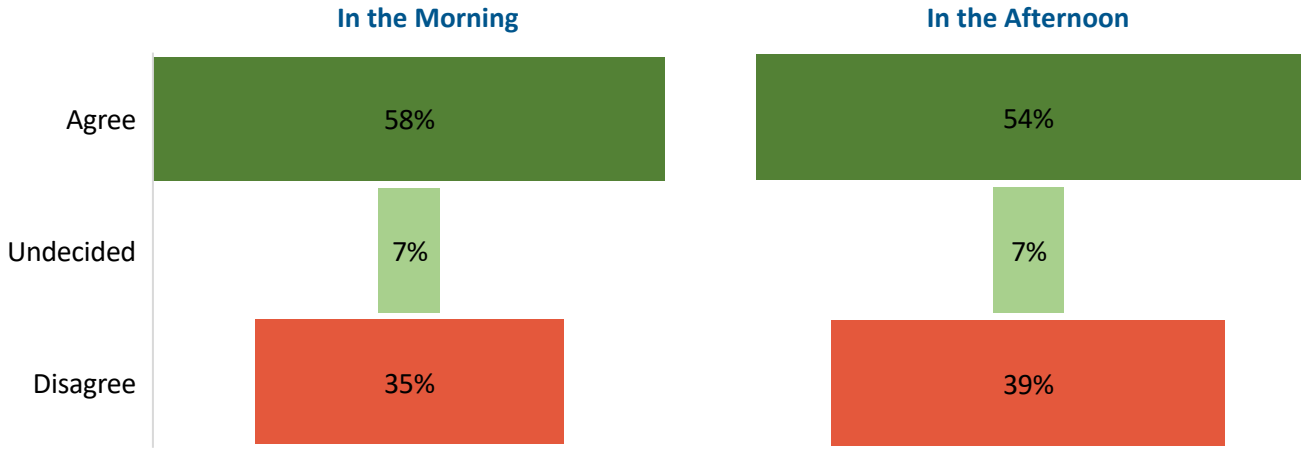
Comparing this year to last year, parent satisfaction with JCPS bus transportation decreased (**Exhibit 2-2**). Only 26% were satisfied this year, compared to 48% last year. Nearly half, 46%, were dissatisfied this year, compared to 22% last year.

Exhibit 2-2
Parent Satisfaction with JCPS Bus Transportation



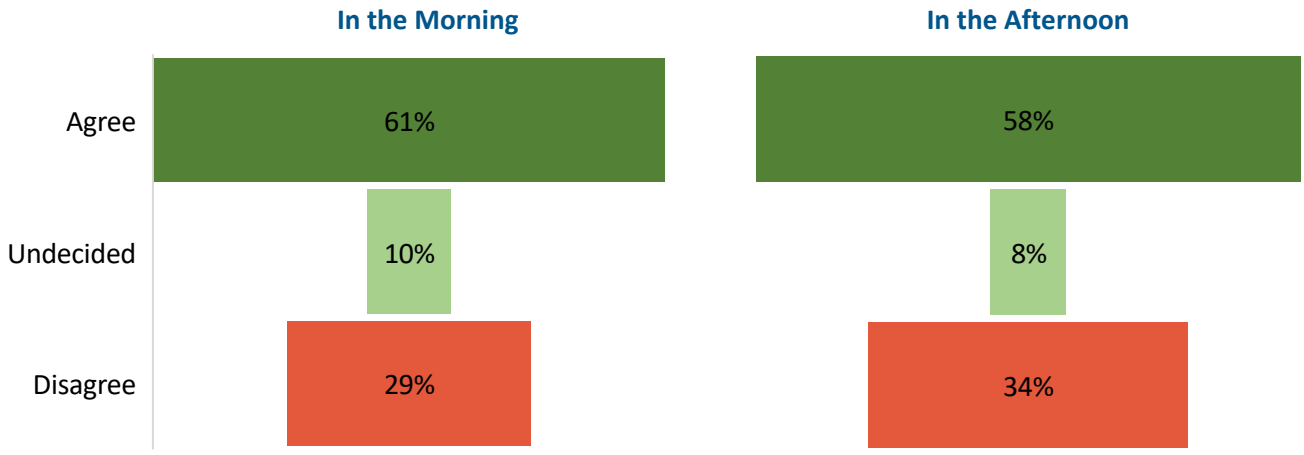
A majority of parents reported that their child's regular education bus ran nearly on time this year in the morning and the afternoon (**Exhibit 2-3**). However, more than one-third reported that this was not the case.

Exhibit 2-3
Parent Report of Regular Education Bus On-Time Performance



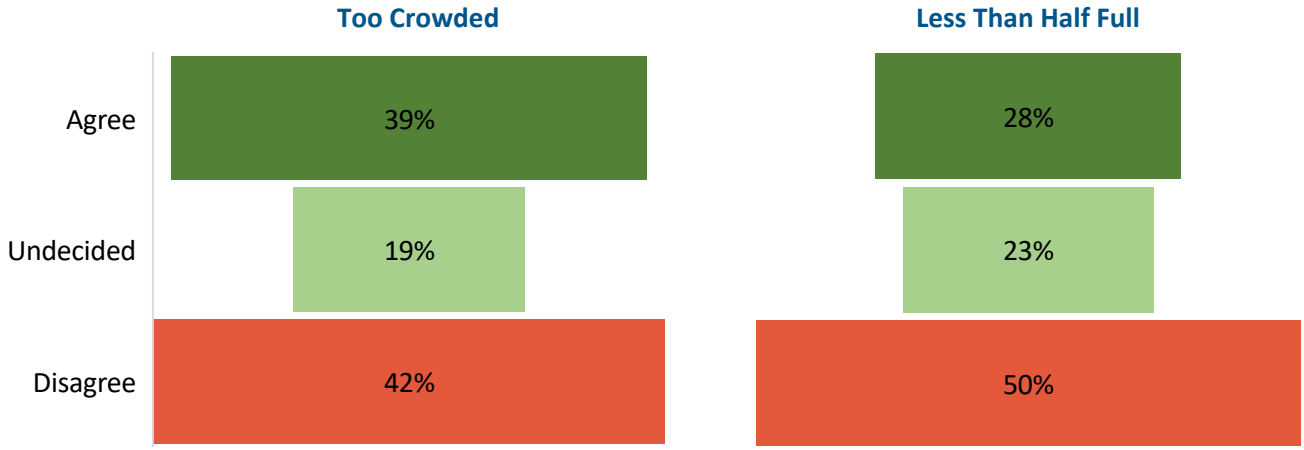
A majority of parents reported that the length of their child's regular education bus ride was reasonable in the morning and the afternoon (**Exhibit 2-4**). However, nearly one-third and more than one-third reported that this was not the case for the morning and afternoon, respectively.

Exhibit 2-4
Parent Report Whether Length of Regular Education Bus Ride is Reasonable



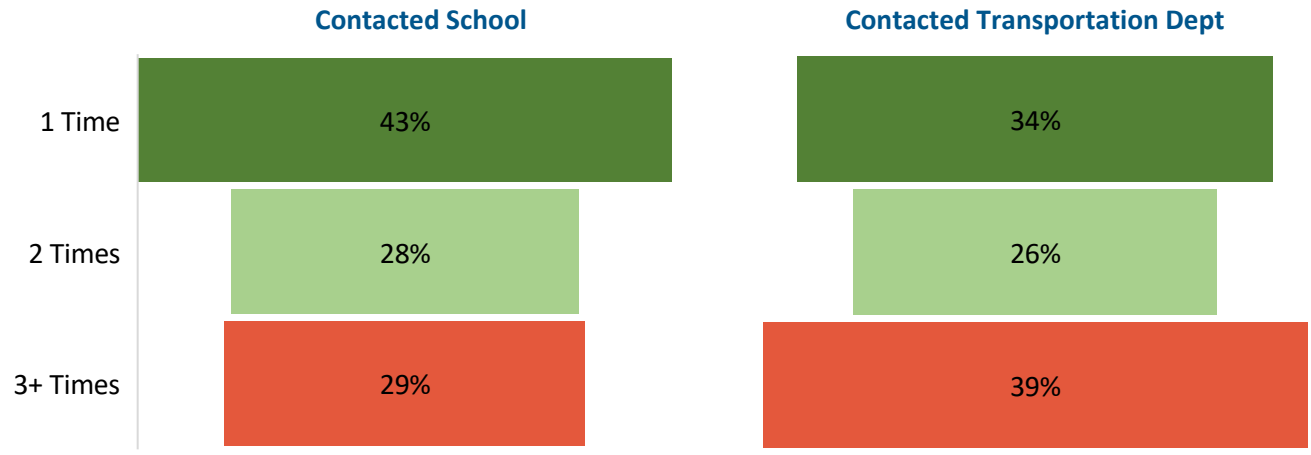
Parents were almost evenly split as to whether their child's bus was too crowded or not (**Exhibit 2-5**). On a subsequent question, half of parents indicated that their child's bus was typically more than half full and 28% of parents indicated their child's bus was typically less than half full.

Exhibit 2-5
Parent Report Whether Typical Bus Occupancy Rates are Acceptable



This year, almost half of the parent respondents (49%) contacted their child's school about a transportation concern. Slightly less than half (47%) contacted the transportation department. Of those who contacted either the school or the transportation department, more than half made contact more than once (**Exhibit 2-6**).

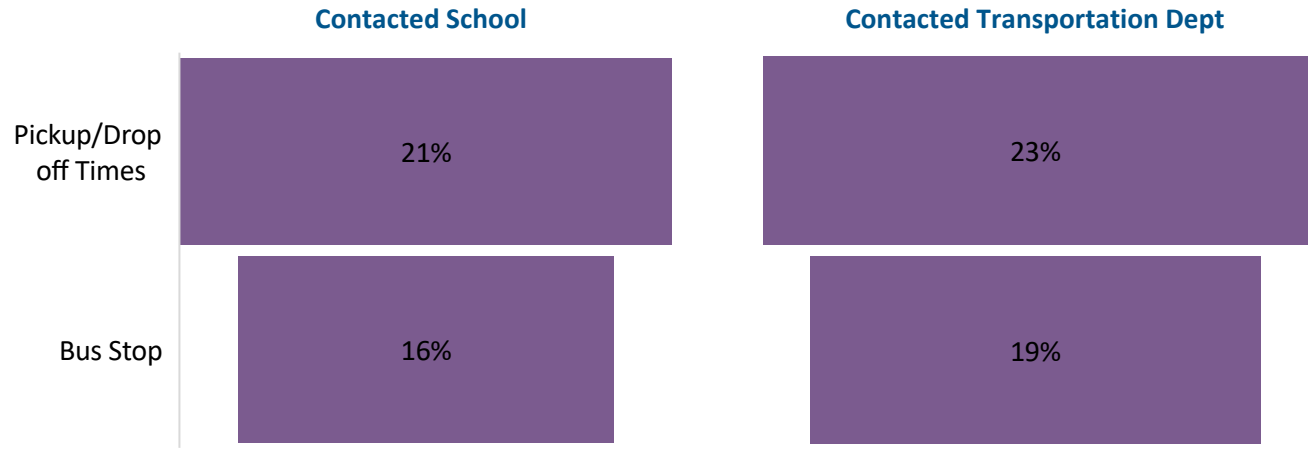
Exhibit 2-6
Number of Times the Parent Contacted JCPS with a Transportation Concern this Year



Parents indicated their top 2 reasons for contacting the school and the transportation department were concerns about:

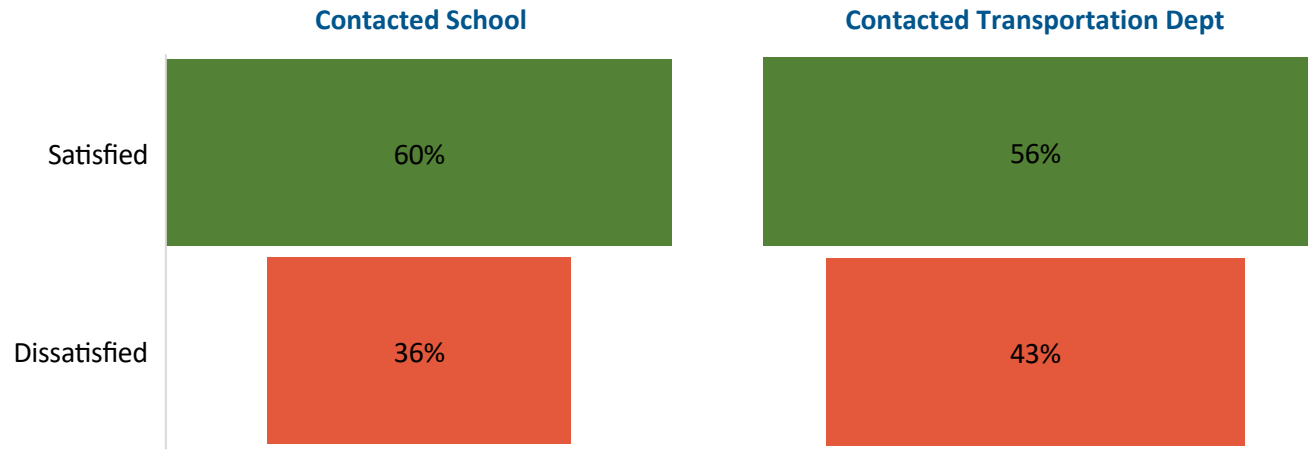
- their child's bus pickup or dropoff times
- their child's bus stop (**Exhibit 2-7**)

Exhibit 2-7
Top Reasons Parents Contacted JCPS About Transportation This Year



Overall, a majority of parents were satisfied with the handling of their transportation concern (**Exhibit 2-8**). They were slightly more satisfied with the handling by their child's school than they were with the handling by the transportation department. However, more than one-third of parents were dissatisfied regardless of whether they contacted the school or the transportation department.

Exhibit 2-8
Parent Satisfaction with JCPS Handling of Bus Transportation Concerns

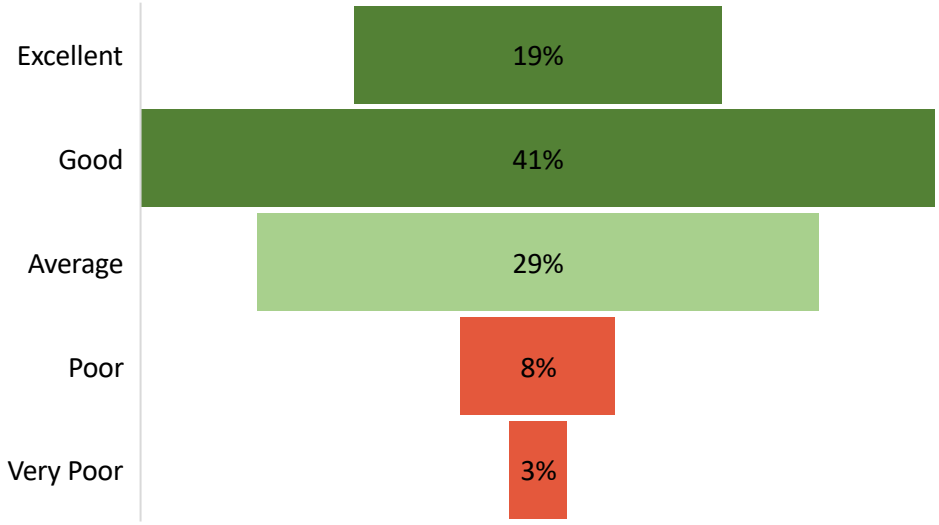


Driver and Attendant Survey Results

The survey input of JCPS bus drivers, attendants and other transportation department staff was received between April 29, and June 1, 2024. Of the 261 transportation staff who provided input, 80% were bus drivers.

Among just drivers and attendants, 19% rated the training provided by JCPS as "excellent." Another 41% termed it "good." The rest rated the JCPS training as "average" or below (**Exhibit 2-9**).

Exhibit 2-9
Driver/Attendant Rating of District-Provided Training



Among the bus drivers who primarily work regular education routes, those newest to the job expressed the highest job satisfaction (**Exhibit 2-10**). Drivers with 6-10 years of experience were the least satisfied. As a group, regular education bus drivers expressed a slightly lower level of job satisfaction than did others survey respondents, which included special education bus drivers, bus attendants, and other employees in the transportation department (**Exhibit 2-11**).

Exhibit 2-10
Job Satisfaction Levels Among Regular Education Bus Drivers

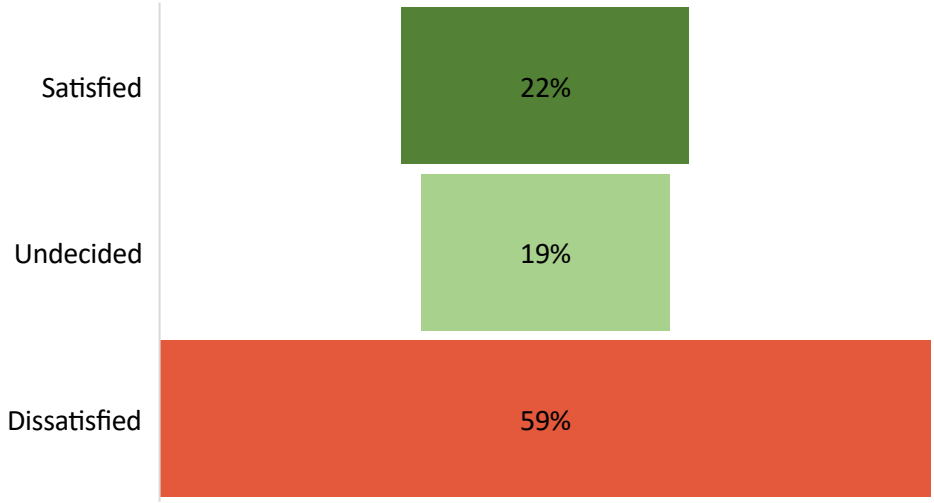
	# of Years Working as a JCPS Bus Driver				
Job Satisfaction	0-5 Years n=56	6-10 Years n=49	11-15 Years n=19	16+ Years n=31	Total
Highly Satisfied or Satisfied	46%	24%	38%	35%	36%
In the Middle	36%	45%	53%	42%	42%
Dissatisfied or Highly Dissatisfied	18%	31%	11%	22%	22%

Exhibit 2-11
Job Satisfaction Levels of Regular Education Bus Drivers Compared to Other Transportation Employees

Job Satisfaction	Reg Ed Bus Drivers	Other Transportation Employees
Highly Satisfied or Satisfied	36%	45%
In the Middle	42%	35%
Dissatisfied or Highly Dissatisfied	22%	20%

Among those regular education bus drivers who completed a referral for student behavior this year, only slightly more than one-fifth were satisfied with the response they received to that referral (**Exhibit 2-12**).

Exhibit 2-12
Satisfaction of Regular Education Bus Drivers with Referral Response This Year



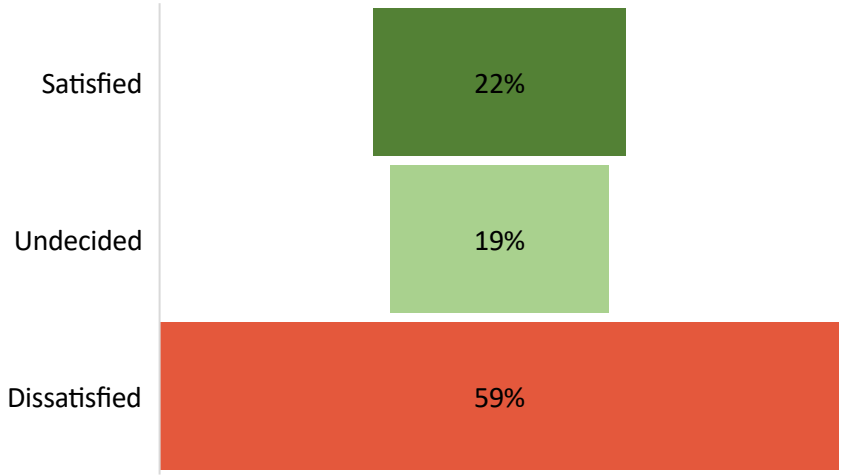
Satisfaction with responses to referrals varied by the driver's length of JCPS employment (**Exhibit 2-13**). A majority of each driver group was dissatisfied. In addition, a much smaller percentage of the senior drivers were satisfied compared to those with less seniority.

Exhibit 2-13
Satisfaction of Regular Education Bus Drivers with Referral Response This Year Considering Length of Employment

	# of Years Working as a JCPS Bus Driver			
	0-5 Years n=48	6-10 Years n=46	11-15 Years n-16	16+ Years n=29
Satisfied	25%	20%	31%	14%
Undecided	19%	17%	13%	28%
Dissatisfied	56%	63%	57%	58%

Comparing the handling of student referrals this year to last year, only 20% of regular education bus drivers were more satisfied with the response to referrals this year (**Exhibit 2-14**). The largest proportion of drivers were less satisfied with this year's response compared to last year's.

Exhibit 2-14
Satisfaction of Regular Education Bus Drivers with Referral Response This Year Compared to Last Year



Principal Survey Results

Principals also provided input regarding current bus operations as part of Prismatic's Phase 1 investigation. Their survey input was received between December 8, 2023 and January 3, 2024. A total of 109 JCPS principals provided input.

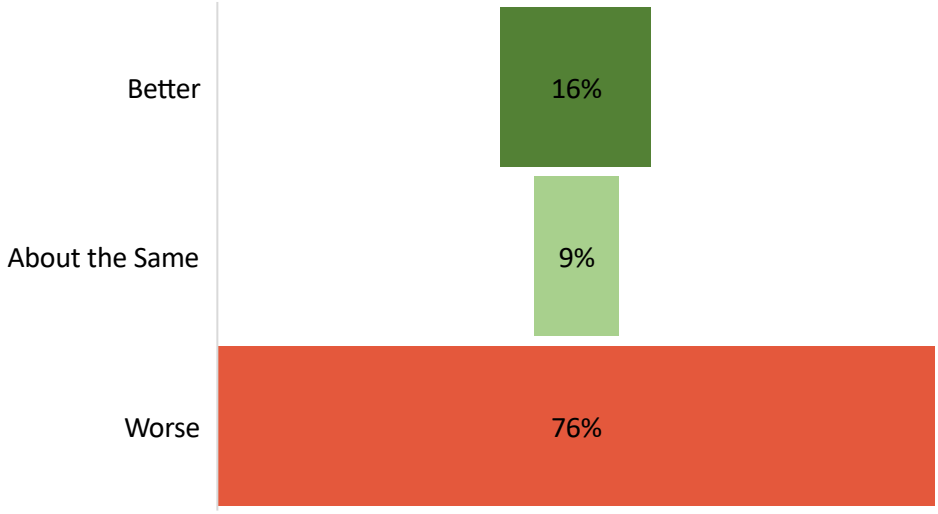
Principals indicated that communications from the bus compounds regarding inactive or substitute buses for the day were inconsistent. Most (66%) indicated that they received an email from the bus compound, but 25% indicated they received no notification. Smaller percentages of principals noted they found out about inactive/substitute buses via other means, such as a phone call from the bus compound, texts from transportation supervisors or bus drivers, or via the Edulog system. In a separate question, 38% of principals stated that some of their buses were not arriving at all in the morning/afternoon, but they were never officially notified about it.

On-time performance was found to be a problem by some principals:

- 86% stated that at least some bus riding students were arriving after the instructional day had begun. These principals estimated an average of 65 students per school arrived after the bell each day.
- At the end of the school day, only 5% of the principals stated that all of their buses were lined up and ready to receive students. A majority, 59%, stated that less than one-fourth of their buses were lined up at dismissal.
- Almost half of the principals, 47%, stated that the last bus at their campus in the afternoon arrived more than an hour after dismissal.
- Principals estimated a daily average of 188 students per school were waiting more than 30 minutes on campus for their afternoon bus.

Only a small percentage of principals characterized bus transportation this year as better than last year (16%). The majority, 76%, characterized it as worse than last year (**Exhibit 2-15**).

Exhibit 2-15
Principals' Opinion of Bus Transportation Compared to Last Year



Principals also noted that bus ridership was lower this year than last year (59%), while car ridership/parent drop-offs was higher (79%, **Exhibit 2-16**).

Exhibit 2-16
Principals' Opinion Bus and Car Ridership

	Bus Ridership Compared to Last Year	Car Ridership Compared to Last Year
Higher	7%	79%
About the Same	33%	20%
Lower	59%	0%
Not Sure	1%	1%

Chapter 3
Department Review

Background

As a function, transportation is typically a small but noticeable portion of the overall budget. From 2003-04 through 2020-21, transportation has varied from 4.4% to 7.7% of the JCPS budget (**Exhibit 3-1**). Industry best practices usually state a range of 4-6% of the overall budget as ideal.

For 2007-08, the Council of the Great Schools (CGCS) reported that among its member districts transportation expenditures as a percent of operating budget was an average of 5.1% (median of 4.9%). In that year, JCPS spent 6.3% of its budget on transportation. The CGCS has not reported on this benchmark since that time, so no more current data are available from that source. A contemporary survey conducted by American School and University magazine reported in 2007 a figure of 5.3% from its membership (the 100 largest school districts in the nation).

Like other district functions, JCPS transportation costs have increased during the last several years. Although the district's transportation costs have been increasing, the rate of increase has been less than most other district operations. In addition, the district's total cost has risen at a lower rate than the state average. The district's transportation general fund expenditures for transportation as a percent of total district expenditures have been decreasing in recent years. Transportation as a percentage of total district costs decreased from 5.7% in 2021-22 to 5.3% in 2022-23, to 4.8% budgeted for 2023-24.

Exhibit 3-1
Historical JCPS Transportation Spend

School Year	Unadjusted ADA	Transportation 2700	Total Expenses 1000-5100	Transportation Percentage
2003-04	82,020	$486	$9,070	5.4%
2004-05	82,406	$662	$9,506	7.0%
2005-06	82,611	$595	$9,967	6.0%
2006-07	83,334	$662	$10,381	6.4%
2007-08	83,662	$690	$10,977	6.3%
2008-09	84,330	$700	$11,008	6.4%
2009-10	84,862	$752	$11,287	6.7%
2010-11	85,656	$839	$11,639	7.2%
2011-12	85,914	$948	$12,255	7.7%
2012-13	89,898	$885	$13,356	6.6%
2013-14	90,188	$953	$13,498	7.1%
2014-15	90,407	$894	$13,890	6.4%
2015-16	90,054	$853	$14,251	6.0%
2016-17	89,904	$891	$14,759	6.0%
2017-18	88,253	$1,012	$16,686	6.1%
2018-19	87,499	$1,019	$16,909	6.0%
2019-20	87,499	$977	$17,444	5.6%
2020-21	87,499	$778	$17,667	4.4%

Source: KDE, 2023

The district's transportation cost per pupil is higher than the state average; however, the district's cost per pupil has been increasing at a rate less than the state average:

- In 2019-20, the JCPS transportation cost per pupil was $977 compared to the state average of $786, $191 per pupil higher.
- In 2022-23, the JCPS transportation cost per pupil was $1,098 while the state average was $1,004, $94 greater.
- From 2019-20 to 2022-23 the state transportation cost per pupil increased by $218 (27.7% increase). Over that same time period, the JCPS transportation cost per pupil increased by $121 (13.4% increase).

Although the district's cost has been increasing at a rate lower than other district operations and the state average, there was no indication that it has been the result of any specific planned action.

A. Organization and Management

Transportation is a vital support service that requires sound management. The management of student transportation does not differ from any other department in that it is incumbent upon management to select, organize, maintain, and adjust staff to meet demands. Establishing and reviewing action plans, training employees, and adopting new methods and technologies are part of the ongoing efforts required for a transportation department to be efficient and successful.

FINDING 3-1: Key Performance Indicators

The JCPS transportation department does not use key performance indicators (KPIs) to monitor its performance and support continuous improvement. As a result, the department has few ways to assess its performance, gauge progress, or report on operations to constituents. The JCPS transportation department lacks a scorecard to verify or assess its effectiveness, and also does not communicate its performance on a regular basis.

In interviews, several JCPS staff noted that they compare transportation organizations and operations to those of other transportation departments whose districts are members of the Council of the Great City Schools (CGCS). However, the district data available indicate those comparisons are not regular, nor do they cover all the KPIs that CGCS collects. There is no annual transportation scorecard developed and communicated publicly.

The JCPS transportation department does collect some data, but either performs only limited analyses or does not publicly report the data. For example:

- JCPS collects "all clear" last afternoon drop off times to determine how late the last students are unloading from their school buses, but is not compiling and reporting out on trends in those data. The collection of this data point began in light of the difficulties at the start of the 2023-24 school year.
- JCPS gathers numbers on driver attendance and absenteeism to learn how short they are of drivers to cover every daily route. The district has tracked this data point for a number of years but has not reported out on the variance in absenteeism by day of week, bus compound, etc.
- JCPS collects bus ridership figures but does not use them to make dynamic adjustments in routes.

In all 3 cases, the process of collection and reporting could be more transparent. During interviews with staff there were references to the "all

clear" times collection and daily driver absentee reports to the CB Young administration building, but no display of graphs or charts tracking progress on these issues and no further discussion of what is being done with the data. In some cases, bus compound coordinators reported that bus ridership numbers were not collected, indicating that line managers are unaware of and therefore not making use of this potentially valuable data. In *Best Practices in Student Transportation* (Roberts, 2013), the author emphasizes how critical it is to share the results of KPI collection and the need to make the collection and distribution process transparent so that others will have trust in the findings.

One area that JCPS is not currently explicitly tracking districtwide and reporting on is bus on-time performance to and from schools. On-time performance difficulties observed January 10-12, 2024 as part of Phase 1 appear to have continued later in the school year. As part of Phase 2, Prismatic completed an additional 17 school observations and found that the district was continuing to have difficulties meeting planned school start/end times (**Exhibit 3-2**). Had the district been systematically collecting and analyzing this KPI over the course of 2023-24, it is possible that management would have implemented changes to improve school arrival/departure times.

Exhibit 3-2
Prismatic School Observations

	School Start Time					
	January 10-12, 2024			April 29 – May 2, 2024		
	7:40 am	8:40 am	9:40 am	7:40 am	8:40 am	9:40 am
Number of schools observed in the morning	4	4	4	3	3	3
Number of schools where at least 1 bus arrived after the start of school	3	3	4	1	2	3
Number of schools observed in the afternoon	5	5	4	3	3	2
Number of schools where at least 1 bus arrived 15-30 minutes after dismissal	5	5	4	2	3	2
Number of schools where at least 1 bus arrived >30 minutes after dismissal	5	5	3	1	3	2

Source: Prismatic, 2024

Exhibit 3-3 provides example transportation performance metrics, drawn from work originating from the Council of the Great City Schools (CGCS). The 2021-22 figures are the most recent ones available from CGCS. As a member district, JCPS annually provides its data to CGCS, but does not analyze the results to assess its performance against peers. For many of these metrics, the best value to a school district lies in analyzing them over time.

Exhibit 3-3
Example Transportation Performance Metrics from CGCS

Metric	Definition	CGCS Median in 2021	JCPS in 2021
Average Age of Fleet	Average age of bus fleet	8.5 years	10.9 years
Cost per Mile Operated	Total direct cost plus total indirect cost plus total contractor cost of bus services, divided by total miles operated	$5.96	$4.16
Cost per Rider	Total direct cost plus total indirect cost plus total contractor cost of bus services, divided by number of riders	$1,234	$959
Cost per Bus	Total direct cost plus total indirect cost plus total contractor cost of bus services, divided by total number of buses	$70,293	$47,721
On-Time Performance	One minus the sum of bus runs that arrived late, divided by the total number of bus runs over two	99.882%	100%
Bus Equipment – GPS Tracking	Number of buses with GPS (Global Positioning Software) tracking, divided by total number of buses	100%	98%
Accidents – Miles Between Accidents	Total number of transportation accidents divided by total miles driven	42,698	63,385
Accidents – Miles Between Preventable Accidents	Total number of transportation accidents that were preventable divided by total number of miles driven	101,659	68,911
Bus Fleet – Alternatively-Fueled	Number of alternatively-fueled buses, divided by total number of buses	20%	98%
Bus Fleet – Daily Buses as % of Total Buses	Number of daily buses, divided by total number of buses	81%	68%
Bus Usage – Daily Runs per Bus	Total number of daily bus runs, divided by total number of buses used for daily yellow bus service	3.88	2.19
Fuel Cost as % of Retail – Diesel	Per gallon price paid by the district for diesel, divided by the per-gallon price of diesel at retail	92.8%	90.0%
Fuel Cost as % of Retail – Gasoline	Per gallon price paid by the district for gasoline, divided by the per-gallon price of gasoline at retail	92.9%	88.8%
Daily Ride Time –	Average one-way (single trip) daily ride	32	35

General Education	time, in minutes – general education students		
Daily Ride Time – SWD Students	Average one-way (single trip) daily ride time, in minutes – students with disabilities	39	50

Source: CGCS, compiled by Prismatic, 2024

In another example, the Texas Legislative Budget Board administers a robust schedule of comprehensive school district performance reviews in its state. They consider the metrics shown in **Exhibit 3-4** to be critical areas for measurement in transportation operations for school districts of all sizes.

Exhibit 3-4
Example Transportation Performance Metrics Texas School Performance Review Program

Cost Efficiency	Cost Per Mile Cost Per Bus Cost Per Student
Cost Effectiveness	On-Time Performance Spare Bus Ratio Driver Absentee Rate Average Student Occupancy Rate
Safety	Accidents Per 100,000 Miles Student Behavior Incidents Per Month
Maintenance	Preventative Maintenance Inspections On-Time Bus Fleet Miles Per Gallon (Diesel) Miles Between Road Calls (Reactive Maintenance) Maintenance Cost Per Bus (Annual Report)

Source: Texas Legislative Budget Board School Performance Review Team, December 2016

RECOMMENDATION 3-1:

Develop systems to collect and report on KPIs.

Key Performance Indicators are the standards by which school transportation departments can be judged. They provide an objective view into the true efficiency and effectiveness of the transportation operation. Given the recent challenges the transportation department has experienced, developing and reporting on KPIs should be a 1st step in regaining public confidence.

The JCPS COO indicated that he wants to make "data driven decisions" about transportation's operations. Collection, study and sharing of KPIs with a broad spectrum of stakeholders is a route to meeting this goal.

In *Best Practices*, Roberts recommends collection and study of KPIs related to accidents, costs, inclusion of classified students on general education buses, complaints, on-time performance, actual ridership vs. bus capacity, spare bus availability, bus fleet age, bus inspections, driver turnover, and more. In *Managing for Results*, CGCS recommends some of

the same and other related KPIs for measuring safety, efficiency and economy.

To implement this recommendation, JCPS should select no more than 5 material KPIs to begin. Given the recent history, on-time to school performance, driver absenteeism, and driver turnover should be included in the 5. Including all members of transportation department leadership in collection, study, and sharing of KPI data will bring more insights and experience to the table, promote a sense of teamwork and collegiality, and allow all to celebrate the improvements and share in solution of problems. The status on all KPIs should be communicated with:

- drivers/attendants – daily via prominent display in the bus compound breakroom areas for at least on-time performance
- all transportation staff during the bi-monthly communications meetings, which should include analyses by bus compound
- leadership (including the school board) at least quarterly until on-time performance reaches an acceptable level, then at least annually

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-2: Job Performance Guidance

The JCPS transportation department lacks both written job performance guidance and a professional development program for its area specialists and compound staff. This can result in bus compounds operating differently and employees completing tasks in different manners, none of which may be the preferred processes or procedures of the district. Coordinators and their assistants may fail to complete tasks on time or in the expected manner. Inexperienced coordinators may struggle to meet unwritten standards, and others may be faulted for unsatisfactorily doing something for which they received no written instruction, leading to feelings of unfair, unreasonable treatment and sub-par performance within the department.

The transportation department lacks documented standard operating procedures (SOP) for various functions. The transportation department develops and distributes a collection of documents as circumstance arise; Prismatic noted several of these (one dating back to 2015) posted in various locations in the bus compounds. However, when asked how bus compound coordinators know how to correctly perform their various responsibilities and when those responsibilities need to be fulfilled, they collectively indicated that training on those responsibilities was informal and that there is no “coordinator manual” to guide them. They have

nothing to guide their typical daily duties. Some coordinators had collected various documents into a binder but most of the items appeared to be informational – what cluster each elementary school is in, which students qualify for which area, etc. They did not have a set of checklists, cheat sheets, or SOPs. In discussing how they handle payroll duties, it was evident that they do not all approach the task in the same manner.

The Pupil Transportation Safety Institute recommends a transportation department handbook that clearly defines employee roles and responsibilities and lists operational and safety procedures. Effective transportation departments have desk SOPs ensuring continuity of operations when key individuals are out of the office. The desk SOPs allow opportunities for cross training and advancement within the department. Additionally, desk SOPs reduce the amount of time required to bring new employees up to speed on office functions. Typically, department SOPs address high visibility, critical items such as:

- missing students – what to do in the event a student was not in school or didn't arrive home after dismissal in a reasonable amount of time
- emergency procedures - such as what to do when an unauthorized adult attempt to board the school bus
- bus stop review requests – what criteria and process will be followed (and documented) when an adjustment to an existing stop or additional stop is requested
- student safety
- radio procedures
- medical concern - how to respond to a student emergency

They also typically contain more routine items such as:

- how to verify, process, and enter employee timekeeping data
- how to help make drivers/attendants feel valued as employees
- how to handle difficult conversations with employees

Likewise, compound coordinators do not have access to regular professional development opportunities. They meet 1-2 times per month, but the agenda is set by the transportation director, so it may not cover professional development in needed areas. One coordinator mentioned the availability of training classes when "something new comes out", but

this comment was largely focused on technology systems, not departmental processes and management.

Mentoring and/or training those new to leadership roles occurs infrequently at best in the transportation department. One new transportation administrator spoke of feeling "thrown into the spot." One new compound coordinator noted they received no training when assuming the role. The department lost 1 young, promising compound coordinator after just a few months – it is possible that mentoring or better training would have led to their retention. The department has at least 2 other coordinators with just a few months of experience who would likely benefit from more support, professional development, and explicit written guidance.

In the interviews of transportation managers for Phase 2, recurring answers to interview questions were, "I don't know", "I'm not familiar with that", or some variation thereof. These answers indicated that many members of the transportation team have incomplete knowledge of the scope of JCPS transportation operations. This included areas such as:

- the department's budget and how it is built and monitored each year – knowledge in this area could lead to ideas and suggestions for improve efficiencies
- district use of taxis and charter coach buses - if the department of equity and poverty (DEP) is using taxis for some cases, the transportation department should know and provide guidance.
- district use of charter coach buses - if some high schools are using charter coach buses, the department should know so that the coach buses are used correctly and the district's interests are protected
- bus maintenance operations

Unless a person is born into a family that has owned and operated a school bus business for generations, there is little way to learn administration of a student transportation program other than by either enduring a "hard knocks," learning by doing, trial by fire, or receiving professional development training including mentoring in the many legal, mechanical, technological, logistical, budgetary, political and personnel challenges inherent in student transportation. Needless to say, the hard knocks, learn as you go approach is sub-optimal for departmental performance.

There are both state and national organizations available for professional development:

- Student Transportation Association of Kentucky (STAKY) – www.staky.org, most active in western Kentucky
- Kentucky Association for Pupil Transportation (KAPT) - www.thekapt.com, most active in eastern Kentucky, (thekapt.com)
- National Association for Pupil Transportation – www.napt.org
- National Association for State Directors for Pupil Transportation Services (NASDPTS)
- American School Bus Council
- National Highway Traffic Safety Administration

Several compound coordinators and assistants reported that they had never heard of these organizations. Others had, but did not note regular use of the association websites, professional development or annual conferences. A few were aware of the leadership of the JCPS transportation executive director in STAKY.

Participation in at least some of these organizations will especially help those who are just stepping up into a leadership position. Another spoke of the department's intention to "train up," that is to help develop new talent by including them in more professional training. New administrators benefit from a mentorship program, provided either by an outsider or internally, or both. The department is fortunate to have "100 years of experience" in the CB Young building's transportation hallway. This experience though, was gained in the past. The department needs to focus on the present and future. A slight adjustment to a popular administrative catch phrase becomes "failure to train is training to fail."

RECOMMENDATION 3-2:

Establish operational expectations via the development of a transportation operations manual and explicit professional development covering key job performance areas.

This should include all essential pupil transportation tasks, including timelines and deadlines, for all department leaders from the director to the compound assistants. Professional development for bus compound coordinators and above should include regular participation in industry conferences regionally and nationally.

The KDE website includes a "Pupil Transportation Management Manual." This lengthy, comprehensive guidance manual can serve as the basis for the department's development of its own, more extensive and inclusive manual. The department already has some guidance documents on

routing for the new year, bus evacuation drills, bus stop and bus run inspections, annual driver retraining, pre-trip inspections, railroad crossings, safe loading and unloading procedures, payroll processing, etc. These documents and more can be gathered from the training, safety, bus maintenance and bus compound coordinators to collectively form the foundation of a comprehensive management guide for the department. The JCPS "Transportation Procedures and Training Manual," last updated in 2019 and usually updated every 5-7 years, can be included in the work to provide current, more complete guidance.

Getting involved in professional organizations will help the department ensure that it is in compliance with state and federal regulations, and fill any gaps when it finds itself out of compliance. All compound coordinators and above should be expected to participate in professional development outside of district offerings.

Fiscal Impact:

The development of a department operations manual to include detailed SOPs for compound coordinators to follow can be implemented with existing resources.

Access to the previously mentioned organizational websites is free. Joining either STAKY, KAPT, or NAPT will cost $100-$150/year per person. Attendance at a statewide STAKY conference will cost ~$950 per person each year:

- Conference Fee - $250
- Per Diem - $50/day x 4 days
- Hotel - $140/night x 3 nights
- Mileage Reimbursement - $80

FINDING 3-3: Student Bus Behavior

Despite much attention to this issue and recent efforts to improve, the district does not yet have the complete confidence of its bus drivers and transportation management team in handling bus discipline issues. This has contributed to lower than desired morale among drivers, some early retirements and unwanted resignations by drivers at a time of driver shortage, perceived disrespect for the written guidelines on bus conduct that appear in student handbooks and Codes of Conduct among staff and students, perceived disrespect and diminished working relationship between bus drivers and the school staff they service, and inadvertent lessons to some students who repeatedly misbehave that their behavior is acceptable because it is accepted.

The district's "Student Support and Behavior Handbook" includes supportive words regarding student discipline on the bus:

> The school bus is an extension of the classroom, and appropriate behavior is expected at all times. Students are expected to follow the same behavioral standards while riding the school bus as is expected on school property or at school functions, activities and events. All school rules are in effect while a student is riding the bus or waiting at the bus stop. Violations…may result in a consequence…Safety-related bus incidents may warrant extended bus suspensions. (p. 38)

The handbook's section on transportation goes on to explain the acronym "B.U.S." to bus riders:

- Be responsible.
- Use respect.
- Stay safe.

It includes 5-7 related, reasonable rules associated with each letter.

These passages lay a groundwork for safe, orderly bus riding. Yet, when asked about the status of bus discipline issues on JCPS buses, the responses from transportation leaders did not reflect widespread adherence to these behavioral standards. One person's initial response was with distressed body language – a closing of eyes, a lowered head, and then a shake of the head, followed by pronouncement that buses are "a toxic environment." Other transportation managers gave a range of responses:

- "lip service is paid (to bus discipline)"
- "parents run it"
- "slow"
- "marginal" improvement
- "not much improved"
- "substantial progress"

On the driver/attendant survey conducted as part of Phase 2, only 22% of regular education drivers who completed a referral this year were highly satisfied or satisfied with the response they received to that referral. The remaining 78% of regular education drivers were undecided (19%) or dissatisfied/highly dissatisfied (59%). The figures were nearly the same for all transportation staff who completed a student behavior referral this

year. Moreover, only 20% of regular education drivers were more satisfied with the district response to referrals this year compared to last year. Other questions on the same survey echoed this dissatisfaction:

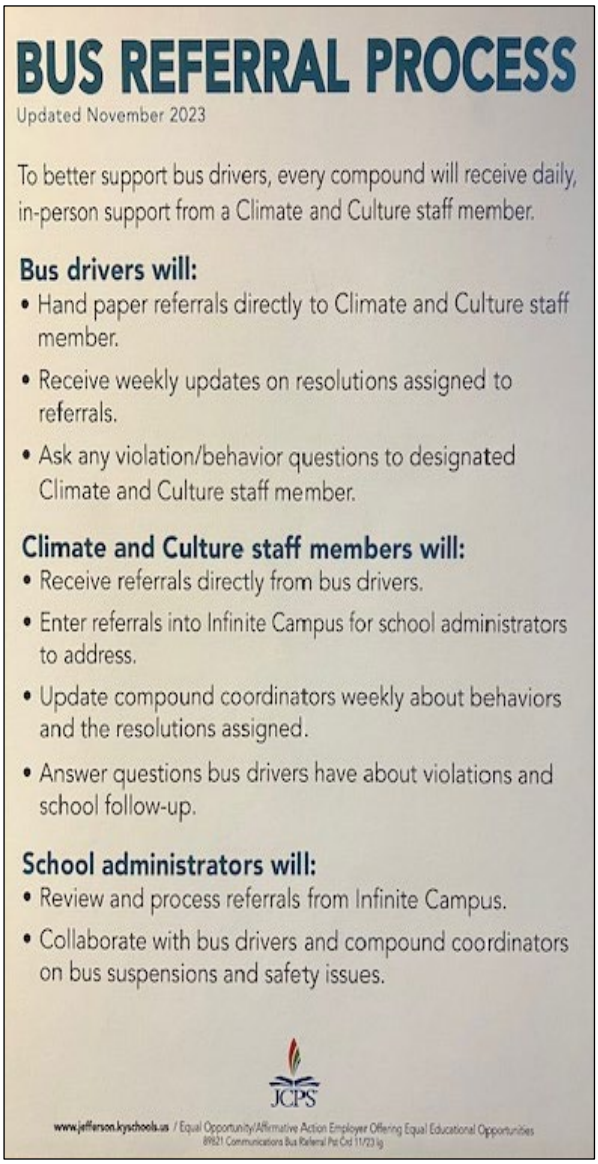
- When asked the least enjoyable part of their job, nearly half, 47% indicated student behavior issues. The next 2 highest categories only garnered 19% each.
- When asked about the challenges in recruiting bus drivers for JCPS, 30% identified student behavior. The next highest category only garnered 18%.
- When asked to identify the top 2 reasons drivers leave JCPS, 87% selected inconsistent handling of student discipline problems by administrators. The next highest category only garnered 34%.
- When asked what 1 thing they would change about working on a JCPS school bus, 29% indicated student behavior. The next highest category only garnered 24%.

However, in interviews higher up the transportation leadership ladder, the perceptions of student behavior as a key problem affecting work conditions was lower. Some leaders reported that bus riders' behavior was not a significant factor in drivers' decisions to leave their position, despite continued media coverage[1] and reports from front-line managers to the contrary.

In response to the events at the start of the school year and the resulting scrutiny of transportation operations by the media and the public, the district announced a new effort to better support drivers in the management of student behavior (**Exhibit 3-5**).

[1] https://www.wdrb.com/news/jcps-handed-out-1-200-suspensions-on-school-buses-in-4-months-after-referral-process/article_9bdfec1a-e6e2-11ee-bd0a-5b7d3dae0f30.html

Exhibit 3-5
JCPS Updated Bus Referral Process



BUS REFERRAL PROCESS

Updated November 2023

To better support bus drivers, every compound will receive daily, in-person support from a Climate and Culture staff member.

Bus drivers will:

- Hand paper referrals directly to Climate and Culture staff member.
- Receive weekly updates on resolutions assigned to referrals.
- Ask any violation/behavior questions to designated Climate and Culture staff member.

Climate and Culture staff members will:

- Receive referrals directly from bus drivers.
- Enter referrals into Infinite Campus for school administrators to address.
- Update compound coordinators weekly about behaviors and the resolutions assigned.
- Answer questions bus drivers have about violations and school follow-up.

School administrators will:

- Review and process referrals from Infinite Campus.
- Collaborate with bus drivers and compound coordinators on bus suspensions and safety issues.

JCPS

www.jefferson.kyschools.us / Equal Opportunity/Affirmative Action Employer Offering Equal Educational Opportunities

Source: JCPS, 2024

As reported in the press in November 2023, JCPS committed to:

- move a staff member from the Climate and Culture Department to each JCPS bus compound, according to district spokesperson Carolyn Callahan.

- The new staff member at each compound will be an assistant director of pupil personnel or a social worker. That employee will be charged with entering referrals into the district's data

management system, known as Infinite Campus, and act as a liaison between drivers and schools over behavioral issues.[2]

Data provided by JCPS staff indicated that staff from the climate and culture department were not "moved" to the compounds. The climate and culture department assigned a total of 10 assistant directors of pupil personnel to the task of supporting the bus referral process. The initial expectation of department leadership was that the assistant directors would each spend 1-2 hours at each compound each morning. The assistant directors have other job responsibilities beyond those related to the bus referral process, including case management, truancy reduction, and student assignment enforcement.

In Phase 2 interviews, bus compound coordinators consistently reported that the new effort has not been implemented as it was described in the promoted new process or in the press:

- The staff members from the climate and culture department have not actually been "moved" to each compound. Coordinators reported that they do come by their compounds daily to gather up the referral slips that drivers have written. Because they are not assigned to the compounds all of the work day, there is in reality limited opportunities for bus drivers to hand paper referrals "directly" to the climate and culture department staff.

- The input of referrals into Infinite Campus is handled by the climate and culture department staff members, relieving the compound staff of that duty. However, those staff members were not reported to be acting in a "liaison" capacity between drivers and schools.

- Coordinators reported that they receive back a printout of the referrals entered (**Exhibit 3-6**). They indicated they are receiving it weekly, but it may be as much as several days out of date by the time it is received. In addition, they have no way of confirming whether all the referrals submitted have been entered, as they do not make a copy of the referrals before providing them to the climate and culture department staff member.

- As shown in the exhibit, there may be a delay of several days before a resolution date is assigned. The longest delay shown was 4 school days (3rd entry).

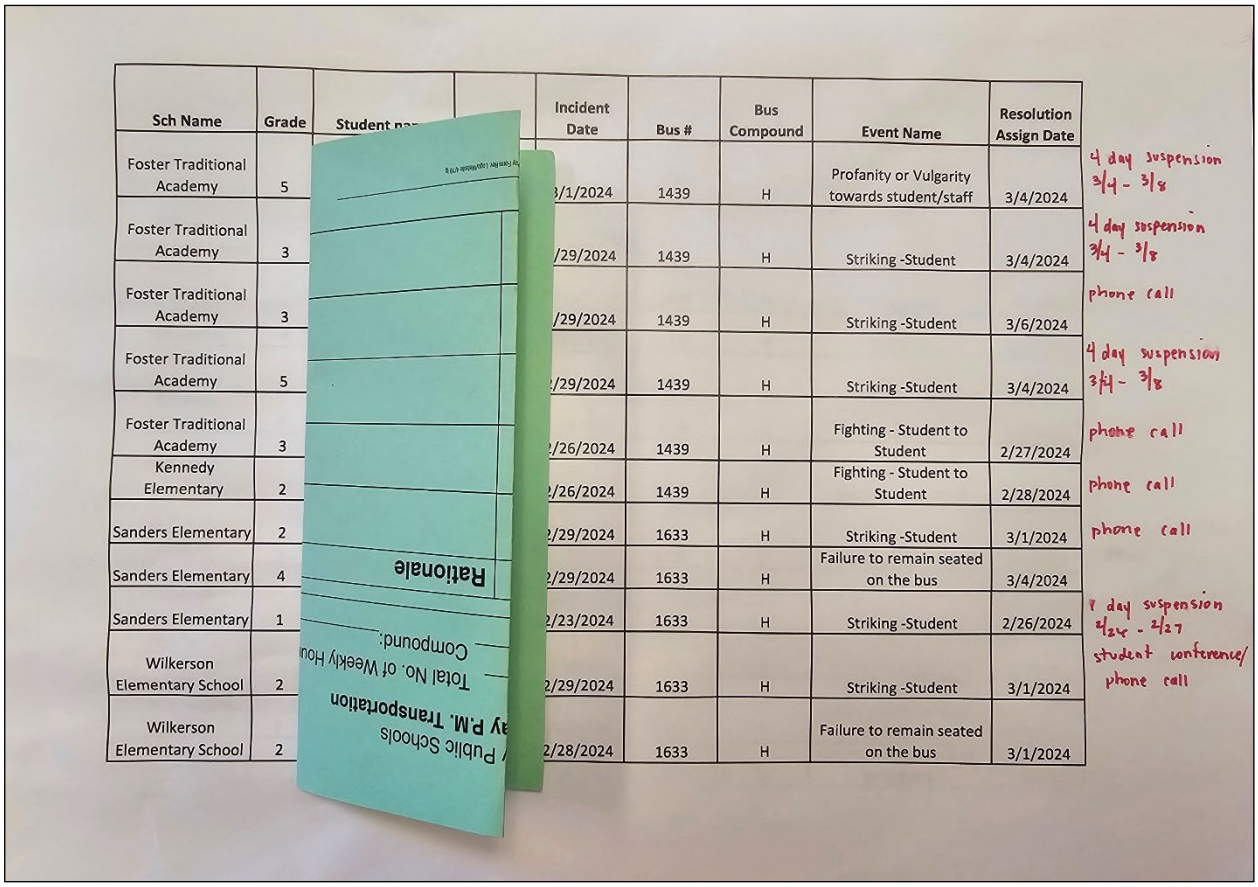
- Compound coordinators expressed dissatisfaction that the printout does not include what the consequence was for each infraction. The printout in the exhibit includes the consequences

[2] https://www.lpm.org/news/2023-11-13/jcps-changes-referral-process-to-help-bus-drivers-with-behavior-issues

in hand-written notes because that coordinator requested them. Other coordinators stated that they only find out consequences given if they contact the assigned climate and culture department staff member. Some coordinators expressed a lack of confidence in their ability to access Infinite Campus and accurately determine whether a bus referral has been entered and whether school administrators have addressed the issue. It also appeared possible that some coordinators lack the credentials to access portions of Infinite Campus.

- When consequences are given in response to a bus referral, drivers do not always know about it in time. Multiple coordinators related instances where a student was suspended from the bus but that information was not relayed to the compound coordinator or bus driver in time. In some cases, this resulted in a bus-suspended student still riding the bus during the suspension period.

Exhibit 3-6
Example Referrals Printout for a JCPS Bus Compound



Sch Name	Grade	Student na		Incident Date	Bus #	Bus Compound	Event Name	Resolution Assign Date	
Foster Traditional Academy	5			3/1/2024	1439	H	Profanity or Vulgarity towards student/staff	3/4/2024	4 day suspension 3/4 - 3/8
Foster Traditional Academy	3			/29/2024	1439	H	Striking -Student	3/4/2024	4 day suspension 3/4 - 3/8
Foster Traditional Academy	3			/29/2024	1439	H	Striking -Student	3/6/2024	phone call
Foster Traditional Academy	5			/29/2024	1439	H	Striking -Student	3/4/2024	4 day suspension 3/4 - 3/8
Foster Traditional Academy	3			/26/2024	1439	H	Fighting - Student to Student	2/27/2024	phone call
Kennedy Elementary	2			/26/2024	1439	H	Fighting - Student to Student	2/28/2024	phone call
Sanders Elementary	2			/29/2024	1633	H	Striking -Student	3/1/2024	phone call
Sanders Elementary	4			/29/2024	1633	H	Failure to remain seated on the bus	3/4/2024	
Sanders Elementary	1			/23/2024	1633	H	Striking -Student	2/26/2024	1 day suspension 4/24 - 4/27 student conference/ phone call
Wilkerson Elementary School	2			/29/2024	1633	H	Striking -Student	3/1/2024	
Wilkerson Elementary School	2			/28/2024	1633	H	Failure to remain seated on the bus	3/1/2024	

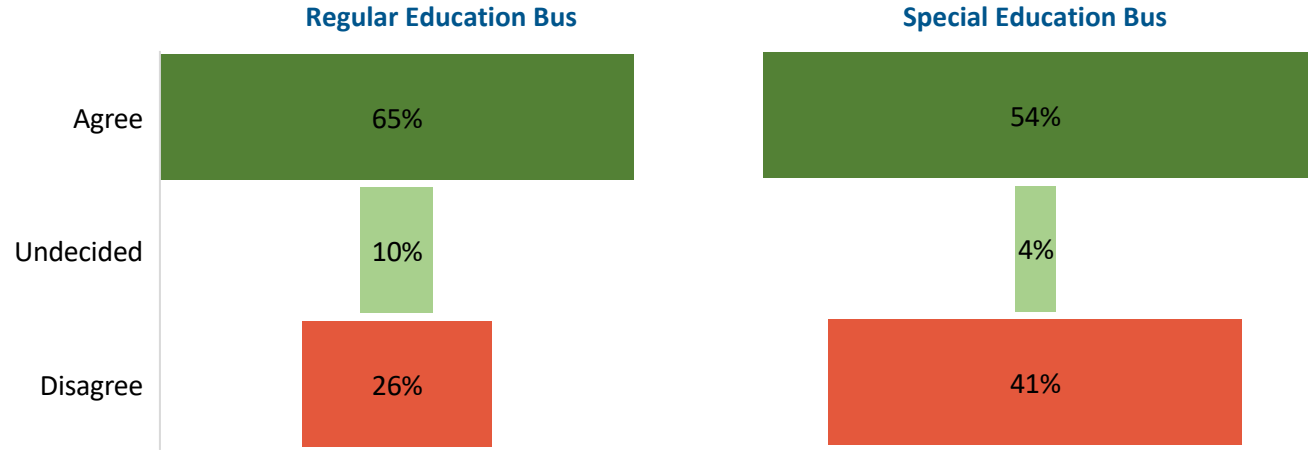
Rationale
Total No. of Weekly Hou
Compound:
Public Schools
P.M. Transportation

Source: JCPS, 2024

For their part, school administrators do not seem to be following any new processes this year compared to last year. On the principal survey conducted for this project, 98% of principals noted that they had someone on their staff assigned to handle bus referrals. In interviews, principals noted that they were not handling bus referrals in a different manner this year, but that was because they believed they were previously handling them effectively and were continuing to do so. None of the interviewed principals indicated that they ever ignored any bus referrals they received.

In the parent survey conducted for this project, while a majority of parents of both regular education and special education bus riders indicated their children feel safe on the bus, a substantial percentage did not (**Exhibit 3-7**). More than one-fourth (26%) of parents of regular education bus riders stated their children do not feel safe on the bus, while 41% of parents of special education bus riders stated the same. Among parents of regular education bus riders, 17% also indicated that they did not feel their child's bus driver treated students with courtesy and respect.

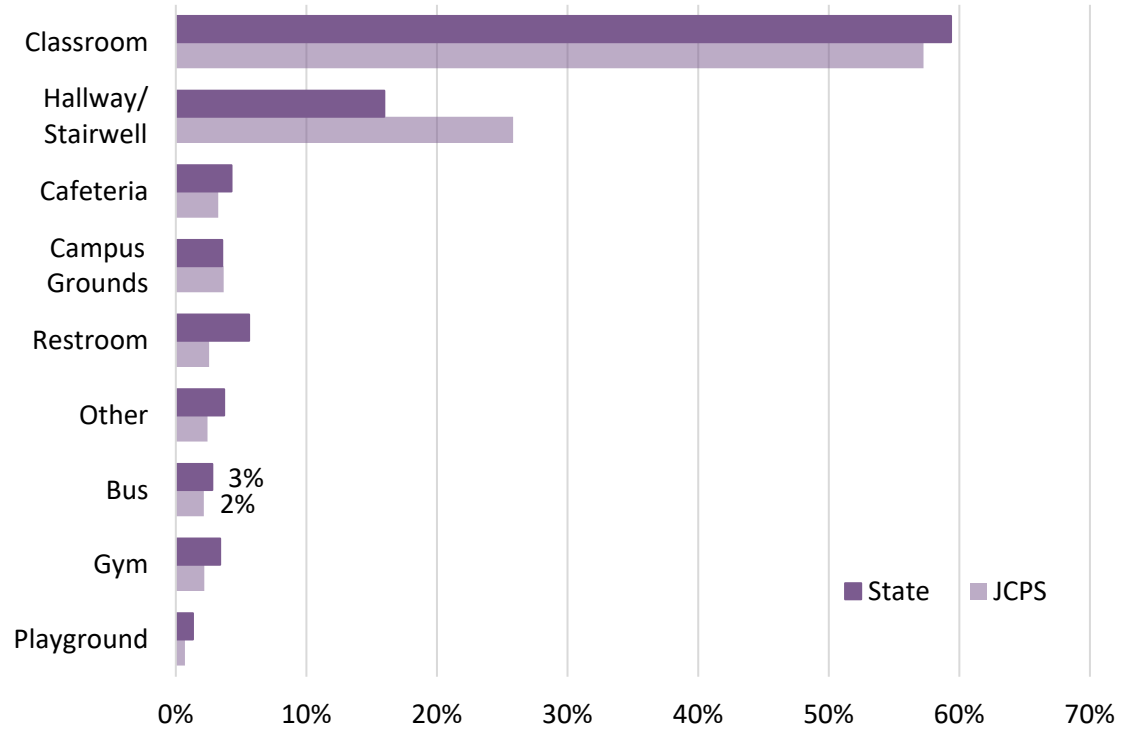
Exhibit 3-7
Parent Report of Children's Feelings of Safety on the Bus



Source: Prismatic Parent Survey, 2024

Compared to the state as a whole, JCPS does not appear to have a higher level of bus discipline issues (**Exhibit 3-8**). In 2022-23, only 2% of JCPS behavior incidents happened on a bus, compared to 3% statewide. However, the state and JCPS reported data may be incomplete. In Prismatic's experience, some districts/schools do not always capture and report data on all behavior incidents. Moreover, a substantial discipline problem on a school bus could lead to a life-threatening situation in a way not likely to happen in a classroom or hallway. A bus driver distracted by a discipline problem while driving creates a situation that could lead to a vehicular accident.

Exhibit 3-8
Location of Behavior Incidents, 2022-23



Source: www.kyschoolreportcard.com, 2024

To the extent that all behavior incidents are reported, the overall 2022-23 JCPS data may point to improvements in the handling of bus referrals. In that year, the 2,024 incidents reported as occurring on the bus involved 1,634 students. As reported in the press in March 2024, in the first 4 months after the implementation of the new bus referral process, the district suspended 1,192 students based on the submission of more than 4,000 bus referrals. On an annualized basis, the 2023-24 bus referral data for JCPS should greatly exceed those of previous years, which would indicate that the new process is at least resulting in the input of more bus referrals into the district system. Based on the data available, Prismatic was unable to determine whether this is due to the submission of more referrals by drivers or simply the more complete input of submitted referrals.

In interviews, several compound coordinators reported that towards the end of the 2023-24 school year they noticed more frequent and longer suspensions of bus riding privileges, which was appreciated. However, the goal of a student bus behavior management system should not be more suspensions; rather, it should be safe and orderly busing. Bus suspensions are only one means towards this end and not a preventive measure.

RECOMMENDATION 3-3:

Readdress and revamp the district's approach to student conduct on its school buses.

The district has correctly recognized the need for bus drivers and transportation staff to feel supported in student behavior management on the bus. However, its current efforts have not resulted in full success.

In order to implement this recommendation, the district should assign climate and culture department staff members to work full-time at the bus compounds, not just to stop by to pick up referral slips. These staff members should then be expected to:

- Lead driver/attendant trainings on positive bus behavior management. Effective bus discipline programs start with helping drivers understand that they can at best hope to control themselves and that the skills/attitudes they bring to the bus play a substantial role in whether students behave on the bus. Controlling or managing students on the bus is not the same as steering and braking a 40-foot school bus, but both skills can be taught.

- Interact directly with bus drivers to collect referral slips, input the data, and provide daily updates on the consequences given. In this way, if a student is given a bus suspension, the driver will know about it in time to enforce it.

- Analyze data by bus route, bus driver, time of day, school, and student (at a minimum) to identify patterns in order to determine areas in need of focus. For example, a driver with routinely higher numbers of referrals may need training/retraining in developing positive bus behavior management skills. A school that is not timely in implementing and reporting on consequences given in response to bus referrals may need a contact to remind them of the importance of timely student behavior management.

- Review videos from school buses to help schools investigate bus referrals and to identify unreported behavior problems. Several coordinators expressed a desire to have more time to review school bus videos. More bus video review could be additionally beneficial if 1-on-1 time is spent with drivers to review how an incident was handled and how it could have been handled better.

- Complete ride alongs on buses at least weekly to support the development of positive bus behaviors.

- Lead training sessions with younger students on how to properly ride the bus.

- Monitor the treatment of bus drivers by school staffs. This would include ensuring that all schools make their restrooms available to their co-workers, the bus drivers, as needed in between bus runs.

- Develop compound-level reports of bus discipline statistics that are then shared with the school board and the public.

Fiscal Impact:

Given the current time spent by assistant directors of pupil personnel and the estimated daily time needed for the tasks outlined above, Prismatic recommends that JCPS assign assistant directors to bus compounds at a rate of 1 assistant director for 2 compounds. Alternatively, the district could elect to create a new position type to oversee these responsibilities.

FINDING 3-4: Bus Arrival and Departure Efficiency

Not all JCPS schools prioritize the efficient arrival and departure of buses over parents and student drivers. In some cases, this leaves buses stuck in car traffic, delaying the bus for its next run.

The consulting team observed various instances where efficient bus arrivals and departures were not consistently prioritized over the convenience of parents and student drivers at some schools. This has several negative impacts:

- The frequent entanglement of buses in car traffic leads to delays in their departure for subsequent runs. These delays can cascade throughout the day, affecting the timeliness and reliability of transportation services for students.

- Prolonged wait times for buses can disrupt students' schedules, causing them to arrive late for school or miss crucial instructional time.

- The disparity in prioritization highlights a lack of consistency in transportation management practices across schools, potentially fostering resentment and dissatisfaction among parents, students, and bus drivers.

RECOMMENDATION 3-4:

Collaborate closely with school principals to develop site-specific plans to expedite the entry and dismissal of buses during both morning and afternoon schedules.

Put simply, in each school's traffic circulation plan, buses should come first. On a per vehicle basis, they carry the most students. Delays in bus

movement impact a far greater number of students than delaying a single parent car.

Each JCPS school should:

- Develop and communicate clear procedures outlining the priority of bus arrival and departures over student drivers, parents, student walkers/bikers, and staff transit. If necessary due to the site layout, all other forms of transit to/from campus should be held until buses have rolled.
- Designate dedicated bus lanes or loading zones at school entrances to facilitate smooth bus flow, and coordinate with local authorities to enforce regulations prioritizing bus movement during school hours.
- Promote alternative transportation modes like walking, biking, or carpooling to reduce private vehicle traffic.
- Monitor and evaluate campus bus operations, traffic patterns, and stakeholder feedback to make necessary adjustments for new processes.

Transportation department staff should monitor the success of each school's efforts and work with school staffs as needed to support improvements.

Fiscal Impact:

This recommendation can be implemented with existing resources.

B. Human Resources

Human Resources (HR) management and operations are critically important functions for a school transportation department. The efficiency and effectiveness of HR functions in supporting transportation are dependent on the organizational structure and strategic leadership. Since HR has a customer service effort, the staff must concern itself with internal and external job applicants, current employees, and even the employees who have left the district.

FINDING 3-5: Bus Driver Recruitment

Immediately after the severe shortage of JCPS bus drivers challenged the successful opening of the 2023-24 school year, administrative leaders in HR, operations, communications, and student transportation initiated full-scale bus driver recruitment events (job fairs, blitzes, wide-scale advertising, social media posts, etc.) to attract applicants. These

specifically planned and executed activities increased the applicant pool by numbers not previously experienced.

In July 2023, the JCPS communications and community relations division took the lead in staging the first ever "blitz" or public event specific to recruiting JCPS school bus drivers that was co-hosted by HR, operations, and transportation. Because of extensive promotion, advertising, and social media postings, applicants interested in being considered for bus driver positions attended and were able to complete applications, to fill out forms, and to be interviewed all the same day. The success of the 1st event prompted 3 additional blitzes in February, April, and June 2024 to be scheduled. For the 2nd and all other subsequent blitzes, HR assumed the lead with continued participation by communications, operations, and transportation.

JCPS also posted numerous billboards throughout the county to recruit bus drivers (**Exhibit 3-9**). The billboards provided a web address launched mid-way through the school year to help make it easier for potential bus drivers to find information and application materials.

Exhibit 3-9
JCPS Sponsored Billboard Advertising for Drivers

Source: Prismatic, 2024

COMMENDATION:

The interdepartmental cooperation and coordination among JCPS departments in staging recruiting events specific to hiring bus drivers is commendable.

FINDING 3-6: Bus Driver Retention Planning

Although JCPS bus driver recruitment has recently exceeded the district's previous directed and specific efforts, district administrative leaders have placed too little emphasis in developing a strategic plan to address its high bus driver turn-over and improve its retention rate. While interviewees in HR, operations, communications, and student transportation supported the belief that "retention is the new recruitment," evidence of substantial formal planning to strengthen this support is missing.

JCPS data showing annual driver turnover rates as well as staff interviews confirm that JCPS turnover rates are at the higher end of the nationally reported rates of 20% for school bus drivers. Recent dynamic improvements in JCPS bus driver's compensation packages are expected to improve recruiting and hiring new drivers, but the district's return on investment will be nil if these new drivers do not remain -- thus perpetuating the current JCPS driver shortages. Despite their acknowledgment that employee retention shares a balance with recruitment, administrative leaders admit that no formal, structured, or written plan or strategy for retention, especially of bus drivers, currently exists and the need for one has not been discussed.

During interviews and focus groups, other than competitive compensation and benefits, any reference to additional factors that research affirms can directly influence JCPS bus drivers' and any other employees' intent to stay was sparse. These areas were generally unacknowledged as retention tools:

- supportive leadership
- workplace recognition
- employee wellbeing
- trust in leadership
- open forums, listening, and honest communication
- inclusivity, diversity, and ethical practices
- supportive colleagues

The driver/attendant survey conducted for this project showed relatively low levels of job satisfaction within the transportation department. Overall:

- Only 39% of transportation staff indicated they were satisfied with the job and working for JCPS; 21% indicated they were dissatisfied.
- Only 48% agreed that JCPS "is a great place to work"; 25% disagreed with the statement.

In assessing each of the bus compounds, Prismatic observed little in the way of staff recognition programs, beyond a few compounds with "birthday billboards." In interviews, compound coordinators indicated there were no specific programmatic efforts to retain drivers. One coordinator expressed the opinion that if a senior driver has decided to leave, "their mind is made up." Compound coordinators described various and different efforts to show driver appreciation. Some hosted end-of-year cookouts, some provided meals at various times during the year, etc. Some coordinators noted that in the past, the district provided funding to support things like lunches for drivers during the first week of school but that they now paid for all such activities themselves or worked out "potluck-type" events with employees. Several noted that national school bus driver appreciation day, which occurred on April 23rd in 2024, was not recognized or celebrated by the district.

As big businesses and industries do, in addition to ensuring competitive salary and benefits, successful school districts have begun to develop an employee retention policy or strategy or plan to ensure their employees experience fulfillment and satisfaction at work and thus to increase the potential to retain them as employees over time. Such plans include specific initiatives the organization takes to keep turnover low, prevent attrition, increase retention, and foster employee engagement. Effective plans, strategies, guidelines, and procedures reflect strong administrative leadership because they solicit frequent feedback, foster ongoing and consistent 2-way communications and exchange of ideas, and ensure meaningful employee recognition and rewards so that employees feel valued and appreciated as integral team members.

RECOMMENDATION 3-6:

Develop an interdepartmental/interdivisional strategic plan specific to districtwide bus driver retention.

The JCPS executive leadership team should appoint a director from 1 of the divisions of operations or HR or from the departments of student transportation or communications to lead other professional members of an appointed team from operations, HR, communications, and student transportation. This plan-development team should also include a

representative number of bus drivers and bus attendants. The goal of this bus driver retention team is to produce a written, research-based, 2-year plan that addresses factors known to impact bus driver retention. The developed plan should include the key, specific, measurable, and evaluative components of strategic planning:

- Vision
- Mission
- SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats)
- Core Values
- Goals
- Objectives
- Action Plans

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-7: Reducing Time-To-Hire

The length of time currently required for a job applicant to begin working as a JCPS bus driver is overly long. While some factors in the process are beyond the control of the district, others are not. Despite their attempts at addressing the urgency to hire bus drivers, JCPS hiring specialists in HR estimate that the entire process from applying online to driving students takes 6-8 weeks even with optimal processing.

Required state and federal employment protocols, tests, and background checks for new JCPS bus driver applicants are time consuming and restrictive in themselves, and these factors automatically extend the time from application to transporting students. JCPS has little or no control of these delays. However, if personnel in HR who screen and "clear to proceed" bus driver applications once received online are not screening them immediately, the "from application to the job" time is needlessly expanded. Additionally, bus driver applicants themselves who do not complete all the required component forms during the online application process further delay the time for their possible hire processing.

Applicants for all posted jobs in JCPS submit their online application electronically, and they receive an auto-generated receipt of the application. For bus driver applicants, however, there is an additional link in the job posting itself that facilitates their scheduling themselves for an appointment in the HR Welcome Center to immediately begin the time-

sensitive hiring paperwork/procedures. If that link is not made and the additional form is not completed at the time the online application is submitted, an HR clerk in the Welcome Center must otherwise contact the applicant to schedule the HR Welcome Center visit. The goal of immediacy is consequently compromised. During the visit to the Welcome Center, the bus driver applicant completes forms for the MVR (motor vehicle record) which gives insight into the candidate's driving history, license status, DUIs, and moving violations. HR receives results of this inquiry in about 2 weeks.

Concurrently, once the electronic application is received, HR clerks ensure that, based on disclosures and/or possible previous JCPS employment, the applicant is eligible to advance in the hiring or re-hiring process. Next, HR hiring professionals further investigate each applicant before releasing the application to the transportation department interview team. HR estimates that the time that passes between this application review and vetting of the applicant and its release to transportation ranges from 2-9 business days. The transportation hiring team contacts applicants on the approved list for face-to-face interviews within the transportation department and arranges for physical and drug testing and screening for the successful interviewees.

Generally, whenever it has decided on a total of 5 recommendations for hire, transportation sends the 5 names to HR, and, after a final check to ensure eligibility and another review of references, HR calls the 5 candidates to schedule them for the next permit (no CDL) or certification (CDL) classes to be given by transportation. The time it takes transportation to conduct its own interviews, to schedule and get back results of physical and drug testing of those it will be recommending, and to accumulate a total of 5 potential hires could not be closely estimated. The minimum enrollment in its CDL permit classes conducted by trainers in transportation is 5.

Leaders in business and industry and HR professionals, especially in school districts regarding hiring teachers, place priority in reducing their average "time-to-hire" or simply, the measurement of time it takes to fill a posted or vacant position with a suitable candidate. The time-to-hire metric is 1 of the key performance indicators for hiring teams. Speed matters and quick hiring gives considerable relief to employees who have been filling in and doing the work of a person in the vacant position. It also reduces the perceived need for an identified candidate to look elsewhere for employment. Time-to-hire focuses solely on when candidates apply for a position until they are officially hired and begin their work.

RECOMMENDATION 3-7:

Investigate ways and means to reduce the time that HR takes between receiving a bus driver online application and it being available to those in student transportation who conduct the employment interview.

Designating an HR professional position to devote work time exclusively to the application and eligibility review process of bus driver applicants would establish priority in reducing the time that HR spends on processing candidates once the application arrives online. This person should be charged with exploring all ways and means to mainstream each application to transportation and to expedite the selected candidates for CDL classes This position should daily access applications and immediately ensure that applicants are scheduled for the initial visit to the HR Welcome Center to begin paperwork and further to track the completion of each step that candidates take toward employment.

Fiscal Impact:

This recommendation can be implemented with existing resources.

C. Routing Related

Effective and efficient routing depends on the optimal use of buses in transporting students to and from school. The routing/scheduling function is 2nd second only to the safety area in determining the effectiveness of a transportation system. Routing determines the total number of routes, which in combination with scheduling of bell times for the various schools, dictates the total number of buses required. This total route bus count drives nearly every expense associated with transportation. The better the district routes and schedules for the system, the more efficient it becomes.

Much of the JCPS routing effort was covered in Prismatic's Phase 1 report. Those findings not included there have been provided here.

FINDING 3-8 – Routes by Compound Assignment

The 2023-24 JCPS bus routes are currently misaligned with their designated compound areas, leading to excessive deadhead mileage. This misalignment increases operational inefficiencies/deficiencies, strains resources, and compromises the overall reliability and safety of the transportation system.

As reported in the Phase 1 report, deadhead mileage in 2023-24 was trending 45% higher than the previous year as of December 2023. Deadhead mileage, where buses travel without passengers, increases fuel consumption and operational costs.

The route/compound misalignment creates other problems:

- It can confuse drivers, who may be unfamiliar with the new, often non-intuitive routes, leading to increased chances of errors and delays.

- They disrupt the timely implementation of new bus stops. When routes are not properly aligned with their respective compounds, the process of adding or adjusting stops becomes cumbersome and slow, adversely affecting the district's ability to respond promptly to changes in student populations and residential patterns.

- Stops in the same neighborhoods for the same schools often use different buses in the mornings and afternoons, resulting in inconsistencies that can exacerbate discipline problems. Different drivers for morning and afternoon routes can lead to inconsistent rule enforcement, which students exploit, furthering behavioral issues.

- It increases the difficulty of ensuring student safety, particularly for young children. If a student boards the wrong bus or if a parent is not present to meet a kindergarten student, the bus cannot simply return to the school due to the distance and tight schedules.

- Responding to breakdowns or accidents becomes more challenging and time-consuming, as buses are operating further distances from their compound.

Best practices for creating geographically streamlined bus routes involve a strategic alignment of routes with their designated service areas to minimize deadhead mileage and enhance efficiency. Firstly, it is essential to conduct a thorough geographic analysis to ensure routes are confined within the closest proximity to their respective bus compounds. Utilizing advanced routing software can assist in mapping the most efficient paths, considering factors such as traffic patterns, road conditions, and student distribution. Additionally, regular reviews and adjustments of routes are crucial to adapt to changes in student populations and urban development. Effective communication and training for drivers on these routes can further reduce confusion and improve service reliability. Overall, a well-planned geographic routing strategy can significantly enhance the operational efficiency and responsiveness of the school transportation system.

RECOMMENDATION 3-8:

Assign buses to routes in the same geographical areas as their compounds to the greatest extent possible.

To address the misalignment, JCPS should review and assign buses to routes within the same geographical area as their compounds. It should then regularly review and adjust route assignments in line with shifts in student populations and urban development.

Fiscal Impact:

This recommendation can be implemented with existing resources but would be more efficiently done with routing software.

FINDING 3-9 – Deadline for Route Change Requests

The district does not currently enforce a cutoff date for route change requests from parents. Having no concrete deadline causes confusion for the drivers as changes can be made right up until school starts.

According to transportation staff, this year, the transportation department adopted a cutoff date of June 28th for route change requests. Staff understood the cutoff date adoption to be in response to district decisions regarding magnet school transportation. Not accepting further changes after that point would help the department in finalizing routes and allowing drivers to complete familiarization runs in a timely manner. However, while the cutoff date was communicated to schools and the public, transportation staff did not feel comfortable that schools and parents would adhere to the cutoff date. It does appear that schools will no longer be able to create bus stops after the cutoff date, but they and parents may still request additional stops or route changes. If true, this only partially accomplishes the intent of a cutoff date.

Addressing the absence of a cutoff date for route change requests from parents is paramount for enhancing the efficiency and effectiveness of transportation operations within the district. Without a clear deadline in place, the perpetual possibility of last-minute alterations creates confusion among drivers and disrupts the planning process leading up to the start of the school year. Moreover, the current communication protocols between the transportation department and schools are insufficient, often leaving schools uninformed about late buses and coverage issues. Consequently, this absence of transparency hampers the ability of schools to effectively assist and communicate with parents and students regarding transportation matters. Schools may be unaware of late buses or changes to routes, leaving students potentially stranded or unaccounted for.

RECOMMENDATION 3-9:

Establish, communicate, and enforce a deadline for route change requests from parents.

Establishing a definitive cutoff date for route change requests and improving communication channels between the transportation department and schools will promote smoother operations and ensure timely and reliable transportation services for all stakeholders.

Prismatic recommends that the district have a deadline for parental stop change requests of at least 2 weeks prior to the start of school and for 2 weeks after the start of school. This allows time for the routes to settle in and reduces confusion with too many changes right at the start of school. This approach provides ample time for routes to stabilize, reducing confusion associated with numerous changes at the beginning of the school year.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-10 – Routing Calendar

The current routing calendar does not provide time for drivers to make efficiency or safety recommendations once they complete dry runs. As a result, the district does not benefit from drivers' expertise. The drivers know the travel conditions that can help improve routes.

With the current routing calendar, there is not enough time for drivers to provide feedback after completing their dry runs. Despite their valuable knowledge of travel conditions that could improve routes, bus drivers are given only a few days to conduct these dry runs after bidding on their routes. There is insufficient time after that to make improvements to the runs before school starts.

Drivers, who are familiar with the local travel conditions and can provide valuable insights, are unable to contribute to route fine-tuning. This omission prevents the identification and implementation of improvements that could enhance operational efficiency and safety. Consequently, routes may remain inefficient, with potential hazards unaddressed, leading to increased fuel consumption, longer travel times, and higher operational costs. Additionally, the lack of driver input can result in missed opportunities to streamline routes, further complicating logistics and potentially compromising the safety of students. Overall, the absence of a structured feedback period undermines the effectiveness of the transportation system and diminishes the quality of service provided.

RECOMMENDATION 3-10:

Adjust the routing calendar to allow drivers to complete initial dry runs, provide feedback, and then dry run the revised routes.

Drivers should be valued for their road knowledge and provided an opportunity to help make improvements in their routes for efficiency and safety. To implement this recommendation, JCPS should:

- Design the new routing calendar with sufficient time between route assignments and the start of the school year so that drivers have enough time for thorough dry runs.
- Designate specific periods for drivers to conduct dry runs at various times of the day to account for different traffic conditions and potential hazards. Dedicated time slots should be integrated for drivers to document and submit their observations and recommendations following their dry runs.
- Develop a systematic feedback process with standardized feedback forms for drivers to report their findings and suggestions systematically. Clear channels for submitting feedback, whether through digital platforms, paper forms, or in-person meetings, should be established.
- Staff a team to analyze the feedback from drivers and incorporate feasible suggestions into the final route adjustments.
- Establish regular communication channels between drivers and the transportation department to address new/ongoing route issues and ensure continuous feedback collection.
- Provide drivers with periodic training to equip them with the skills needed to identify and report issues with routes and safety effectively.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-11 – Routing Team

The district's historical lack of a full, centralized routing team has placed substantial operational burdens on compound coordinators. Before the 2023-24 school year, these coordinators were responsible for most routing duties in addition to their daily supervisory responsibilities. This arrangement proved insufficient. In response to the August 2023 school year start, JCPS began the creation of a dedicated routing team; however, at the time of this report, the team remains only partially staffed. Only 3 positions were filled – a supervisor and 2 routers. Prismatic estimates that

at least 8 full-time routers are needed. An informal rule of thumb used by some transportation directors of transportation is that the number of students to be routed to the number of routing positions should be approximately 7,000 to 1.

Additionally, the district does not have written guidelines for essential aspects of bus routing, such as bus stop creation, walk-to-stop distances, and the identification of hazards that would prevent a non-transportation zone from being implemented. This absence results in inconsistent and potentially arbitrary decisions regarding bus stop creation and assignments among different staff members, further complicating the transportation system's efficiency and reliability.

RECOMMENDATION 3-11:

Complete the creation of a full, centralized routing department.

The district should first finish staffing the new routing department. The department should include:

- a supervisor – this position has already been filled
- 2 lead routers – each would supervise a team of 3 routers
- 6 routers

While compound coordinators should retain a role in suggesting improvements for route efficiency and effectiveness, the primary responsibility for routing should lie with the dedicated team. This will help compound coordinators focus primarily on managing daily operations.

The routing team should be equipped with advanced computerized routing software to analyze and optimize bus routes based on real-time data, including traffic patterns, road conditions, and student distribution. The use of such software can substantially reduce route inefficiencies and enhance route accuracy.

In parallel, the routing department should develop comprehensive written guidelines for bus stop creation, specifying clear criteria for the placement of stops based on safety, accessibility, and efficiency. These guidelines should also outline appropriate walk-to-stop distances, ensuring they are reasonable and safe for students of all ages. Additionally, the guidelines should include a systematic process for identifying and documenting hazards that would prevent the implementation of walk zones, such as busy intersections, lack of sidewalks, or high-crime areas. By establishing clear criteria for bus stop placement and reasons for omitting stops, route planning and execution are structured and consistent.

Fiscal Impact:

This recommendation will require the creation of additional router positions beyond those already staffed. The creation of written routing guidelines can be implemented with existing resources.

D. Use of Technology

The use of technology has enabled school districts to enhance operational, instructional, and business efficiency and effectiveness. Technological advances in hardware and software over the past decade have precipitated an explosion in the proliferation of technology in today's schools. Support services areas, including transportation, have typically lagged a bit behind other district departments. Nevertheless, the effective use of technology in a transportation department can be a force multiplier.

FINDING 3-12:

The current communications efforts of the transportation department with schools sometimes leaves the school unaware of late buses and coverages. This leaves the schools unable to assist in communicating with parents and students as needed.

The transportation department has no consistent method for communicating irregular operations, such as late buses to schools. When a bus is stuck in traffic in the morning, if the driver communicates the problem to the transportation department, the department has no regular procedure and mechanism to communicate that problem to the school. After school, if a bus is going to be more than a few minutes late to its bus stops because of traffic, the transportation department has no consistent, easy way to communicate that fact to schools.

In the principal survey conducted for this project, principals indicated they were advised of late/substitute buses in a variety of ways, with the most prevalent method being emails from the bus compounds. In addition, 38% of principals indicated that sometimes buses simply do not arrive at their school but they are never officially notified about it.

Some school districts publish information regarding late buses on their web pages (**Exhibit 3-10**). If the information is comprehensive and accurate, it can be an effective communications tool for schools and parents.

Exhibit 3-10
Sample Webpages for Alerting Stakeholders to Late Buses

THIS INFORMATION IS ONLY AVAILABLE FOR BUSES THAT ARE AT LEAST 10 MINUTES LATE OR FOR UNUSUAL SITUATIONS

DATE	TIME	SCHOOL	BUS	INFORMATION	UPDATE
11/14/19	6:35AM	Special needs	140	In spare bus #289	
11/18/19	6:19AM	CHS, MES, SLES	121	In spare bus #269	
11/20/19	6:15AM	CHS, CMS, MES, SLES	118	In spare bus #296	
11/25/19	6:10AM	HHS, PPMS, PPES, HES	128	In spare bus #210	
11/26/19	7:21AM	CMS	79	In spare bus 295 and running approx 25 min late to CMS.	
11/26/19	1:47PM	HHS, PPES, BES	29	In spare bus 280 this PM.	

Bus Status Updates

To see all the bus status updates, hover over or touch the table below and use the scroll bar to the right of the Action Taken column to scroll through the list. Click on the column headers to sort the list and use the School menu to filter by school.

Bus Status for Nov 3, 2023

School

Bus #	AM/PM	Serving School	Type of Problem	Minutes Late	Action Taken
16	PM	North Point HS	Not Running	10	95
19	AM & PM	Henson MS	Not Running	0	208
19	AM & PM	Indian Head ES	Not Running	0	208
19	AM & PM	Lackey HS	Not Running	0	208
29	AM	McDonough HS	Running Late	15	None
47	AM & PM	McDonough HS	Not Running	0	None
47	AM & PM	Craik ES	Not Running	0	None
81	AM & PM	Lackey HS	Not Running	0	558
81	AM & PM	Smallwood MS	Not Running	0	558
81	AM & PM	Indian Head ES	Not Running	0	558
104	AM & PM	Thomas Stone HS	Not Running	0	541
104	AM & PM	Stoddert MS	Not Running	0	541
104	AM & PM	Barnhart ES	Not Running	0	541
116	AM & PM	Craik ES	Not Running	0	519
116	AM & PM	McDonough HS	Not Running	0	519
136	AM	McDonough HS	Not Running	0	574
136	AM	Higdon ES	Not Running	0	574
155	AM	Billingsley ES	Not Running	0	None
155	AM	Davis MS	Not Running	0	547
155	PM	Mattawoman MS	Not Running	0	None
155	AM	St. Charles HS	Not Running	0	None

Source: Prismatic, 2019 (top) and 2023 (bottom)

RECOMMENDATION 3-12:

Communicate all late buses and coverages via the district website.

To implement this recommendation, staff in the transportation department should work with those in the IT department to develop a process to identify and report all late buses. All late buses should then be reported to schools and the general public via the district website. This would supplement the district's efforts to provide a parent application, as each provides information at a different level and for different audiences.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-13: Timekeeping System

The setup of the district's timekeeping system results in wasted repetitive effort by bus compound coordinators. Instead of allowing the scheduled hours of bus drivers to reflect those actually assigned, the system allows only an 8-hour day to be scheduled. As many drivers are scheduled daily to exceed 8 hours of work, each payroll period the compound coordinators must manually override the 8-hour assignment with the hours actually assigned. This is inefficient.

The district currently uses an internally developed system called Time & Attendance (T&A), to gather employee work hours each time period. Within T&A, bus drivers have 5-day schedules which preloads the number of contract hours. Those contract hours are capped by T&A at 8 hours daily over the 5-day schedule and are typically set in the system once per year. Data collected in T&A then feed into the MUNIS system for payroll.

In multiple interviews with bus compound coordinators, Prismatic confirmed that the district's current timekeeping system is set to allow a maximum of 8 work hours per day per employee. Yet, many bus drivers are scheduled to work beyond 8 hours each day. Once scheduled, drivers only report deviations from their assigned schedule if they take leave or work longer than scheduled. Time worked beyond the schedule is reported on a paper "green sheet" and turned into the compound coordinator. When completing the bi-weekly payroll, coordinators must manually adjust the work hours of drivers with longer than 8 daily hours assigned, overriding the system maximum. Then, they must input the additional time worked from the green sheets. While the green sheet additions are necessary, the manual override requirement is inefficient. Some coordinators reported they spent most of a full day every 2 weeks handling payroll processing.

RECOMMENDATION 3-13:

Adjust the maximum assignment allowed within the timekeeping system for bus drivers to be 12 hours per day.

Making this adjustment will reduce repetitive bi-weekly timekeeping adjustments. It will also free coordinator time for more important duties.

To implement this recommendation, the transportation department should request that the JCPS IT department update T&A to allow for the actual contract hours to be loaded. As noted by IT department staff, this will require reprogramming and testing of T&A to ensure that the improvement propagates correctly through what they termed "a very old application."

Fiscal Impact:

This recommendation can be implemented with existing resources.

E. Facilities and Maintenance Operations

In many school districts, transportation facilities are frequently an afterthought. They are typically the last to be renovated/updated and are often undersized for the needs of the operation. An effective transportation facility has:

- a location that is conveniently located for drivers/attendants and centrally located in the area where the buses operate
- adequate parking space for buses
- easy access to refueling and bus washing functions
- adequate parking space for the personal vehicles of drivers/attendants
- a well-maintained building with adequate office space for assigned staff and a welcoming break room for drivers/attendants

A good vehicle maintenance program is critical to the success of any transportation operation. It helps minimize the number of times a route bus is stranded due to mechanical issues and supports on-time route performance. It helps safeguard and extend the life of expensive district assets.

FINDING 3-14:

The JCPS bus compounds are generally adequate for current operations, with the exception of the spaces allocated primarily as driver breakrooms.

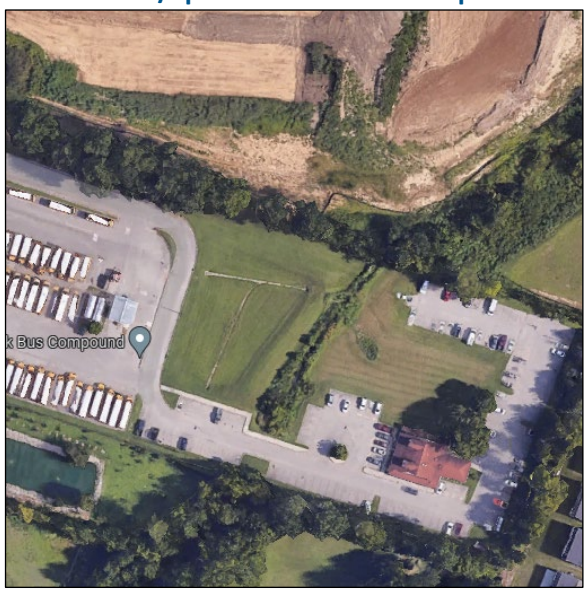
Poor-quality driver breakrooms can be a deterrent in driver recruiting and retention.

Prismatic visited each of the JCPS bus compounds (**Exhibit 3-11**) to assess site adequacy, space for bus parking, space for staff parking, building condition, office space availability and functionality, and driver breakroom adequacy. With the exception of driver breakrooms, the team found JCPS bus compounds to be generally adequate for current operations. A few sites need some pothole repair, while some would benefit from parking lot restriping.

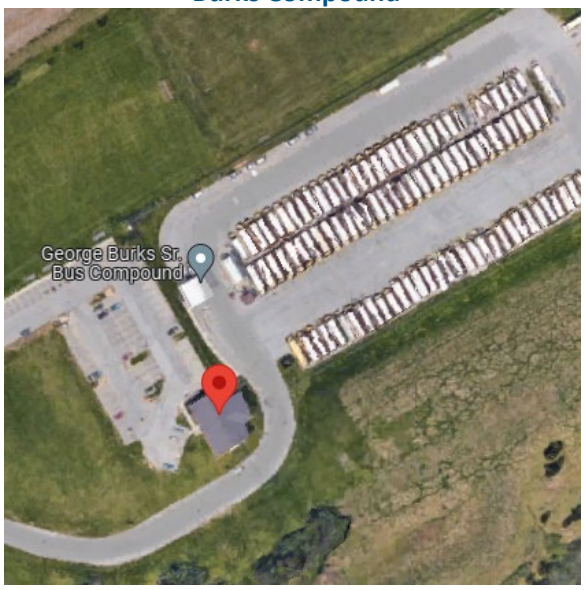
Exhibit 3-11
Aerial Views of JCPS Bus Compounds

Blankenbaker Compound

Blue Lick/Special Needs East Compound



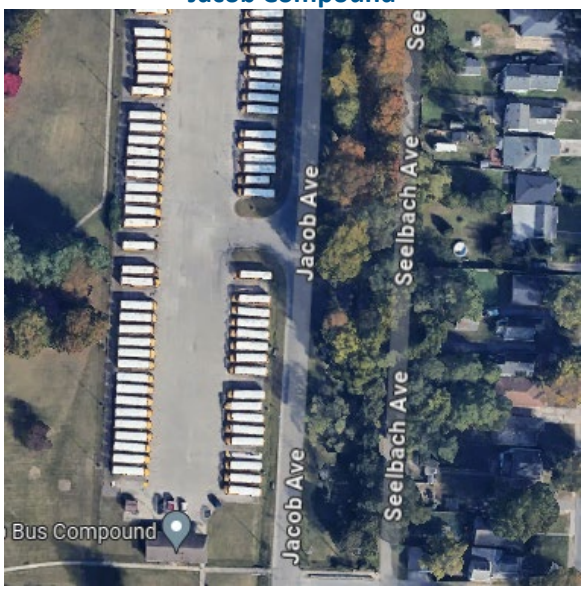
Burks Compound



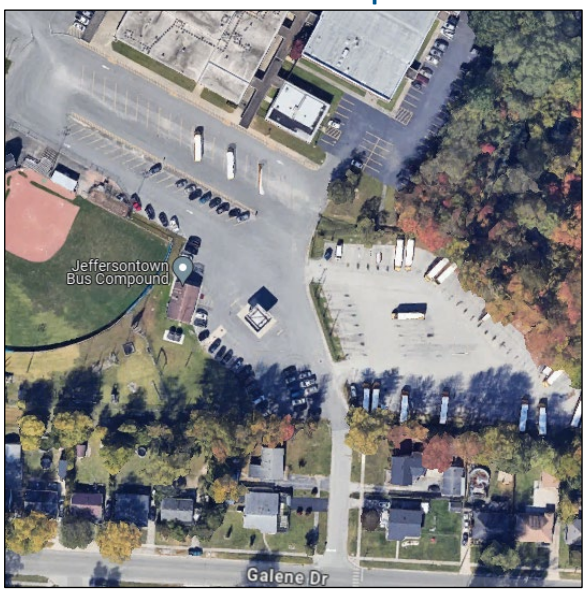
Detrick/Nichols Compound

Hoke Compound

Jacob Compound



Jeffersontown Compound



Lees Lane/Special Needs West Compound

Moore Compound

Wilhoit Compound

Source: Googlemaps, 2024

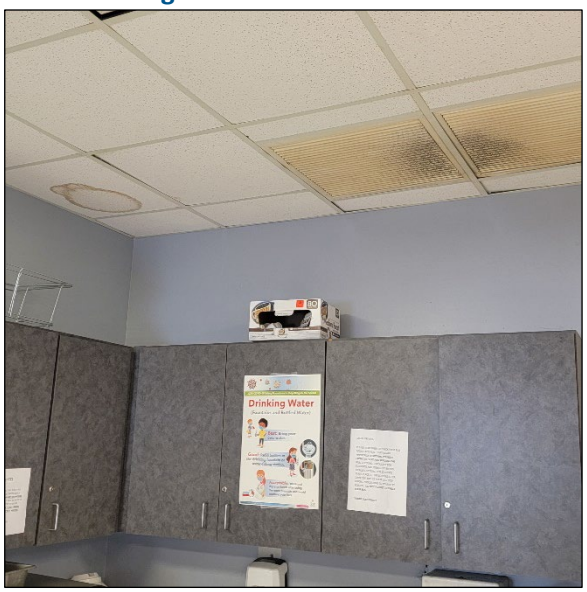
In contrast to the adequacy of the bus compounds in other areas, the driver breakrooms were inadequate (**Exhibit 3-12**). Some of the spaces include long-broken appliances and vending machines. Decorations are minimal, as are reasonable amenities such as computer access, televisions, and a coffee machine. Staff at 1 compound pointed out mold in their facility.

Moreover, there were differences among the compounds:

- Some had a number of small tables with seating for drivers, while others had an inadequate amount. Likewise, some had some outdoor seating space, while others did not.
- Some had a television playing a local news channel, while others did not.
- Some had a microwave, coffee pot, and/or toaster available, while others did not.
- Some had a limited supply of snacks available for free to drivers, but most did not. Some had snacks/drinks available for sale, either in vending machines or out on tables.
- Most of the spaces lacked demonstrable signs of driver appreciation or recognition, apart from a few boards that listed driver birthdays.
- All of the bathrooms observed were generally clean, but most were largely undecorated.
- Several spaces had been reduced in size and attractiveness through placements of filing cabinets, storage of items, and creation of office space for some employees.

Exhibit 3-12
Examples of JCPS Driver Breakroom Inadequacies

Ceiling Stains and Mold Evidence

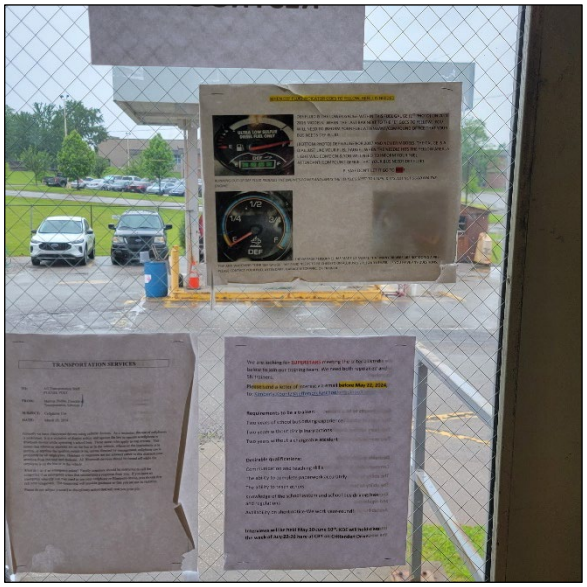


Damaged Cabinetry and Dirty Storage

Damaged Walls and Exposed Plumbing

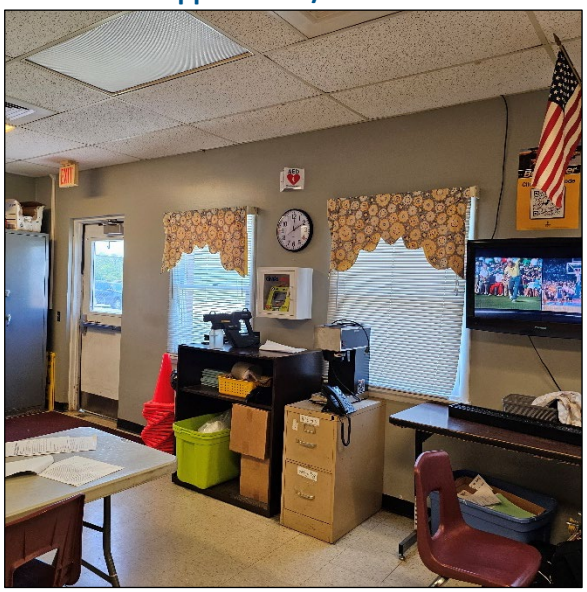
Broken Ice Machine

Flyers Posted on Window

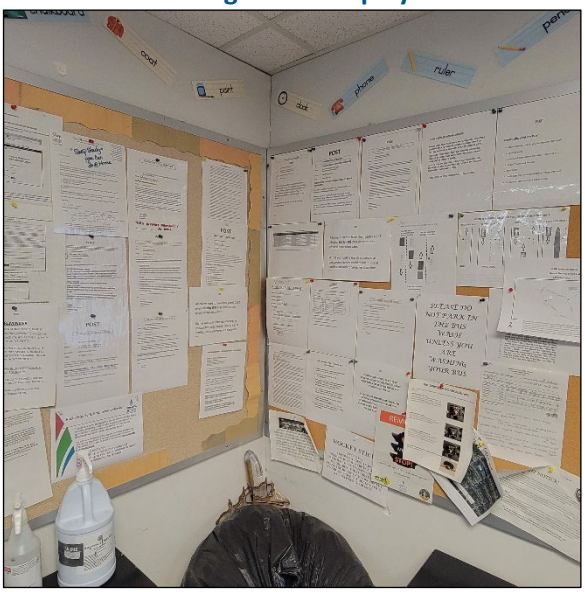


Cleaning Chemicals Stored Atop Refrigerator

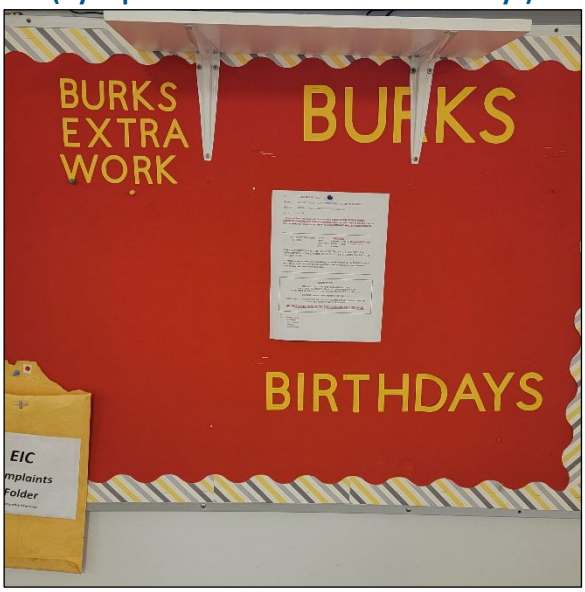
Ramshackle Appearance / Broken Coffeemaker



Disorganized Displays



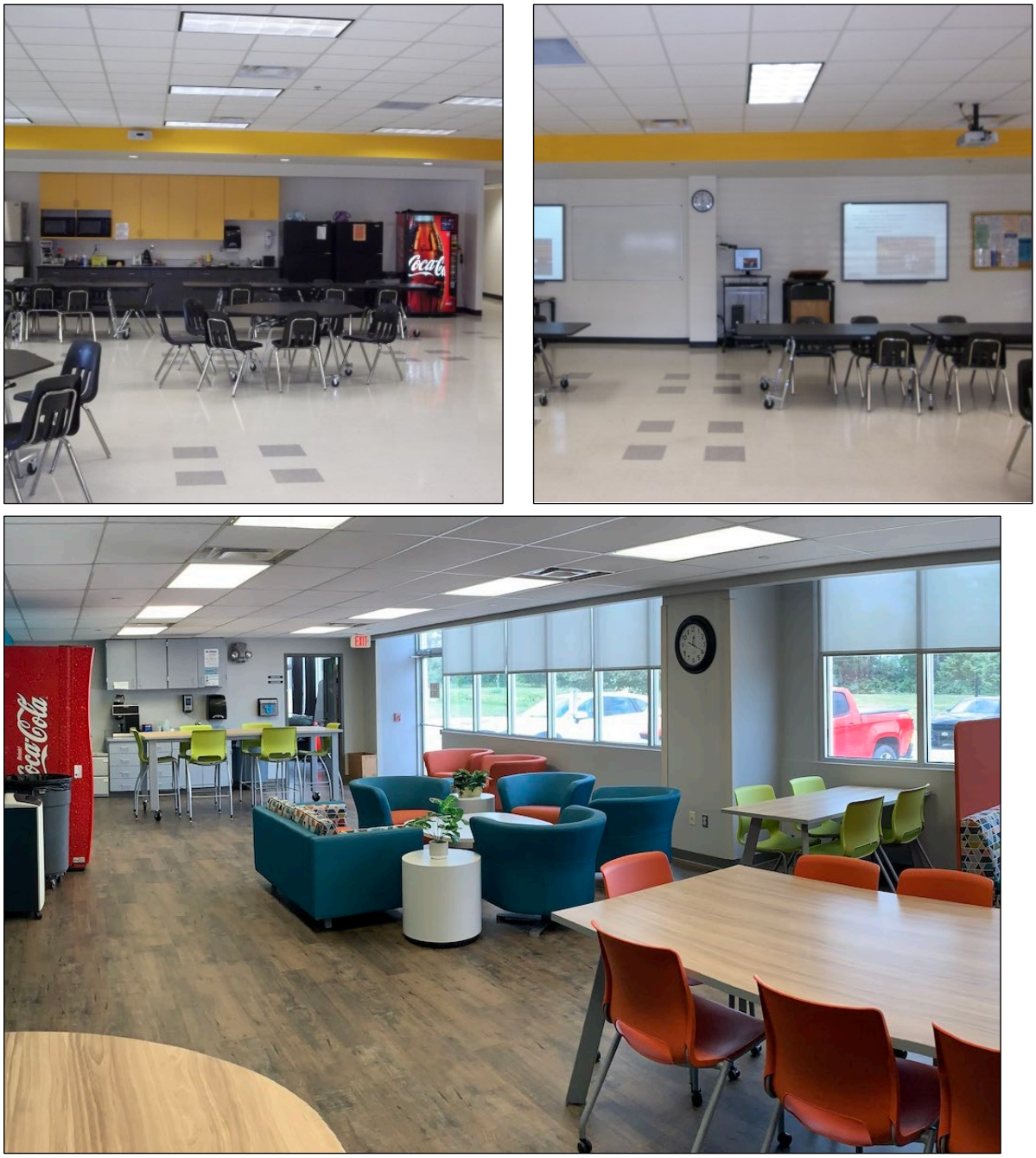
Disorganized Displays
(flyer posted is not related to birthdays)



Source: Prismatic, 2024

Well done, a driver break room can serve as both a recruiting and retention tool. Most school bus drivers work a split shift and need a place to wait in between their shifts. Even if they work a straight shift, drivers need someplace other than their school bus to check district email, complete work paperwork, or review training materials. **Exhibit 3-13** provides some examples.

Exhibit 3-13
Examples Model Driver Breakrooms



Source: Top row by Prismatic, 2013; Bottom photo from School Transportation News, August 3, 2021

RECOMMENDATION 3-14:

Revamp the driver breakroom areas of most of the bus compounds.

Driver break rooms should signal the value of drivers and attendants to the school system. They should have:

- functional appliances, including coffeemaker, microwave, and ice machine
- a variety of comfortable seating options
- a computer with internet access available for driver use
- sufficient number of power outlets for drivers to charge their devices
- clean, uncluttered appearance
- intentional, professional decoration
- digital signage to impart daily updates, including progress against KPIs
- organized and updated displays of needed information
- staff recognition space

Fiscal Impact:

The transportation department should allocate $10,000 per breakroom for minor repairs, repainting, and new appliances.

FINDING 3-15

The JCPS vehicle maintenance department lacks KPIs to assess the effectiveness and efficiency of the vehicle maintenance operations. As in the other JCPS transportation areas, the lack of KPIs negatively impacts performance assessment, continuous improvement efforts, and transparency regarding operations with constituents.

None of the coordinators indicated that poor service from the vehicle maintenance area was a pressing problem. One noted that they "do a great job" and others expressed similar sentiments. However, some noted that the mechanics do not always communicate well with compound staff. One noted that they get good service from the maintenance area because they "stay on them."

Relevant KPIs for a vehicle maintenance department include:

- maintenance cost per mile operated
- maintenance cost per bus – rising maintenance costs on a particular bus or rising costs in general could support decisions to replace a bus
- on-time route performance – excess breakdowns due to poor maintenance impact on-time performance
- daily buses as a percentage of total buses – poor maintenance operations can lead to a reliance on an overly large spare fleet
- fleet availability – number of regular route buses available for work on a daily basis
- average age of the fleet – an older fleet typically requires more maintenance dollars
- preventive maintenance inspections completed on-time
- preventive maintenance inspections scheduled versus number completed
- miles between road calls (reactive maintenance)
- mechanics per bus
- maintenance hours per bus
- maintenance expenditure as a percentage of general fund and as a percentage of the transportation budget

RECOMMENDATION 3-15:

Develop a balanced scorecard approach to set realistic maintenance department goals against established KPIs.

As with the transportation department as a whole, JCPS should select no more than 5 material KPIs to begin for the vehicle maintenance area. Prismatic recommends these:

- maintenance cost per bus
- preventative maintenance inspections completed on-time
- fleet availability
- mechanics per bus

- maintenance hours per bus

The status on all KPIs should be communicated with:

- bus compounds – weekly via prominent display in the bus compound breakroom areas
- all transportation staff during the bi-monthly communications meetings, which should include analyses by bus compound
- leadership (including the school board) at least annually

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-16 – Vehicle Maintenance Staffing

JCPS lacks sufficient maintenance personnel and is experiencing a higher ratio of school buses to maintenance technicians than desirable. JCPS lost 5 maintenance technicians from January to May 2024. As of June 2024, the district had 36 filled positions out of an authorized 80. This has resulted in the district requiring remaining staff to work overtime, contributing to lower morale and job satisfaction.

Bus compound coordinators, while generally acknowledging the good work of the vehicle maintenance area, noted the shortage of staffing. They believed that mechanics leave district employment for higher-paying jobs elsewhere. JCPS mechanics are well trained, and all have at least 1 ASE certification, making them a valuable addition to any workforce.

In interviews, maintenance staff indicated their team is overworked due in part to the requirement to conduct the state mandated monthly PMIs. To stay on schedule, overtime is used and some maintenance technicians have complained about a lack of family time.

Staff in the vehicle maintenance department indicated they did not typically focus on the ratio of vehicles per mechanic as a KPI. JCPS staff estimates of the current ratio ranged from 12:1 to 120:1. The supervisor of vehicle maintenance noted that the current ratio ~30 buses per 1 mechanic. *Best Practices in Student Transportation* recommends a staffing ratio of 2 mechanics for every 45 school buses and 1 mechanic for every 45 white fleet vehicles.

The bus inventory provided by JCPS lists 969 daily use buses and 256 spare buses. These figures differed from those reported on the KDE website - the 2023-24 Kentucky School Bus Inventory for JCPS lists 833 daily use buses and 347 spare buses. The first set of figures results in a ratio of 15.2 buses per 1 authorized mechanic, but a current ratio of 33.7 buses per

actual mechanic. The 2nd set of figures results in corresponding ratios of 14.8 buses per authorized mechanic but a current ratio of 32.8 buses per actual mechanic. These ratios do not include any vehicular maintenance for white fleet vehicles.

The JCPS lacks a night pay differential for the foremen who work the evening shift. The 2nd shift hours of operation are from 1:30 pm to 9:30 pm Monday through Friday.

The foremen working the 2nd shift provide critical support to the on-going vehicle maintenance mission of the department. Having an evening shift is a sound management strategy when faced with a facility of inadequate size, as it effectively doubles the amount of workspace and work time, without costly facility renovations or new construction.

A supplement, or night differential, helps to attract and retain experienced maintenance staff. It also demonstrates a commitment to fairness for those working undesirable hours.

Finally, JCPS lacks a maintenance department recognition or incentive program. The consulting team found the morale in the department to be low. They feel they do not have a voice in the district, they are unappreciated, and their pay is low.

RECOMMENDATION 3-16:

Address the maintenance staffing shortage.

JCPS should address its maintenance staffing shortage in multiple ways:

- Develop an outreach program to market district employment opportunities to those leaving the military from Fort Campbell and Fort Knox. The primary focus should be soldiers possessing 91B (Wheeled Vehicle Mechanic), 63B (Light-Wheel Vehicle Mechanic), or 63S (Heavy-Wheel Vehicle Mechanic) certifications.

- Implement a hiring bonus for qualified technicians.

- Issue an RFI to explore options for outsourcing white fleet maintenance. It is likely that white fleet maintenance can be outsourced at the same or lower cost than required using in-house staff. This would free the mechanics to focus on the more important job of bus maintenance.

- Complete a wage comparison analysis within the locality to ensure the district is paying competitively for mechanics. The district should adjust base as needed to remain competitive.

- Adopt a night pay differential for all 2nd shift workers. Retaining an evening work force and incentivizing potential evening shift workers often requires a pay differential. The transportation department should develop a pay differential for its 2nd shift. Employees who spend at least two-thirds of their workday beyond 4:00 pm should be entitled to a night differential. Prismatic recommends a minimum of a 5% differential.

- Provide employee recognition in the form of a Vehicle Maintenance Technician of the Month (EOM) and a Vehicle Maintenance Technician of the Year (EOY). The EOM recognition program winner could receive a $50 restaurant gift card from a local business stakeholder. The EOY recognition program winner could receive an opportunity to attend the Kentucky Association for Pupil Transportation (KAPT) Annual Conference. Recognized employees should be featured in district social media.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-17

The JCPS vehicle maintenance department lacks control of the spare parts inventory; it is instead assigned to the supply services department. The maintenance department currently experiences delays in parts availability and the just-in-time resupply program does not function well for the maintenance technicians.

The current decentralized spare parts operation prevents the prime customer from having control over its destiny. When the spare parts operation is co-located with the mechanics there are benefits, including:

- efficient utilization of space

- effective warranty management when mechanics identify defective items and parts staff handle warranty claims immediately

- speedier repairs that only require stocked parts

- elimination of unnecessary approval delays for purchase of parts not typically stocked

Currently, Blakenbaker Garage uses the corkboard near the foreman's desk for parts not carried by the spare parts department (**Exhibit 3-14**).

Exhibit 3-14
Blakenbaker Corkboard Storing Spare Parts Not Stocked by Supply Services

Source: Prismatic, 2024

RECOMMENDATION 3-17:

Transfer control of the spare parts inventory to the vehicle maintenance department.

This is traditionally the home for the spare parts section, due to the need for close operational alignment. A centralized maintenance department has the spare parts section under its control. This symbiotic relationship works best for both organizations.

Fiscal Impact:

This recommendation can be implemented with existing resources.

FINDING 3-18 – Bus Standardization

JCPS has not standardized on 1 bus manufacturer and instead maintains buses from 3 major bus manufacturers: Blue Bird, Thomas Built, and International. This lack of standardization increases the amount of spare part line items needed on-hand. It also decreases staff efficiency, since they must learn to maintain multiple systems.

According to the bus inventory data provided by the district, the daily bus fleet is comprised of 17 Blue Bird, 332 Thomas Built, and 620 International buses. The spare bus inventory is similarly divided.

As noted by Government Fleet, the benefits of fleet standardization generally outweigh the cons and include:

- improved maintenance efficiency
- fewer diagnostic and specialty tools
- smaller parts and bulk fluid inventory
- increased operational efficiency and safety
- closer vendor relations
- proven reliability
- faster specifications and bid evaluation
- fewer contracts and invoices to process[3]

RECOMMENDATION 3-18:

Work towards a fleet focused on 1 school bus manufacturer.

The manufacturer should be selected based on the best value in workmanship, reliability, technical support, accessibility and maintainability. To implement this recommendation, JCPS should form a selection committee comprised of the transportation director, vehicle maintenance manager, coordinator, foreman and maintenance technician. The committee should then:

- establish a written scoring matrix based on best value in workmanship, reliability, technical support, accessibility and maintainability
- score manufacturers in key areas by rank order to determine the winning manufacturer
- report out to JCPS leadership and begin the procurement process in 2025-26

Fiscal Impact:

This recommendation can be implemented with existing resources.

[3] https://www.government-fleet.com/145360/fleet-standardization-pros-and-cons

FINDING 3-19 – Spare Bus Ratio

The transportation department maintains a higher number of spare buses than is standard in the industry. Based on the bus inventory data, the JCPS transportation department has a spare bus percentage of 21%. The industry standard calls for a spare factor of 10%, although this standard is flexible based on the needs of a particular system. Things like district size, off-site parking, age of the fleet, and reliability of the fleet are all factors that can impact the appropriate spare factor for a fleet. Considering these factors, the consulting team determined that JCPS has a significant excess spare fleet. This drives up the division's fleet ownership costs in the areas of insurance, preventive maintenance, and required inspections.

In discussing the spare fleet with district staff, 1 of the operating factors that led the transportation department to grow its spare fleet was the length of time repairs required. A higher number of spares are in place in the event a part is not in stocked and the item must be requisitioned. This requires:

- getting the necessary approvals for a new line item
- ordering the item
- taking delivery
- adding the item to the stock
- issuing the part

A key underlying cause for the slowness of the process is the lack of blanket purchase orders. The outcome of the slow process has been a tendency to keep a higher number of spare buses than would otherwise be necessary as a de facto insurance policy against the long repair time.

The CGCS includes in its annual *Managing for Results* publication the spare fleet ratios its members maintain. The median rate in 2021-22 was a 19% spare factor, with a lower quartile of 29% and an upper quartile of 11%. In that year, JCPS reported a 32% spare factor. Only 8 of the 45 reporting CGCS members had higher spare factors.

RECOMMENDATION 3-19:

Expand the use of MUNIS-generated blanket purchase agreements for repair parts to expedite the repair and maintenance of school buses.

To implement this recommendation, JCPS should:

- Review the maintenance work history of the spare bus fleet.

- Determine which buses are candidates for auction/scrap metal sales based on miles, cost per bus and age.

- Conduct a controlled exchange of bus parts with a longer time horizon, swapping out parts such as tires with less wear on buses slated for auction onto buses still in use.

Additionally, if reorder points are used by the spare parts department, the amount of stock at 0 balance should be minimal. This would also reduce the amount of cyclical maintenance required for the spare fleet.

Fiscal Impact:

This recommendation can be implemented with existing resources. As the number of spare buses is reduced, the division will see reduced expenditures for insurance, preventive maintenance, and inspection work. Reducing the size of the fleet will also pay dividends on replacement as the district will not need as many buses.

FINDING 3-20 – Bus Replacement Policy

The district lacks an adequate bus replacement policy. Older buses take more time to repair and have a higher frequency of breakdowns because of their age.

The district's adopted policy on bus replacement states:

> Every effort shall be made to retire buses from regular service when the amount calculated for annual depreciation under Kentucky administrative regulations reaches zero (0) percent of the state annual bid price. [06.11]

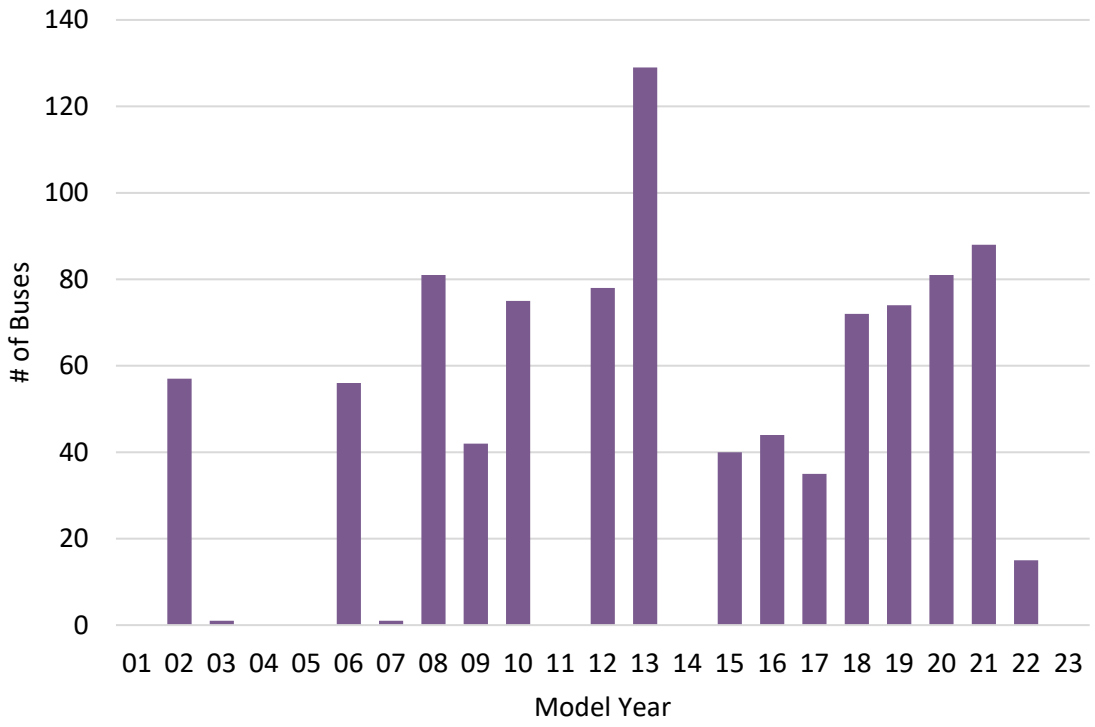
However, the bus inventory provided by JCPS lists 586 out of 969 daily use buses as having a cash value of $0. The inventory also lists 144 out of 256 spare buses as having a cash value of $0. These figures differed from those reported on the KDE website. There, on the 2023-24 Kentucky School Bus Inventory, JCPS has 382 out of 833 daily use buses and 347 out of 347 spare buses as having a cash value of $0.

KDE regulations allow districts to depreciate buses over a period of 12 years. Internally, JCPS depreciates buses over a 10-year period. At the end of either period, a bus would reach a value of 0% of the state annual bid price.

Exhibit 3-15 provides the breakdown of the JCPS daily use and spare bus fleets by age based on the data provided by the district in response to the initial data request. The average age of the daily use fleet is 10.3 years;

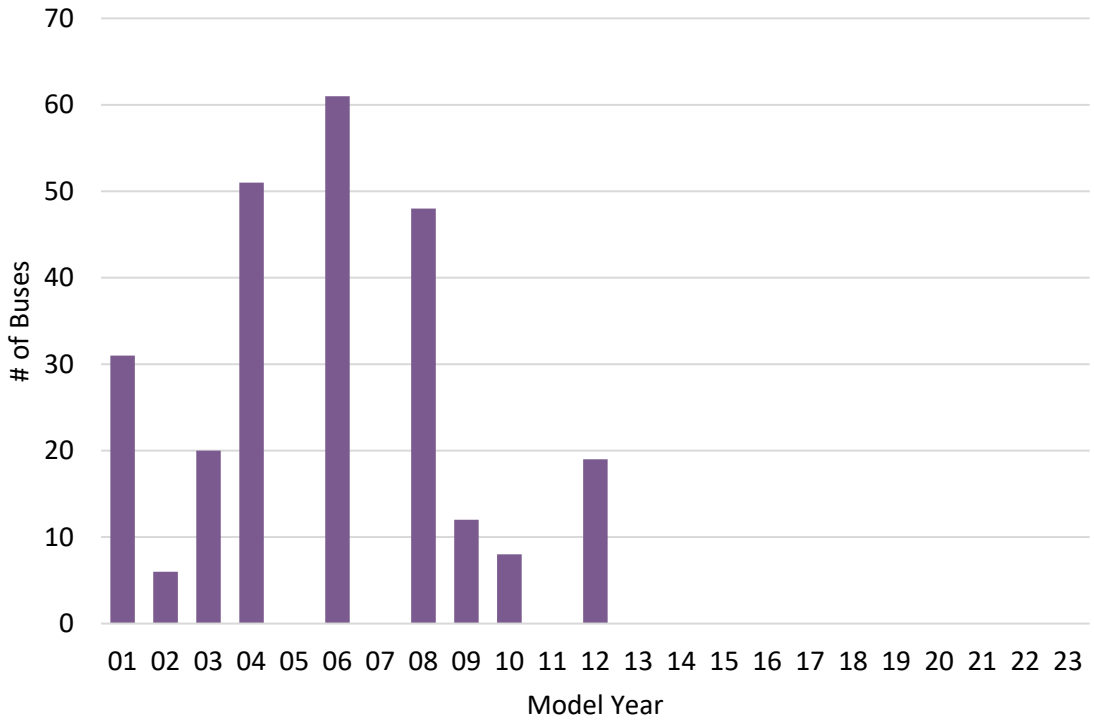
the average age of the spare fleet is 18.2 years.[4] The variation in the number of buses by model year indicates inconsistent purchasing practices across the years.

Exhibit 3-15
JCPS Daily Bus Fleet by Model Year



[4] The data on the KDE website indicated average ages of 8.3 and 17.2 years for the daily and spare fleets, respectively.

JCPS Spare Bus Fleet by Model Year



Source: JCPS, November 2023

Prismatic found little data in the JCPS budgets and annual financial reports regarding bus purchases. None of those documents contained a line item for bus purchases. It appears that the district has typically budgeted $5M annually for bus purchases, but has not always spent that amount. As noted in budget document:

- 2020-21 – no mention of a budgeted amount
- 2021-22 – new bus replacement budget of $1M
- 2022-23 – reinsertion of $5M as budget for bus replacement
- 2023-24 – no mention of a budgeted amount

In documents provided to Prismatic, staff noted:

> Buses are ordered in November of the prior year and are not received until May of the following year. Based upon funding allotted for bus purchases for the 2022-2023 school year, we ordered 22 buses in November of 2022. We received all of those buses by the end of August 2023. We will be placing an order for buses this school year and will not receive them until around May of 2024. We have approximately $5.2 million allotted. Based upon bus purchase, this should allow us to purchase roughly 26 buses.

School buses are a high-dollar capital expense. For a district to be successful in providing safe, reliable, and fiscally responsible transportation, long-term planning is critical. This includes planning for the regular acquisition of school buses. Not planning for the regular acquisition of school buses to refresh the fleet results in years where a district is forced to make a large purchase of buses at once, thereby squeezing the general or capital fund budgets.

Bus replacement is one of the most important transportation policies a school board can establish to maintain a sound fleet and stable budgeting. Kentucky does not mandate that districts adhere to school bus replacement timelines or mileage limits, but at least 11 other states have maximum ages for school buses. As noted in one of its white papers, "the National Association of State Directors for Pupil Transportation Services believes the timely replacement of school buses must be a planned process." The association further recommends a replacement cycle of 12-15 years, mitigated by local operational conditions and the extent of preventive maintenance. Buses older than 16 years are often not compliant with evolving regulations and policies. An aging fleet with significant mileage generally has a higher cost of operation, in the form of lower mileage, more frequent repairs, and higher repair costs. According to the March 2024 issue of *School Bus Fleet* magazine, the average school bus retirement age is 15 years.

RECOMMENDATION 3-20:

Adopt and adhere to a formal bus replacement plan.

Bus replacement is one of the most important transportation policies a school board should establish. In essence, the school board determines the age of the school bus fleet, which then drives maintenance costs and service quality.

Planning for a regular replacement cycle makes annual budgeting easier and helps guard against a tendency to avoid bus purchases in lean budget years. A regular cycle also encourages a consistent, gradual purchasing schedule that avoids expensive replacements of large numbers of buses at one time.

The transportation director should draft a policy for board review and adoption that ensures the replacement of all buses older than 15 years of service. Once that task is completed, the policy should direct the superintendent, COO, and transportation director to ensure that the average age of the route fleet not exceed 10-12 years. This standard will ensure buses are compliant with evolving regulations and vehicle specifications.

Once the policy is adopted, the JCPS leadership team should identify the funding needed for the replacement cycle during the budget

development cycle. The district should then encumber the funds and note that they cannot be reallocated for another purpose.

Fiscal Impact:

The adoption of the recommended policy can be accomplished with existing resources; however, the most likely effect of the policy will be a cost associated with replacing a percentage of the fleet in the next several years. With 200+ daily buses older than 15 years of age, the district will likely have to make substantial purchases in the next few years, but this should be balanced with a critical look at the district's actual route bus needs. It may be that, with the improved use of routing software and other operational improvements, the district's base need for route buses is lower than the current figure.

Chapter 4
Conclusions and Recommendations

Conclusions

In Phase 2, Prismatic reviewed available documents/files, interviewed JCPS leadership and transportation department staff, observed operations, toured bus compound facilities, and surveyed transportation staff and JCPS parents. The Prismatic team then made 20 recommendations designed to improve the efficiency and effectiveness of the JCPS transportation department. Prismatic found these recommendations to have 2 primary underlying themes:

- Performance Measurement and Communication
- Staffing Management

Some recommendations address both themes. Remaining recommendations address needed operational improvements.

Performance Measurement and Communication

The transportation and associated support departments have not historically measured their performance, either over time or against peers, in a meaningful way in most areas. Prismatic made 7 recommendations that seek to address this issue, either in part or in whole. These include:

- developing Key Performance Indicators – these would explicitly measure performance
- addressing student conduct on school buses, executing a strategic plan to retain bus drivers, and reducing the time required to hire bus drivers - each of these would include the regular measurement of the impact of district efforts

For each recommendation, the analysis and public communication of results are critical.

Staffing Management

The district's bus driver recruitment and retention problems have been well documented within JCPS and publicly this year. JCPS leaders were aware of the trends in both areas prior to this year; however, it was not until the situation reached a crisis level that the district began new strategies to address it. Other staffing challenges, such as the shortage of bus mechanics, have received less notice. Prismatic made 12 recommendations that seek to address staffing management issues. either in part or in whole. These include recommendations to address the bus driver shortage through development of a strategic plan to retain drivers and multiple actions to recruit/retain bus mechanics. These also include recommendations to improve work conditions such as:

- creating written bus compound SOPs that would include how coordinators should interact, develop, and support bus drivers/attendants
- revamping the driver breakrooms of the bus compounds to create an environment that shows the district values drivers/attendants
- working toward a single fleet type to reduce the need for mechanics to know and support multiple fleet types

Commendation

Prismatic found 1 area of commendable activity among those reviewed in Phase 2. In staging recruiting events focused on hiring bus drivers this year, JCPS departments demonstrated a commendable level of interdepartmental cooperation and coordination.

Recommendations

As with all projects Prismatic undertakes, a number of areas considered initially to be within scope were reviewed extensively but ultimately no recommendation was made. This was because either because the data were inconclusive, there were insufficient data upon which to base a recommendation, or the area was operating already at an average level. Including only the highest priorities for improvement results in a report of manageable length and helps keep district leaders and stakeholders focused on what is most important in order to realize gains in efficiency and effectiveness.

Exhibit 4-1 provides a summary of Prismatic's recommendations and the thematic areas they cover.

Exhibit 4-1
Summary of Prismatic Phase 2 Recommendations

#	Recommendation	Thematic Area(s)
3-1	Develop systems to collect and report on Key Performance Indicators (KPIs).	Performance Measurement
3-2	Establish operational expectations via a transportation operations manual and explicit professional development for bus compound leaders.	Performance Measurement Staffing Management
3-3	Readdress and revamp the district's approach to student conduct on its school buses.	Performance Measurement Staffing Management
3-4	Collaborate with school principals to expedite the entry/dismissal of buses.	Operational Improvement
3-5	None	
3-6	Develop an interdepartmental/interdivisional strategic plan to retain bus drivers.	Performance Measurement Staffing Management
3-7	Investigate ways and means to reduce the time to hire bus drivers.	Performance Measurement Staffing Management
3-8	Assign buses to routes in the same geographical areas as their compounds to the greatest extent possible.	Operational Improvement
3-9	Establish, communicate, and enforce a deadline for route change requests from parents.	Operational Improvement
3-10	Adjust the routing calendar to allow drivers to provide feedback on runs.	Operational Improvement
3-11	Complete the creation of a full, centralized routing department.	Staffing Management
3-12	Communicate all late buses and coverages via the district website.	Performance Measurement
3-13	Adjust the maximum assignment allowed within the timekeeping system for bus drivers.	Operational Improvement Staffing Management
3-14	Revamp the driver breakroom areas of most of the bus compounds.	Staffing Management
3-15	Develop a balanced scorecard approach for the vehicle maintenance area.	Performance Measurement
3-16	Address the bus maintenance staffing shortage.	Staffing Management
3-17	Transfer control of the spare parts inventory to the vehicle maintenance department.	Operational Improvement Staffing Management
3-18	Work towards a fleet focused on 1 school bus manufacturer.	Operational Improvement Staffing Management
3-19	Expand the use of blanket purchase agreements for repair parts.	Operational Improvement Staffing Management
3-20	Adopt and adhere to a formal bus replacement plan.	Operational Improvement Staffing Management