

## **Project Executive Summary**

In November 2023, TransPar Group, Inc. was selected by Bismarck Public Schools (BPS) as its student transportation consulting partner to conduct a review of its transportation operations. BPS sought to understand, through a review of its transportation operations, how the district could become more efficient and cost-effective in its service to students. To achieve this goal, TransPar performed a thorough operations assessment, which included the following:

- Policy Analysis
- Financial Analysis
- Performance Baseline and Cost Analysis
- Current Bell Time and Routing Assessment
- RouteYield™ Analysis
- Bell Time Alternative Scenario Development Analysis

The assessment revealed that transportation operations were limited in their ability to become more efficient primarily due to the constraint of the district's school bell times. A lack of adequate time between school start and end times has required the district to operate with a single-tier system, and the manner in which bus routes are able to be tiered and balanced determines the number of resources (i.e. school bus drivers, buses, total routes) which are required to operate the system. The remainder of the Executive Summary will briefly outline analysis and observations for each of the assessment areas outlined above.

### **Policy Analysis**

BPS is to be applauded for the thoroughness of its district policies as they pertain to the provision of student transportation services. TransPar often finds that its district partners either have insufficient transportation policies or policies which contribute to operational challenges. In its assessment of BPS' policies, TransPar found that the district spoke clearly and consistently on matters pertaining to student eligibility, walk zones, walk-to-bus stop, bus to placement and route scheduling criteria, as well as expectations for student behavior on buses. BPS' policies have not been identified as being a hindrance to the efficiency of operations and will only bolster its ability to gain greater levels of efficiency if the district chooses to implement bell time change recommendations.

### **Financial Analysis**

For fiscal year ending 2023, BPS had total transportation expenditures of \$6,546,668. These expenditures accounted for 3.3% of the district's total \$198,366,505 in expenditures that year. On average, TransPar's clients have transportation expenditures that account for roughly 4 – 6% of the total district operating budget. BPS' were broken down into primary spending categories as follows:

- 45% = Contracted Services/Harlow's Contract
- 21% = BPS Driver Wages, Benefits, Retirement
- 8% = Vehicle Maintenance, Repair, Insurance
- 6% = Fuel & Oil
- 4% = Buses
- 4% = BPS Monitor Wages, Benefits
- 1% = White Fleet Repair
- 1% = Fuel & Oil for Activity Trips

BPS operates with a hybrid in-house and contracted system. As such, the cost per route metrics have been broken down into in-house and contracted operational costs in the table on the following page.

BPS Route, Run, & Student Totals	BPS Cost Per Route/Run/Student Metrics Assuming \$3,600,667 in in-house costs	Contracted Route, Run, & Student Totals	Contracted Cost Per Route/Run/Student Metrics Assuming \$2,946,000 in contracted costs
16 reported routes	\$225,042	47 reported routes	\$62,681
45 reported runs	\$80,015	135 reported runs	\$21,822
200 reported riders	\$18,003	2,475 reported riders	\$1,190
<p><b>TransPar client costs per route typically range from \$60,000 - \$80,000 on the lower end, to \$100,000 - \$120,000. Costs per route and per student vary significantly among districts across the nation, especially in costs associated with transporting students with special needs and/or in specialized programs, thus TransPar focuses on maximizing resource efficiency based on the number of students a district must/has decided to transport.</b></p>			

### Performance Baseline and Cost Analysis

In meeting with both BPS and Harlow's staff in November 2023, the following were the primary challenges expressed with regards to factors directly impacting performance of the operation:

- Increasing number of students requiring transportation, particularly across the following student segments:
  - Special Education
  - Hardship/Students in Transition (McKinney-Vento)
  - Foster Care (ESSA)
- Many of these students live beyond school boundaries, increasing routing complexities
- All schools start and dismiss within a 30-minute window of one another
  - BECEP and special education program times directly conflict
- Program times can change often throughout the school year for students
- Timing of student information being provided to the Transportation Department places a high level of stress on staff to get students routed in a timely manner
- BPS is lacking the type of spare buses it needs to respond appropriately to operational needs in the event of a breakdown, accident, or other unforeseen circumstances
- An increasing van white fleet has posed additional challenges and created questions around maximizing use of these assets efficiently
- The size and use of the transportation facility is being stretched as transportation needs continue to grow

Each of these challenges impact the overall efficiency and cost-effectiveness of the operation; however, BPS' ability to address these challenges first lie in becoming as efficient as possible in the structuring of general education routes, which account for two-thirds of the total routes operated.

### Current Bell Time and Routing Assessment, RouteYield™ Analysis

The district operates with a one-tier system in which all schools start and end within a 30-minute window of time. RouteYield™ analysis, which is a time and capacity analysis that evaluates the utilization of each bus run, found that:

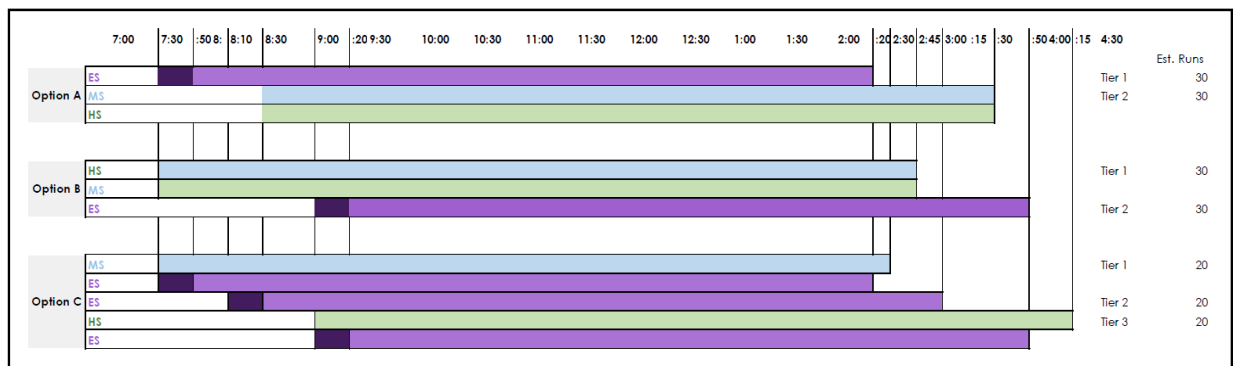
- Both differing lengths of day and BPS' bell time schedule create a difficult framework for executing transportation efficiently
- The geographic distribution of students creates very long runs for some schools/students
- To achieve the desired level of service delivery for students, families, and schools, changes

- will need to be made to the BPS bell time framework
- Changes to the bell time framework are likely to result in many benefits to all stakeholders, including drivers, and may allow for Harlow's (BPS' current vendor) to take on more work and alleviate current strains on BPS' transportation team

### Alternative Bell Time Scenarios and Recommendations

Three alternative bell time scenarios were developed, each of which were designed to enhance service delivery to students and to reduce the total number of resources required to operate the system. Two (2) two-tier scenarios and one (1) three-tier scenario were developed. Conservatively the two-tier scenarios would allow for 60-minutes between bell time tiers and reduce general education routes by approximately seventeen (17) routes, where the three-tier scenario offers 50-60 minutes between bell time tiers and reduces general education routes by approximately twenty-seven (27). The actual number of buses and drivers required for home-to-school and school-to-home transportation in these scenarios cannot be finalized until the system is rerouted based on new parameters.

## Possible Future Bell Time Scenarios



- Option A:** Pros: Reduces total buses and drivers needed; maintains current length of day for all levels; most change only impacts one school level  
Cons: ES school level will start and end school much earlier than they do today
- Option B:** Pros: Reduces total buses and drivers needed; maintains current length of day for all levels  
Cons: Start and end times change for all levels
- Option C:** Pros: Largest reduction of buses and drivers needed; maintain ES and HS LOD  
Cons: Lots of change; ES do not have consistent start/stop times; MS LOD changes

	ESTIMATED			
	AM Riders	PM Riders	Min. Buses	Max Buses
ES	800	1190	25	32
MS	648	852	15	22
HS	301	433	12	13
<b>Total</b>	<b>1749</b>	<b>2475</b>	<b>27</b>	<b>35</b>

### Conclusion

Adjusting bell times to a framework that best promotes meeting student curriculum and academic needs while also ensuring students arrive to school on time and ready to learn can both enhance service delivery to students and reduce the number of resources required to operate the system. The alternative bell time scenarios have been shared with the Operational Excellence Committee which will review and discuss the information with the community and other stakeholders in order to narrow and make a decision on the implementation of potential changes for the 2025-26 school year.

BPS has taken proactive, strategic, and methodical steps to thoroughly evaluate its operational challenges and opportunities, and TransPar has been appreciative of the opportunity to be a partner in helping the district move towards a more efficient and cost-effective transportation system for its students and community.