



### CUSTOMER:

Benton Community School District

### SITUATION:

Preparing for the possible consolidation of two elementary schools into a new centralized location, and therefore, reevaluating transportation needs

### SOLUTION:

Working with UniteGPS to create a savings and consolidation plan.

### RESULTS:

A strategy to shrink 22 routes to 19, reduce daily mileage by 212 from 1,056 miles to 844, save an estimated \$110,282 in annual costs, and achieve a cost per mile of \$2.89 (multiplied by the 180-day school year).

Benton Community School District in Iowa contacted UniteGPS in November 2022 for some advice. With a new centralized school under deliberation, the district was wondering how they could improve routes before the prospective closure of two elementary schools. Transportation officials were already using Crosswalk K-12 for routing and student ridership tracking before the consulting project began.

# OPTIMIZING TRANSPORTATION FOR BENTON COMMUNITY SCHOOL DISTRICT

## Achieving Estimated Cost Savings of \$110,000 with UniteGPS

### SITUATION

West of Cedar Rapids, there are seven rural municipalities in the Benton Community School District: Van Horne, Atkins, Blainstown, Elberon, Keystone, Newhall, and Norway. As the community considers consolidating two of its elementary schools into a new centralized location, Benton wanted to prepare a transportation plan in case the bond vote passes.

Still undetermined, the proposed Van Horn Elementary School would serve grades pre-K-6. Any pre-K-3 students who formerly walked to Norway Intermediate School, or 4-6 students from Keystone Elementary School, would be eligible for bus service if approved. UniteGPS followed this formula to appraise potential cost benefits from the consolidation.



## SOLUTION

To gauge the financial impact of the project, UniteGPS revamped routes by redirecting elementary students to the Van Horn facility. Equipped with Benton's data, they calculated the mileage for both current and optimized routes—using the cost per mile of operations from the previous year and determining the cost difference between the two scenarios.

This required addressing average ride times for students. Under Iowa state law, no route can exceed 75 minutes for high school students, and no more than 60 minutes for elementary or middle school students, when the wheels are in motion. From 2021 to 2022, the average ride time in Benton was 1.829 hours.

In addition to analyzing average ride times, UniteGPS suggested phasing out Benton's bus shuttle system. Here the solution involved measuring the distance between the bus garage and the final drop-off point—information that helps administrators assess bus stop location efficiency. Project participants tallied both route miles and no route miles, meaning the drive time without any students onboard, to handle the task.



## RESULTS

Ultimately UniteGPS evaluated ridership data and drafted a cohesive action plan for Benton. For example, none of the high school routes exceeded 75 minutes after the consultation project was finalized, all while keeping elementary and middle school routes under 60. Working around these parameters, the team managed to reduce the number of routes from 22 to 19.

In the long run, three fewer routes would decrease daily mileage from 1,056 to 844 miles if implemented. Annual savings of approximately \$110,282 with a cost per mile of \$2.89 (over a 180-day school year) could result from these estimates. Further savings and operational efficiency would also come from replacing Benton's shuttle service points with direct student transportation.

Accurate ridership data provided by Benton over Crosswalk K-12 was instrumental in making the consolidation plan. The district onboarded in 2022 and has been consistently recording data ever since. Director of Transportation Tim Lyons at Benton can attest to how the solution has transformed his department over the past year.

*“Since we began using Crosswalk K 12, it has been a game changer for us. Just all around with setting up routes, seeing where the buses and students are at, how much they ride, if they're riding. If a parent calls saying that the bus didn't stop, we can look and see that they were there. It has made a huge difference in our district.”* Director of Transportation Tim Lyons