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Information Brief

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School Districts Can Take Steps to Substantially Reduce Their Transportation Costs

at a glance

School districts with high transportation costs often subsidize their operations with funds that could otherwise be used in the classroom. Therefore, school districts should take steps to reduce their transportation costs. Some school districts have implemented successful cost-saving strategies that include

- improving bus routing, including using computerizing routing software, to reduce the number of buses and drivers needed;
- limiting the transportation of students who can safely walk to school and eliminating unsafe walking conditions;
- limiting specialized transportation to just those students needing this service and maximizing federal Medicaid reimbursements;
- using innovative methods to increase surplus vehicle sale revenues;
- improving tracking and timeliness of vehicle maintenance; and
- cooperatively bidding out fuel purchases.

These strategies could be adopted by other school districts to improve their transportation operations.

Scope

This report is one in a series that highlights cost savings opportunities identified in Sharpening the Pencil reviews of Florida school districts.[1] This report identifies effective strategies school districts can use to reduce district student transportation costs. Other reports in the series examine opportunities to reduce educational facilities and food service costs.

Introduction

The Legislature appropriated $430 million in Fiscal Year 2003-04 to assist districts in transporting students. At the district level, this funding covered between 31% and 99% of transportation expenditures.[2] When transportation expenses exceed the state allotment, school districts must subsidize transportation services with local funds. Effectively managing transportation costs is important to school districts because savings can be redirected to the classroom.

[1] Enacted in 2001, the *Sharpening the Pencil Program* (Ch. 1008.35, *F.S.*) is intended to improve school district management and use of resources and to identify cost savings. The reviews are conducted by OPPAGA and the Auditor General.

[2] School districts spent in excess of $725 million for student transportation in the most recent reporting year (Fiscal Year 2001-02). During this same fiscal year, the Legislature appropriated $411,269,216 for student transportation. Thus, state funds account for roughly 57% of total transportation funds.

Conclusions

This report discusses six strategies to improve transportation operations and reduce costs:

- improving bus routing;
- reducing courtesy bus riders;
- better managing ESE student transportation;
- improving vehicle acquisition, use, and disposal;
- better managing vehicle maintenance; and
- improving fueling practices.

Improving bus routing

Effective bus routing is extremely important in minimizing student transportation costs because efficient routing will minimize the number of buses, drivers, and fuel needed as well as the costs associated with maintaining and storing vehicles. Bus routing involves not only planning the routes and bus stops that buses use for transporting students to school, but also includes decisions about school schedules and the location of programs such as magnet schools within the county. School districts can take several steps to improve bus routing and reduce costs, including adjusting school start/end times, computerizing bus routing, using innovative methods for transporting students to programs and magnet schools, and setting reasonable walking distances between bus stops.

The potential savings from improving bus routing can be considerable. For example, the Lee County School District saved $2,135,000 in a three-year period by implementing multi-level routing (transporting middle and high school students on the same bus routes) along with other bus routing changes.

Adjusting school start/end times. Generally, bus operations are more efficient when school start/end times are sufficiently staggered to allow buses to operate multiple routes each morning and afternoon rather than just a single route serving one school. For example, the St. Lucie County School District changed its school start times in school year 2001-02 to help improve its bus usage. As a result, the district eliminated the need for 18 buses and nine bus routes. Other school districts including Manatee and Monroe also have changed their school start and end times to more efficiently use buses and reduce transportation costs.

Using computerized bus routing. Several school districts use computerized routing software to design efficient bus routes. In general, larger school districts can use this software to reduce the time it takes to design efficient routes, better ensure that chosen routes minimize the number of buses needed to transport students, and reduce student ride times.[3] Computerized systems also provide bus drivers with detailed directions and bus schedules. Potential savings from using computerized routing software depends on several factors such as the cost of the computer program and the salaries and benefits paid to employees that operate the system. The Fairfax County (Virginia) school district found that using such software can result in a 5% to 10% reduction in the number of bus routes in a district. The Marion County School District found that the using routing software allowed it to eliminate one district office staff position.

While the state's largest districts, such as Polk and Broward, have used routing software for years, smaller rapidly growing school districts have begun to use computerized routing. For example, the Osceola County School District had experienced rapid growth and determined that staff could no longer efficiently implement manual routing; the district is now in the process of fully automating its routing process. Other Florida school districts, including St. Lucie, Lee, and Duval, use computerized routing systems to assist bus routing staff in creating and updating bus routes.

Using innovative bus routing strategies. School districts that establish magnet (specialty) programs often find that the geographically large area served by these schools significantly increases transportation costs. Some districts have implemented innovative bus routing strategies to reduce the cost of transporting magnet school students. For instance, the Brevard County School District uses corridor (sometimes called "arterial") busing for its magnet school students. In this system, parents

[3] Smaller school districts (generally those with 100 or fewer buses) often can achieve these results through manual routing.

transport their children to central pick-up points along major transportation arteries. The St. Lucie County School District similarly uses transfer centers for some of its magnet school students. Under this approach, students attending a magnet school are bused from their local bus stop to a regional transfer center and then ride a different bus to their magnet school. St. Lucie transportation staff estimate that using these transfer centers will save $133,556 annually.

Establishing reasonable walking distances between bus stops. Adopting school board policies which establish reasonable minimum distances between bus stops allows district transportation managers to eliminate closely spaced bus stops serving relatively few students. For example, the Duval County School District spaces the majority of its bus stops one-half mile or more apart. Fewer stops result in more efficient bus service, less fuel consumption, and less wear on the buses.

Reducing courtesy bus riders

The state provides transportation funding for certain students living within two miles of their assigned schools, including elementary school students who would face hazardous walking conditions and exceptional education students needing specialized transportation to attend school. However, districts often provide transportation to large numbers of other students who live within two miles of school. These students are often referred to as "courtesy riders." Transporting courtesy riders who can safely walk to school results in districts having to purchase additional vehicles and hire additional drivers, and increases maintenance costs. Statewide, school districts transported approximately 57,000 courtesy riders during 2001-02 school year. Courtesy riders account for roughly 5% of student ridership in Florida's school districts, a figure which can significantly add to transportation costs. Appendix A shows the number of courtesy riders by school district.

While transporting children who live close to their schools can significantly increase transportation costs, sometimes it is appropriate to do so for safety reasons. Unsafe walking conditions can be divided into two categories: those that meet state-defined criteria for hazardous walking conditions and those that are locally defined. The state has issued criteria defining hazardous walking conditions, which include traffic counts, speed limits, and walking areas. The state provides funding for the transportation of elementary students facing these conditions.

School districts also may determine that other local situations that do not meet the state criteria also pose a hazard. For example, a district may determine that it would be unsafe for middle school children to cross a bridge that lacks a pedestrian walking area. The state does not provide funding for transporting such students.

One option to address this issue is for school boards to adopt written policies that define local situations that pose safety hazards, and limit transportation of courtesy riders to those students who meet these criteria. School districts such as Gadsden, Polk, and Brevard have adopted policies limiting transportation services to those students who live two miles or more from assigned schools and do not face hazardous walking conditions or need transportation because of a disability. These policies help districts respond to parental requests to transport their children using uniform criteria, and help ensure that exceptions to the policy are deliberated at the school board level in a public setting. For example, the Hillsborough County School District estimated that it saved $76,800 annually by reducing the number of courtesy riders it transports. Indian River County School District Transportation department staff estimated that eliminating courtesy riders on 10 school bus routes would save $23,500 annually.

School districts also can reduce transportation costs by working with local officials to eliminate dangerous walking conditions. School districts such as Monroe, Martin, and Sarasota have worked with governmental agencies to eliminate some of these unsafe conditions. For example, the director of transportation in the Martin County School District worked with county officials to install a walking bridge and extend a sidewalk. By eliminating this unsafe condition, transportation is unnecessary as the students now can walk to school safely.

Better managing ESE students transportation

While most children who receive exceptional student education (ESE) services do not require specialized transportation services, some students with severe disabilities may need to be transported in specialized buses that pick them up at their homes. Many of these buses are equipped with wheelchair lifts and medical equipment, and/or are staffed by aides to assist with loading or supervising their trips. These additional services and equipment can substantially increase district transportation costs. The state supplemental cost to provide specialized transportation averages $1,024 per student compared to the statewide average base allocation of $354 for regular school bus transportation; costs in excess of this state allocation are paid by local school districts. Districts can take steps to manage and recoup these costs by limiting specialized transportation to those students needing it and seeking Medicaid reimbursement for the transportation of eligible students.

Limiting specialized transportation to those students needing such services. Some school districts, including Hillsborough, have adopted policies to mainstream ESE students and transport them on regular buses whenever possible. These policies help ensure that expensive ESE transportation services are provided only to those students needing specialized services. These policies also help districts meet federal regulations that require ESE students be placed in the least restrictive environment consistent with their exceptionality.

Maximizing Medicaid reimbursements for eligible transportation services. To help pay for the added costs of specialized transportation, the federal government allows school districts to receive Medicaid reimbursement for eligible transportation services, such as trips to physical therapists. To receive Medicaid reimbursement, a district must file for a Medicaid provider number, devise economical methods of collecting necessary data, and submit forms to Medicaid. The Florida Department of Education and the Florida Agency for Health Care Administration have assisted several districts, including Bradford, in setting up their Medicaid reimbursement programs. The Miami-Dade County School District recovered $281,000 from Medicaid during calendar year 2001 for transporting eligible students, while the Marion County School District received $52,000. Recovering federal Medicaid funds free district general fund dollars for other local school needs.

Improving vehicle acquisition, use, and disposal

School districts spend significant resources each year to buy new school buses and other vehicles such as maintenance trucks. For example, school districts spent $85 million to purchase school buses in Fiscal Year 2001-02 with typical school buses costing districts $60,000 each. Districts can minimize these costs by carefully managing their purchasing, use, and disposal of vehicles. For instance, school districts can take several steps to reduce vehicle costs, including purchasing the most efficient vehicles, adopting policies that reduce the need for vehicles, and using innovative vehicle disposal methods.

Purchasing efficient vehicles. Districts can reduce the number of buses that they need by purchasing the largest capacity buses that they can fill on cost-efficient routes, as it is more economical to operate a few larger buses than a larger number of smaller ones. For example, the Volusia County School District uses larger "type D" (transit-style) buses that seat up to 87 students rather than the more common "type C" buses that seat a maximum of 71 students. This district on average transports 99 students per bus daily on its assigned routes, compared to the state average of 70 students per bus.

Maximizing returns from surplus vehicles. Districts also can maximize the money they receive from selling surplus vehicles using innovative disposal methods. For example, districts that sell vehicles via sealed bids or local auctions often receive low proceeds due to limited competition. Districts such as Wakulla that participate in regional auctions reach a larger pool of buyers and often receive higher prices for their surplus buses.

Adopting policies to reduce the need for vehicles. Districts can adopt policies that reduce the need for additional buses. For instance, the Polk County School District has a policy that prohibits field trips from being held when

regular bus routes are operated. This reduces the number of buses and drivers needed to provide student transportation in the district.

School districts also can establish policies that limit use of vehicles such as cars and vans that are used primarily to transport district staff. Districts often provide vehicles for administrators that are mostly used for commuting to and from work and, thus, are essentially perks. Districts can save funds by establishing local policies that mirror state policies on employee use of vehicles. For example, s. 287.17, *Florida Statutes,* authorizes agency heads to assign state-owned vehicles only to employees who are projected to drive the vehicle a minimum of 10,000 miles annually for official business with incidental commuting mileage excluded from calculating official mileage. Florida law also permits the use of state vehicles for commuting purposes only if authorized by the Department of Management Services as a perquisite, if required by the employee after normal working hours to perform assigned duties, or if the employee's home is the official base of operation.

The Florida Department of Management Services has calculated the annual break-even mileage at which it becomes cost-effective for the state to provide assigned vehicles to employees who drive their personal vehicles extensively for state business to be 12,500 miles for a compact car. School districts can use this same break-even mileage to determine when it is more cost-efficient to reimburse employees for use of their personal cars rather than purchasing additional vehicles.

Better managing vehicle maintenance

Districts can minimize vehicle operating costs by ensuring that vehicles receive preventative maintenance services, using innovative practices to reduce costs, and controlling their parts inventories. Poor vehicle maintenance can lead to costly repairs, poor gas mileage, and the need to replace vehicles more often. Because districts often operate hundreds of buses and other vehicles, these additional expenses can be significant.

Tracking district vehicle maintenance. Districts can ensure that timely servicing is performed by tracking vehicle maintenance for all vehicles. For example, districts should collect and monitor data on oil changes, routine servicing, and all repairs and warranty work to help them make informed decisions on whether it is cost-effective to make expensive repairs on older vehicles. Several Florida school districts, such as St. Lucie, Hillsborough, Bradford, Hernando, and Gadsden, use computerized maintenance management information systems to collect and analyze vehicle maintenance data. These systems help transportation managers schedule work, identify problem areas such as premature failure of parts, and make decisions when to surplus vehicles while reducing costly breakdowns.

Using innovative oil program. Extending the mileage between oil changes while ensuring that vehicles are properly lubricated can reduce labor costs and the amount of oil that needs to be purchased, stored and disposed. This can be done by adhering to engine manufacturers' recommended intervals and by conducting engine oil analyses, as needed. For example, changing oil every 15,000 miles on buses operating under normal conditions (not experiencing extreme conditions such as excessive road dust and high engine operating temperatures) per the engine manufacturer's recommendation rather than more frequently (some districts change oil every 5,000-8,000 miles) can reduce oil expenses without damaging engines. In addition, the St. Lucie County School District uses a type of oil that requires changing only when an engine analysis indicates the need to without endangering the engine. The district estimates the superior lubricating qualities of the oil used will save it $15,000 annually in fuel efficiency costs.

Controlling vehicle parts inventories. Some school districts such as Polk have reduced storage costs by requiring vendors to stock more parts in their inventory thus allowing the districts to maintain a lower inventory in the parts room. Reducing the number of parts maintained in the district's parts room allows the district to improve its efficiency through reductions in space needed to store in-house parts and not having to expend district funds for replacement parts that are not commonly used.

For example, the use of just-in-time purchasing techniques helped the Polk County School District reduce the value of its parts room inventory by 12%.

Compounding vehicles. Parking district vehicles in secure compounds at night and on weekends rather than letting district staff take the vehicles home can substantially reduce vehicle mileage and associated costs. Some districts, but not all, compound all their vehicles at the end of the work day. Some districts lack fenced compounds to park the vehicles in, allowing staff to take vehicles home. In some cases, allowing staff to take the vehicles home will save the district funds. For example, when bus drivers live close to the beginning of their bus routes, taking the bus home will save the district money by reducing the distances the bus has to travel to begin the bus route. However, if the bus driver lives a considerable distance from the beginning of the bus route, allowing the driver to take the vehicle home can increase costs to the district compared to compounding the vehicle at night. Compounding vehicles also has the benefit of reducing the district's financial exposure associated with accidents caused by employees driving district vehicles to and from work.

Improving fueling practices

Fueling practices can greatly influence the prices that districts pay for gasoline and diesel fuel. As most school buses average about eight miles per gallon of diesel fuel, districts use large quantities of fuel (both diesel and gasoline) to power their buses and other vehicles. To reduce fuel costs, most Florida school districts operate fueling stations to obtain fuel in bulk through contracts with suppliers. However, school districts can take additional steps to improve their fueling practices, including cooperatively bidding out fuel purchases, buying appropriate grade fuel, and monitoring fueling operations.

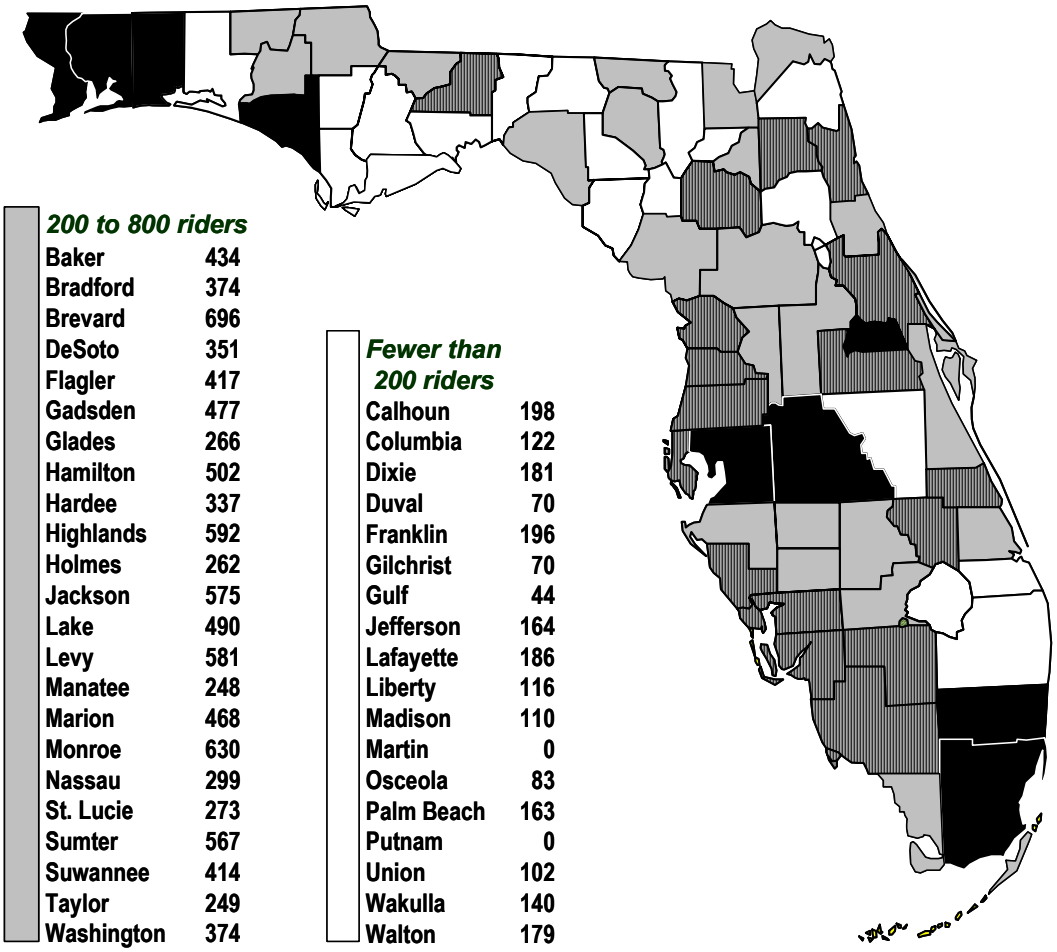
Cooperatively bid out fuel purchases. Districts often can reduce fuel costs due to economies of scale by pooling their purchases with other school districts or local governments. For example, the St. Lucie, Indian River, and Okeechobee school districts pool their fuel bids. Similarly, the Monroe County School District buys fuel using the Monroe County fuel contract. School districts also can use the economies of scale within the Florida Department of Management Services' fuel contract to reduce their costs. This contract allows school districts and other government agencies to obtain fuel from suppliers without having to go through a competitive bid process.

Purchasing gasoline with appropriate octane levels. Gasoline-powered on-road vehicles such as vans, pick-up trucks, and sedans generally are designed to operate using regular (87 octane) gasoline. However, in some cases districts use higher octane gasoline such as premium (92 octane) gasoline, which increases fuel costs without improving performance. The Monroe County School District recently changed its purchasing practices to buy regular gasoline instead of premium gasoline for its gasoline-powered vehicles, which it estimates will save $6,000 annually.

Monitoring fuel tank levels and disbursements. Most districts are large enough to be able to justify the cost of using automated fueling systems that are designed to prevent unauthorized fuel disbursements and log the amount of fuel used by individual vehicles. Transportation management can review fuel system reports to ensure that fuel is properly dispensed and to identify vehicles with excessive fuel consumption, which could indicate the need for repair or unauthorized fuel use. For example, the Miami-Dade County School District operates an automated fueling system that automatically transmits mileage, amount of fuel dispensed, computerized engine diagnostic codes, and other pertinent information to the computer when the vehicle comes in to be fueled. The district believes that the system will enable it to save over $634,000 annually in salaries and benefits.

Appendix A

Number of Courtesy Riders by School District October 2001 Through February 2002



Over 2,000 riders

Bay	2,987
Broward	2,397
Escambia	2,530
Hillsborough	5,052
Miami-Dade	2,648
Okaloosa	2,927
Polk	2,192
Santa Rosa	2,625
Seminole	2,255

800 to 2,000 riders

Alachua	1,564
Charlotte	840
Citrus	914
Clay	1,366
Collier	841
Hernando	1,131
Indian River	824
Hendry	926
Lee	1,330
Leon	1,120
Okeechobee	897
Orange	1,230
Pasco	1,993
Pinellas	1,643
Sarasota	948
St. Johns	1,003
Volusia	1,034

200 to 800 riders

Baker	434
Bradford	374
Brevard	696
DeSoto	351
Flagler	417
Gadsden	477
Glades	266
Hamilton	502
Hardee	337
Highlands	592
Holmes	262
Jackson	575
Lake	490
Levy	581
Manatee	248
Marion	468
Monroe	630
Nassau	299
St. Lucie	273
Sumter	567
Suwannee	414
Taylor	249
Washington	374

Fewer than 200 riders

Calhoun	198
Columbia	122
Dixie	181
Duval	70
Franklin	196
Gilchrist	70
Gulf	44
Jefferson	164
Lafayette	186
Liberty	116
Madison	110
Martin	0
Osceola	83
Palm Beach	163
Putnam	0
Union	102
Wakulla	140
Walton	179

Source: Florida Department of Education's *The Quality Links: Florida School District Profiles* published July 2003.

The Florida Legislature

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