

NCDPI Transportation Bulletin—TIMS in Times of Budget Cuts

Derek Graham, Section Chief
Transportation Services



Public Schools of North Carolina
State Board of Education | Department of Public Instruction

June 2009

North Carolina is experiencing an unprecedented state budget shortfall. At this writing, the General Assembly is seriously considering a cut to transportation operations (PRC 56) and basing any appropriation on an average fuel price of \$2.058 per gallon. Further, the state will likely be in no position to help out if fuel prices rise above that price.

How will you reduce your transportation budget?

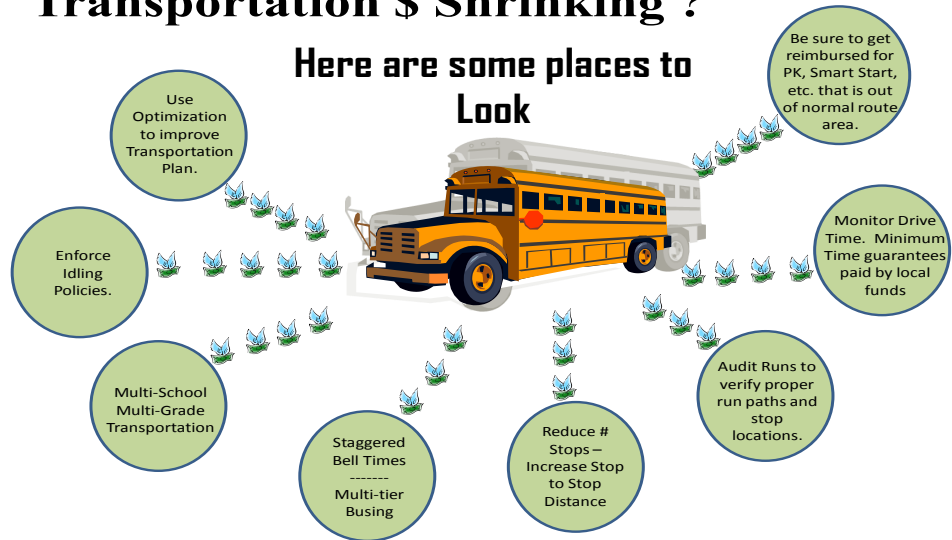
Since more than half of a transportation budget is impacted by routing, districts need to develop and implement a plan—NOW—to reduce operational costs while maintaining student safety.

Using TIMS to help create your plan

Just USING TIMS alone doesn't make things cost efficient or reduce transportation expenses. TIMS is a powerful tool that, when utilized correctly, can help save money. By analyzing transportation data in TIMS, each LEA can reduce the miles travelled and the amount of fuel consumed on a daily basis. In these tough economic times, sufficient oversight of state monetary support is more important than ever.

Transportation \$ Shrinking ?

Here are some places to Look



For more information visit: www.ncbussafety.org/documents/RoutingGuidance2009.doc

District Decisions That Impact Pupil Transportation Budgets: A Transportation Self-Assessment

The self-assessment below highlights key academic decisions that can impact transportation costs within your LEA.

Assignment of Transportation Responsibilities

– Do you consider the effects of policy choices on the cost, safety and efficiency of your transportation services?

- Are your stop placement procedures consistent with state policies regarding minimum distance between stops?
- Are bus stops reviewed so the total number of stops are limited and are they strategically placed?
- Are routing decisions being made by your LEAs transportation department or by school staff, for whom transportation costs may not be a priority?

- Staggered Bell Times allow a single bus to provide services previously handled by multiple buses. Are your Bell Times staggered?
- Reviewing and auditing bus routes – who does it? How often? Who is responsible?
- Do your transportation personnel physically audit bus routes to ensure accuracy and compliance with routes established in TIMS?
- Do parent complaints dictate the transportation plan? Does the local board overrule transportation policies? How much does this cost?
- Incremental changes will

- render the most efficient transportation plans inefficient. Routing plans should be frequently reviewed to ensure changes being made do not decrease the efficiency of your transportation system
- Do schools, transportation staff and bus drivers communicate effectively?
- Are transportation staff involved in IEP meetings related to transportation choice?
- Locations of special programs, magnet programs and new schools can have significant effects on transportation. Are the right people included in these decisions?



District Decisions Make a Difference to Pupil Transportation

"The power of TIMS is not truly harnessed until the transportation department is directed to use the system to improve efficiency and student service levels." - Ben Matthews, Director, NCDPI School Support

TIMS Service Indicators

TIMS data are used to compile a state-wide report on service levels and operations in each district.

The 2008-2009 Service Indicators Report is available at www.ncbussafety.org. The report provides district administrators with a wealth of information that can be used in analyzing your district's transportation system.

- * Student ride times
- * Student distances to stops
- * Earliest AM pickup times
- * Operations data to evaluate optimization potential

TIMS as a Resource For Your LEA

Power of TIMS

TIMS has modules designed to develop and/or improve routes - TIMS offers the ability to semi-automatically build efficient bus trips using various strategies such as run sequencing and optimization.

Using these strategies can help you to reduce mileage as well as reduce student ride time.

TIMS also can be used to reduce fleet size by developing new or improving bell schedules. Safety-enhancing reports for drivers that

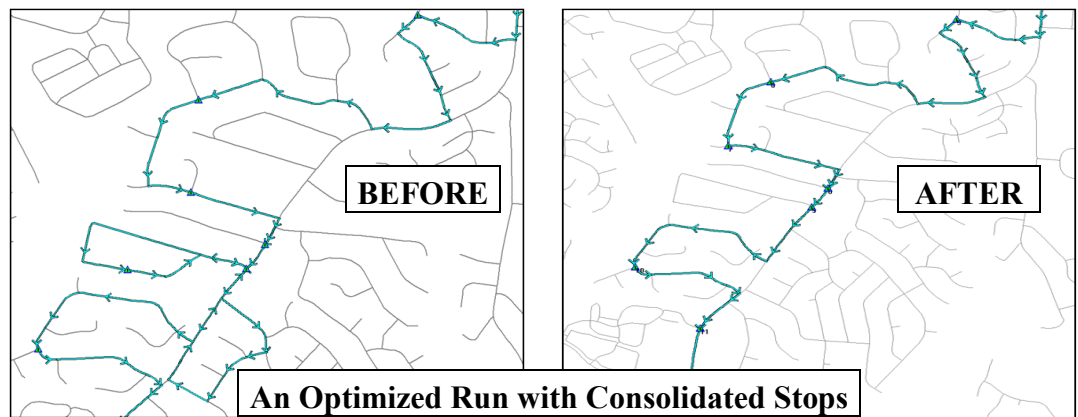
1. Do a visual review of routes using TIMS mapping features.
2. Assign schools or areas to one of two categories: Requires minor cleanup or needs major revision. Examples of problems are incorrect stop order and stops assigned to the wrong

bus.

3. Make manual modifications to areas where there are only a few problems that can be easily addressed.
4. Use run optimization in areas with larger issues to revamp

routes more completely (see example in maps below).

5. Ensure this moves from paper and planning to practice.
6. Institute policies and procedures that will ensure periodic and frequent review to maintain efficient routing structure.



TIMS has the ability to give you a "big picture" of your bus routes. It also has an optimization component that can help to quickly improve routes. Above are before and after pictures of a run serving the same set of students. After stop consolidation and optimization, the mileage and fuel use would be reduced in this scenario. In this real world example, nearly two miles are saved.

TIMS support

Services are provided via contract with ITRE at NC State and The UNC Charlotte Urban Institute. The staff at ITRE and UNC Charlotte have many years experience in working with LEAs to accomplish these goals.

Eastern North Carolina
919.515.9999

Western North Carolina
704.687.2763



ITRE
Institute for Transportation
Research & Education



TIMS is a systems initiative of the North Carolina Department of Public Instruction. It is required to be used by all local education agencies (LEAs) [General Statute 115C-240(d)]. Funding for pupil transportation is based partially on data obtained from TIMS.