

**Ideas for:  
Subcommittee for Transportation Operations  
Tweak Committee  
School Transportation Task Force**

**Reducing the load count through improved service**

The deterioration of service on FCPS busses has driven away many potential riders. This is a poor means of increasing “efficiency”. However, there are several ways that students and parents can be encouraged to use alternative transportation that represent an *improvement* of service.

- 1) **Increase availability of School Age Child Care in the elementary schools.** Expanding the availability of this important service so that it is available to every family would reduce bus loads through an improvement in service. Today, many students travel on FCPS busses between school and before- and after- school care locations when they would prefer to participate in the school-based SACC program. A commitment by the school board to expand this program to fully meet demand would reduce the load on the bus system. If necessary, return SACC to school administration to allow more effective use of FCPS facilities.
- 2) **Expand middle school after-school programs to five days and ensure availability to all students.** This expansion of service would similarly reduce the burden on busses while providing expanded options to families.
- 3) **Expand late bus schedules to 5 days for high school and middle school.** This would allow programs to be spread out over 5 days and more consistently reduce afternoon bus loads (**which are paradoxically heavier than the corresponding morning loads, due to flight from poor service in the morning**). This shifts riders from the busiest tiers to those with the most slack.
- 4) **Improved facilities and policies for kiss and ride** is a low-cost means of reducing bus loads through improved services.
- 5) **Work actively with PTA’s and VDOT to improve pedestrian routes**, including sidewalks and crossing signals. Consider more crossing guards and, in exceptional cases, police control of major intersections near schools before and after school.

**Increasing the load count through improved service**

As stated above, the deterioration of service on FCPS busses has driven away many potential riders. It should be recognized both that improving service will have the effect of attracting more users and that this would be a positive development. As also stated above, discouraging bus ridership through poor service is a terrible means of achieving “efficiencies.” Efficiencies should be measured as a function of student bus trips, not total students.

**More “gifted and talented” programs**

Given the size of FCPS middle schools, each should be able to support its own “gifted and talented” (GT) program. We do not see substantial additional resources required for these programs, only a reallocation of resources following the student. Enough teachers generally show a preference for teaching GT to staff these programs with motivated faculty, and the curriculum is well-established county-wide.

GT should be expanded into additional elementary schools, with special consideration given specifically to minimizing transportation requirements.

If an elementary school family chooses to place their pupil at different GT center when an in-school GT program is available, the family should provide transportation. This would permit program choice by families without unduly burdening the bus system.

Above all, more GT programs mean fewer kids going out of boundary, with resulting shorter bus rides. Students would benefit from shorter and fewer bus rides; middle school students, in particular, would benefit from later morning pick-ups and more sleep. Any perceived diminution of service should be more than made up for with the reduction in student time in transit.

### **End “grandfathering” of bus routes**

The “grandfathering” of bus routes, by which routes are duplicated to serve students whose homes are moved from one school attendance boundary to another, is unduly burdening the transportation system. Families who want their student to continue attending a school that was formerly, but no longer, within their attendance boundary should be allowed the same flexibility as now allowed to remain at their original school. However, transportation should become the responsibility of the family. This would permit program choice by families without unduly burdening the bus system.

### **Consider limits on transportation to alternative schools**

In many cases, student assignments to alternative schools are a family choice or the result of disciplinary action analogous to expulsion. In such cases, FCPS should consider whether it is appropriate to provide bus transportation at all or to charge for such transportation.

### **Fully consider transportation impacts in all program decisions**

The geographic distribution of school programs and facilities has an enormous impact on the costs and effectiveness of the bus system. All facility and program siting decisions should be made with a full consideration of the transportation impacts.

***Consider clustering.*** The programmatic decision to spread around special programs has had a terrible and expensive impact on the transportation system. School administration should instead consider clustering special (especially mandated) programs to make the shuttle busses more efficient.

***Pair high schools with middle schools.*** Bus routes are more efficient where the high school and middle school routes can be merged, as at adjacent campuses of Woodson and Frost, or at Lake Braddock Secondary School. All future high school and middle school construction should be planned with this in mind.

***Special programs cited with traffic in mind.*** County-wide programs should be located to minimize traffic. Programs are more accessible if they are located so that most traffic flows against the

### **Replace Monday half days with additional teacher work days**

The current scheme of having short instruction days at elementary schools on Mondays is a waste of time and transportation resources. Replacing the Monday half-days with additional (perhaps monthly) teacher work days would provide for a more consistent schedule. Assigning different teacher work days to different schools would also provide some slack in the bus schedule.

Monday half-days also reduce supplemental part-time employment options for bus drivers.

Eliminating them should allow hiring more drivers with mid-day jobs, combining driving jobs with other school jobs staff. This could include splitting driving jobs between an ES teacher's aide (who drives in the morning) and a HS custodian (who drives in the afternoon). A more continuous workday would make the jobs more appealing.

The SACC program should be expanded to provide supervision on these expanded teacher workdays.

### **Make use of public transportation.**

The existence of significant and growing public transportation options in Fairfax County argues in favor of allowing families to choose a public transportation alternative to the school bus system. Student-only bus and Metro passes should be provided on request to high school and middle school students whose route from home to school is served by public transportation. If this proves successful, FCPS should work with local transportation authorities on scheduling that better fits student needs. Ultimately, public transportation might replace some long routes for certain categories of high school students.

### **Consider any options for increased bus capacity**

Many routes currently are overcrowded. Any opportunity to provide more slack in the system by increasing the capacity of individual busses should be explored.

### **Improve fleet performance.**

Only 75% of the current bus fleet is on the road each day. This seems a high rate of redundancy, and should be compared with other school bus systems that place comparable demands on their busses. If it is high, then a review of best practices should be undertaken to reduce it.

### **Decentralize fleet management; centralize fleet dispatch**

A dispersed fleet operations system would allow more busses to be kept overnight closer to their starting points. Routine maintenance could be handled at satellite locations, with major work done at a central garage.

Centralizing dispatch functions, though, would allow better communication among Areas, and more flexible use of resources across Areas, while still allowing each Area to be measured for its performance.

### **Set appropriate performance standards**

Performance standards for FCPS transportation department should reward them for successful provision of service. For example:

- Fleet maintenance should be rewarded for maintaining the highest possible percentage of the fleet ready for service at any given time.
- Planning and dispatch should be rewarded for delivering students in the designated windows with minimal ride times.
- The system should be rewarded for efficiency in providing service, based on audited load counts, not potential ridership.

As much as possible, transportation department objectives should be benchmarked against the performance of comparable systems around the country.

### **Fully Optimize, Evaluate, Repeat**

Perhaps the most important long-term recommendation is to develop the analytical capacity to achieve a full optimization of the transportation system. Given the size and cost of the FCPS bus system, effective planning resources should easily pay for themselves.

A well-designed optimization program would demonstrate the high costs of exceptional routes, and help evaluate the transportation impacts of programming decisions which are now made without this information. It would also help define the transportation cost of each incremental demand made on the system.

As a start, FCPS transportation department should make the fullest use of the Mapnet NT program in the annual scheduling process. A transportation engineer with expertise in systems operations should be hired, if not already on staff, to effectively optimize the year-to-year adjustments that are necessary.

In addition, the School Board should contract with a firm such as MPS on a periodic basis to fully re-evaluate, revise, and implement the bus and bell schedule.

*Parameters for operations of the bus system* must be established to give the transportation department clear direction. Given the recognition that the system is currently strained beyond the capacity to provide adequate service, this should include allowance to request additional resources.

*The transportation department should adhere to specific requirements:*

- Do not drop off students before the building is open.
- Do not drop off ES students more than 15 minutes before start time.
- Do not drop off MS/HS students more than 25 minutes before start time.
- No ES students out beyond civil twilight.

*Optimization should incorporate some value for student's time.* Even a minimal value of 50¢ or \$1.00 per hour will generate a schedule that is much more reasonable. Recognizing the value of student sleep time could be done by mandating 8:00 a.m. as the earliest possible high school start time.

*Ideally, approach the problem as an economic optimization,* which allows a balancing of multiple objectives. This may require new thinking, and something beyond off-the-shelf consulting.

- **Objective:** Minimize time from pick-up to school start time
- **Objective:** Minimize cost of running system
- The two objectives can be combined by setting a dollar value on students' time.
- The means of achieving the objectives are defined by the transportation options and their costs, including walking, bussing, public transportation, cabs.
- The objectives of this optimization are constrained by need to meet minimum standards, such as those outlined above. **For example:**
  - No ES students outside beyond civil twilight.
  - Provide transportation for all students meeting specific criteria.
  - All HS start times between 7:45 and 8:20
  - Etc...

### **Re-engineering the bell schedule: Two-and-a-half tiers**

This variation on both of the flip committee's options would compress the bus schedule.

½. Start time of 7:30-7:40, at elementary schools where all routes are short and can be run between 7:10 and 7:35.

1. High schools and middle schools at 8-8:15 a.m., on same routes wherever possible.

2. Most elementary schools at 8:45-9:15 a.m.

2½. Other elementary schools opening throughout 7:45 to 9:15, if more busses are needed than can serve HS and MS in one tier.

**Explanation:** Under the current bell schedule, high schools start first. Since there is wide variation in route lengths, there is also a wide variation in bus start times, and in some cases, a single bus runs two routes to deliver students with the same start time. One way to even out use of these busses is to run shorter routes to elementary schools without any long runs and an early start time.

This reduces the variability in bus start time, sets the high school start times back.

If necessary, elementary school day may be extended by 20 additional minutes of recess to make morning and afternoon bus schedules more compatible.

**Task Force should decide if an 8:00 a.m. start time is an objective.**

We are spinning our wheels if we don't establish this.