



Management Partnership Services, Inc.

March 7, 2006

Mr. Dean Tistadt, Assistant Superintendent
Facilities & Transportation Services
Fairfax County Public Schools
10640 Page Avenue
Fairfax, VA 22030

Dear Mr. Tistadt:

This letter is provided in response to the proposed scope of work outline we received from you on February 24th, which in turn was sent in response to the *Phase 2* proposal we submitted on December 26th. We have considered the impact of the proposed changes to the scope of work and offer the following observations for your consideration. First, it is important to draw a distinction between the type of modeling that was proposed for Phase 2 with that required to accomplish some of the objectives contained in your outline. Whereas logistical models utilizing actual route data were developed in Phase 1 and proposed for Phase 2, some of the elements provided in your outline would require a different approach in order to arrive at a realistic work plan.

The outline establishes a three-step process whereby certain base elements of the transportation system are evaluated before bell time changes are considered in the second step. One specific bell time scenario is defined for step two. Step three would consider other potential scenarios that could achieve the objective of finding the most cost effective and efficient method of achieving later start times. A brief discussion of how we might approach each element is described in brief form below. A more thorough and complete work plan would be developed should the Division decide to proceed with all or a portion of this scope.

Step 1

The elements in this step pertain to certain modifications to the base transportation system that would reduce resource requirements regardless of the school bell time changes being contemplated. Each of the elements defined in the outline would require a different analytical approach. The first three bullet points relate to the elimination or reduction in transportation to certain non-traditional and cross-boundary programs such as high school academies and out of boundary GT programs. This analysis can be readily conducted for the entire system, with the output measured in terms of the precise number of runs that could be eliminated plus an estimate of the number of buses that could be reduced as a result.

The next three elements listed under Step 1 address the consolidation of bus stops, increasing walking distance parameters, and optimizing the school attendance boundaries. Each of these considers a fundamental building block of the transportation program which makes them extremely time consuming and complex to analyze effectively. Because they are fundamental to the structure of each individual bus run as well as the construct of the entire system it would be necessary, in essence, to reconstruct the

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entire system in order to arrive at a similarly detailed conclusion regarding their impact. However, a different approach is possible for each individual element that can provide a reasonable surrogate:

Consolidating bus stops – This analysis can be performed utilizing a mathematical programming approach. Criteria would be established under which “excess” stops would be identified and their impact on reducing run times estimated. Time savings in turn would yield an estimate of potential run and bus reductions.

Increasing walking distances – This analysis would be conducted using GIS mapping technology wherein school and student locations would be plotted. Walk zones around each school would also be plotted, noting key restrictions and constraints such as major roadway crossings. By varying the extent of these walk zones for each individual school, we would develop a comparison of the population of students eligible for transportation under each scenario. These would, in turn, lead to estimates regarding the reduction in buses required to transport these students to each school.

Optimizing school attendance areas – This analysis would be conducted in a similar manner to the walking distance analysis. In this case we would establish criteria that identify those attendance boundaries where opportunities exist to improve transportation efficiency through “fixing” elements such as non-contiguous boundaries. Using GIS mapping technology, we would then redefine these boundaries (or a representative sample of boundaries) in simulation. Time savings and bus reductions would be estimated based on the relative routing efficiencies realized.

It should be reiterated that the approach described above for each of these three elements would not yield a specific result sufficient to support the actual implementation of the changes derived from the analysis. To accomplish this level of accuracy would require that the entire system of bus routes be redesigned in accordance with the proposed changes to these policy-driven factors. Rather, our proposed approach would model the changes using a variety of approaches and provide a reasonable impact analysis based on clearly defined criteria and realistic assumptions. The results would be used to support School Board decision making; operational implementation of the results would require a significant subsequent implementation of the revised route structure for FCPS.

Step 2

This step in your outline redefines the assumptions and constraints for the logistical modeling of school bell time changes from our Phase 2 proposal. Using the results of the analyses in Step 1 as a baseline, and the conditions and constraints identified in the outline, we would follow the analytical approach identified in our Phase 2 proposal to develop a logistical model demonstrating the impact the specified changes would have on resource requirements. The baseline premise would be that the resource reductions identified in Step 1 could be used to offset, in part or in total, any new resource requirements identified in this portion of the analysis.

Step 3

This step requires that we identify recommendations for other for other reasonable scenarios for later high school start times, possibly similar to those developed by the SLEEP and by Board members, by which

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the School Board might achieve the objective of finding the most cost effective and efficient method of achieving the goal of later start times. We interpret this to mean the evaluation of additional scenarios with constraints and assumptions different from those identified in Step 2. Given that we had proposed a total of three scenarios to be evaluated as part of Phase 2 (identified as Option 1, 2, and 3 in the proposal), we will continue to use this as a planning parameter. However, this may change as the scope of work is further refined. The price range quoted below assumes that a total of three scenarios (as defined in Step two plus two additional to be defined by MPS) will be evaluated.

In summary, we feel it necessary to reiterate that the results of our Phase 1 study indicated that changing the bell times for the high schools to a later slot will involve a substantial increase in transportation expenditures. Keeping that in mind, it is important to realize that the changes to stops, boundaries and walking distances described in the outline you provided will involve a major review – significantly larger than the one we just completed – and the impact of these changes may not have a positive impact on reducing the cost of the proposed bell time changes. That being said, we believe that the analysis can be conducted in accordance with the approach outlined above. Prior to the development of a detailed work plan and approach, it is impossible for us to offer a precise estimate of cost. **However, for planning purposes, we estimate that this work plan would require a minimum budget of \$150,000 and would require six to eight months to complete.** We offer this estimate as a tool to assist the School Board in weighing the costs and benefits of proceeding with the study. A further refinement and drafting of a detailed work plan would be required as the next step should the School Board decide to proceed. We would refine and document our detailed approach, and establish a firm fixed price and project schedule at that time.

Thank you again for your continued confidence in MPS. Please do not hesitate to contact me with any questions you may have. We look forward to the possibility of continuing our work with the Fairfax County Public Schools.

Sincerely,



Thomas W. Platt