

TRANSPORTATION MANAGEMENT PLAN

Introduction

The following document describes the transportation management strategies to be employed by the Bullis School in implementation of its proposal to increase its enrollment cap from 604 to 900 students. Bullis recognizes that the opportunity to increase enrollment beyond the current 604 students will bring with it an increased responsibility to actively manage traffic generated by its operations to minimize the impact of an increased student body and, potentially, traffic growth in the area's transportation network.

Background

The Bullis School campus, which comprises 78 acres, has three points of access – two entrances (one of which serves as the main entrance) located on Falls Road and one entrance on Democracy Boulevard. Bullis currently employs 98 full or part-time faculty and 55 staff persons (not counting part-time coaches) for a total of 153 employees. The School day runs from 8:00 AM to 3:30 PM, with operations and/or extracurricular activities extending from 3:30 PM to as late as 11:30 PM.

As Bullis grows from 604 to 900 students, a Transportation Management Plan will be essential to achieve the following primary objectives:

1. Managing the flow of traffic at the School's points of access so that vehicular movements to and from the grounds are made in a safe and efficient manner without impeding the flow of through traffic on either Falls Road or Democracy Boulevard;
2. Ensuring that queuing and circulation of vehicles on campus is conducted in an organized and efficient manner that supports the School's operations;
3. Reducing the volume of traffic, whenever possible, to and from the Bullis campus so as to support objectives 1 and 2 above and to minimize traffic on surrounding streets and roads; and
4. Maintain or improve the current 1.65 students/vehicle ratio (measured in the Local Area Transportation Review included in this application).

Summary of Management Plan

The Transportation Management Plan to support the Bullis School's growth to 900 students has three major components:

- (1) the minimization of vehicular traffic;
- (2) the management of vehicular traffic; and
- (3) the dispersal of traffic away from the peak hours of usage of Falls Road and Democracy Boulevard.

The program to minimize vehicular traffic, both in terms of total volume and during certain periods of the day, will include efforts to encourage carpooling, the use of public and private bus service, and the restriction of vehicles that can be driven to the campus. The management of vehicular traffic will include programs to optimize the circulation and parking of vehicles; the use of traffic control measures; the supervision of campus traffic by both staff members and security officers; and the education of persons commuting to and on the Bullis campus. Finally, the program to disperse traffic away

from peak hours of usage as much as possible will include protocols that facilitate the scheduling of non-classroom instruction events or activities, including parent-teacher meetings, committee or board meetings, and alumni activities, on days and times outside of the School's peak hours of traffic flow. Each of these programs will be implemented before the end of the first fiscal year in which Bullis' average enrollment grows beyond the current cap of 604 students.

Personnel

The Transportation Management Plan will be implemented by a staff person who will be designated to act as Transportation Coordinator. This person will act as a liaison with other persons and other divisions in the School to facilitate the programs described in this Plan. Examples of the persons and department with which the Coordinator will interact include (a) Building and Grounds staff; (b) Admissions office staff; (c) Bullis events scheduler; (d) parent groups; (e) bus operators; and (f) School Registrar. The performance of the Transportation Coordinator will be evaluated annually with primary emphasis on his or her success in increasing the number of Bullis students riding in carpools or buses.

Program

I. MINIMIZATION OF VEHICULAR TRAFFIC

A. Carpooling

1. The Transportation Coordinator will direct efforts to encourage, coordinate and maintain carpools.
2. The Transportation Coordinator will be authorized to undertake the following steps to encourage and support carpooling at Bullis School.
 - a. Before the commencement of each academic year, Bullis will mail to parents of students a postcard-sized response form requesting information on a student's travel patterns and the student's interest in opportunities to travel to school by public transportation, private bus transportation, or multiple occupancy vehicles (carpools).
 - b. The information garnered from this mailing will then be collated by the Transportation Coordinator and will be sorted into geographical areas.
 - c. The Transportation Coordinator will use this information to create an area map for parent/student review showing the location of families involved in existing carpools or families interested in forming carpools.
 - d. In addition, as part of the parent orientation programs conducted at the School each year, the Transportation Coordinator will make presentations to the parents regarding the transportation management plan, and,

specifically, the benefits of carpooling. The Transportation Coordinator will stress the convenience factor and the traffic reduction impacts as benefits to carpooling.

- e. The Transportation Coordinator will also establish and maintain a carpool registry at the School so that carpool formation can be fostered during the entire school year, or, alternatively, so that short term carpooling arrangements can be made.
- f. Parents of students will be encouraged in literature and publications mailed by the School to organize carpools from the information provided by the carpool coordinator, or to consult the coordinator for further assistance.
- g. In addition to the above, the School will include information about carpool opportunities in:
 - (1) correspondence periodically mailed by the School to parents;
 - (2) the school's web site;
 - (3) the student handbook;
- h. Finally, the Transportation Coordinator will develop and the School will adopt incentives for families that carpool. These incentives will include the following:
 - (1) parking privileges for special events that may otherwise require off-site parking will be provided on-site for families that actively carpool;
 - (2) priority seating and/or additional seats to graduation and potentially other activities will be provided for families who actively carpool.

B. Bus Transportation

Bullis is dedicated to encouraging travel to School by bus, both public and private service.

1. Public Bus/Metrorail Transportation:

Public bus transportation to and from the campus is presently available on the T2 Ride-On bus with both northbound and southbound bus stops immediately in front of the School. Since the T2 stops also at the Rockville Metro station, students can use a combination of the Metro rail and the T2 bus to reach Bullis from a wide range of neighborhoods, particularly along the Metro Red Line. The following measures will be taken to encourage public bus transportation to and from the campus:

- a. Enhancement of the bus stops in front of the campus by installing a comfortable bench and/or shelter to be used by Bullis' students and employees as well as other public transportation users in the area (e.g., staff at Normandie Farm Restaurant and the nursing home on Tennis Lane);

- b. Collaboration with the State of Maryland in creating a signed crosswalk across Falls Road to the southbound bus;
 - c. Coordination with Montgomery County of sidewalk improvements to facilitate movement from the bus stop to the central campus;
 - d. Advertising the availability of public transportation on its web site and in its handbook; and
 - e. Addition of a Bullis bus pick-up stop at the Grosvenor Metro station each morning and afternoon to allow students using outbound Metrorail to shorten their Metro trip and eliminate the need to take the T2 public bus to reach Bullis.
2. Private bus transportation:
- a. Bullis currently operates an extensive program of private bus transportation connecting the School with various communities in Maryland, Virginia, and D.C. Parents are notified of bus routes and schedules during the summer preceding each school year. Through literature mailed by the School, families are encouraged to participate in this program.
 - b. The School will undertake the following programs to increase ridership in its bus program:
 - (1) Include in all School literature, on its web site, and in periodic mailings to parents, information about bus service to the School.
 - (2) Continually assess how expanded private bus service can be employed as a recruitment tool and using such a program to attract new students from areas not historically well represented within the Bullis student body or well-served by Bullis bus transportation;
 - (3) Plan to increase the number of daily bus routes from the current six to at least eight, in order to serve a broader number of neighborhoods in which Bullis students live;
 - (4) Establish and inform all parents of a regular morning and afternoon Bullis bus stop at Grosvenor Metro station, to further encourage and facilitate use of Metro rail use by students;
 - (5) Offer Bullis families receiving financial aid a discount from Bullis bus fees in order to make Bullis bus transportation affordable for all its families;
 - (6) Each year, assess and modify as appropriate, bus routes to the extent possible to make it convenient for each family requesting bus service to reach the nearest bus pickup point;

- (7) Offer the same preferential parking and other privileges to Bullis families using Bullis buses described above under carpooling; and
- (8) Introduce additional daily bus routes in the late afternoon for students staying late for sports and extracurricular activities (Bullis currently runs one daily activity bus route).

Bullis will work actively to expand its bus service, with the understanding that it retains the right to modify or cancel any bus route in the future that fails, in spite of the School's good faith efforts described above, to attract at least 10 regular riders. The School's goals, in allocating resources available for transportation, will be to maximize the number and percentage of students employing carpools and buses to reach campus.

C. Vehicle limitations:

1. Limit the number of student vehicles on campus by restricting parking privileges (managed via the sale and mandatory use of student parking tags) to seniors and juniors; and
2. Faculty and administration will be encouraged to share travel opportunities to and from school.

II. MANAGEMENT OF TRAFFIC

Since Bullis' on-campus road network is physically adequate to handle current and projected future traffic loads, traffic management will focus on the following human controls:

1. Maintain and enforce a system of one-way traffic flow through the campus intended to minimize queuing and standing.
2. Off-duty Montgomery County policemen, crossing guards, and/or Bullis employees will be stationed at the Democracy Boulevard exit during morning drop-off and afternoon pick-up periods to facilitate the movement of cars leaving campus.
3. Bullis will utilize staff to actively manage each division's drop-off/pick-up queue each morning and afternoon to ensure traffic moves smoothly, efficiently and safely. A faculty or staff member will be stationed on each traffic queue in the afternoon to minimize the length of the queue by actively directing parents to move forward as far as possible and to close any unnecessary gaps between cars.
4. Bullis will station staff at key intersections on campus as needed to ensure that campus traffic flows smoothly and safely, without bottlenecks at the intersections.
5. Bullis will monitor traffic flow at the two Falls Road entrances and will station traffic control personnel at either or both gates if traffic flow at the gates ever creates bottlenecks on Falls Road. Whenever queue lengths threaten to back up onto Falls Road, staff will be

stationed to direct excess traffic to bypass the queue, and wait for students in unused parking spaces in the vicinity of the queue. This technique has been used successfully on the few recent occasions, typically at the beginning of the school year, when queues have reached the front gate.

6. The existing closure of the stadium gate on Falls Road immediately before, during and after stadium games will be continued, per the School's agreement with the County in 1996, as a condition of the County's approval of stadium lighting for Bullis.

III. DISPERSAL OF VEHICULAR TRAFFIC

There is much more activity on the Bullis campus than just classroom teaching. Bullis has numerous committees, groups and advisors whose trips could conflict with the normal pick-up and delivery of students. Accordingly, Bullis has developed the following protocols:

- A. Faculty and staff will be instructed to commute, whenever possible, outside of the hours of morning drop-off or afternoon pick-up.
- B. Parent-teacher meetings, when they must occur early in the morning or late in the afternoon will, when possible, be scheduled to take place outside of the School's peak hours of traffic flow (7:00 AM-8:00AM in the morning and 2:30-4:00PM in the afternoon).
- C. Meetings of committees and boards whose members are not already coming to campus for school reasons will be scheduled whenever possible to occur outside of the School's peak hours of traffic flow.
- D. Bullis events, such as alumni activities, will, when possible, be scheduled in the evening or on weekends.
- E. Bullis' events coordinator will ensure that activities will be scheduled so that they will minimize traffic movements during peak hours whenever possible.

IV. PEDESTRIAN CONSIDERATIONS

Since Bullis has proposed a program of minimizing vehicular traffic to and from the School, the state of the area pedestrian network is of concern to the School. Presently, there are no sidewalks in front of the School in the rights-of-way for either Falls Road or Democracy Boulevard. Since use of public transportation will be encouraged under this TMP, Bullis recognizes that pedestrian movements from bus stops on Falls Road must be made easier and safer. Accordingly, Bullis will work with Montgomery County and the State of Maryland to secure public funding and approval for a sidewalk from the existing northbound public bus drop-off/pick-up point on to the campus gate. Moreover, as stated previously, Bullis will work with the State Highway Administration to secure public funding and approval for a demarcated crosswalk area from the southbound bus stop (on the west side of Falls Road across from the campus) on to the School's property.

Special Event and Auxiliary Use Traffic

In addition to daily school operations and athletic games, Bullis runs a number of special performances and special events each year that generate traffic to varying degrees. Bullis also permits a limited range of auxiliary uses during the school year that generate some traffic. Auxiliary uses are described more fully in a companion application to the Board of Appeals; this document will focus only on the traffic generated by these uses. Each type of event and auxiliary program is listed below, along with information about traffic levels and mitigation measures:

I. SPECIAL EVENTS

Among the many special events on the Bullis campus each year, only two -- the Festival of Lights in December, and graduation in June -- generate enough traffic to potentially cause off-campus traffic impacts. Bullis staff are deployed at both of these events each year to keep traffic moving smoothly on-campus and prevent off-campus impacts. For this year's Festival of Lights, the additional measure of splitting what has been one school-wide event into two separate events (one for the Lower and Middle Schools, and one for the Upper School) was introduced, partly to improve traffic flow on campus.

Other recurring special events (not including scheduled athletic games) on campus include:

	<u>Dates</u>	<u>Appx days/yr</u>	<u>Typ. attendance</u>
Student art performances	Wkday or wkend eves	30	200
Student art exhibitions	Wkday eves	10	100
College counselling open houses	Wkday eves	2	150
Academic award ceremonies	Wkday eves	4	100
Sports tournaments	Wkday/wkend day/eve	12	200
Admissions Open House	Wkend day	1	500

None of these events generates traffic that requires active traffic management in order to prevent off-campus traffic impacts or on-campus bottlenecks. Even at 900 students, these events are projected to be easily managed with the measures described earlier.

As with other once-each-year special events, it is not feasible to reduce event traffic with the traffic minimization measures -- carpooling and bus transportation -- described earlier in this plan. As Bullis grows toward 900 students, traffic generated by high-attendance special events will be managed more intensively, using the measures described earlier, in order to maintain manageable traffic volumes. If any recurring event grows to the point of threatening off-campus bottlenecks and slowdowns despite intensive traffic management measures, Bullis will modify the event itself to reduce traffic volume, using strategies similar to the one used this year in connection with the Festival of Lights.

II. SUMMER PROGRAMS

Bullis conducts a popular series of summer programs with both academic and recreational components. The operational characteristics of these programs are detailed in a Traffic Statement prepared by the School's traffic consultant. Traffic management measures already in place for summer programs, as detailed in the Traffic Statement, include:

1. Staggered starting and ending times for different summer programs, to spread traffic arrivals and departures over time sufficiently to reduce on-campus traffic congestion and prevent off-campus traffic impacts;
2. Placement of drop-off points within the campus to ensure arriving traffic is split between the two Falls Road entrances, further reducing the potential for bottlenecks;
3. Stationing of summer program personnel at each drop-off/pick-up point to facilitate the flow of traffic around those points; and
4. Employment of a Montgomery County crossing guard at the Democracy Blvd exit in the morning and afternoon to facilitate the movement of cars leaving campus.

These measures have proven to be successful for the activities of the program to date. Bullis has no current plans to expand the overall enrollment at summer programs beyond its current level, but would like to reserve the opportunity to do so in the future, limited, of course, to the number of students authorized during the academic year. Experience indicates that the present measures to organize, stack and circulate vehicles on the campus during the summer sessions can easily accommodate a substantially larger enrollment without any adverse impact on intra-campus circulation or off-site congestion. However, if the traffic generated by an increased summer enrollment begins to approach the level that could cause off-campus back-ups or congestion, Bullis will implement one or more of the following traffic management measures to ensure that vehicles will not have to stand on Falls Road in order to enter the campus and that there will be adequate parking and stacking on-site in order to accommodate all vehicles arriving or departing the grounds:

A. Short-term measures

1. Station staff at key intersections on campus as needed to ensure that campus traffic flows smoothly and safely, without bottlenecks at the intersections; and
2. Monitor traffic flow at the two Falls Road entrances and will station traffic control personnel at either or both gates if traffic flow at the gates ever creates bottlenecks on Falls Road. Whenever afternoon queue lengths threaten to back up onto Falls Road, staff will be stationed to direct excess traffic to bypass the queue, and wait for students in unused parking spaces in the vicinity of the queue; and
3. Repositioning pick-up/drop-off points deeper within the campus to reduce the possibility that queues could spill onto public roads.

- B. Longer-term measures (implemented prior to the next summer)
1. Limiting enrollment to the level that experience shows can be adequately managed with the above-described measures.

The multiple measures currently in use and available for future use, combined with the size of the Bullis campus and number of personnel on-hand to help manage traffic, allows Bullis to confidently promise the County that any future growth that may occur in summer programs can and will be managed in a way that does not increase off-site traffic congestion around the entrances and exits from campus. As detailed in the Traffic Statement, the fact that Bullis summer programs traffic occurs outside the peak rush hours for Washington commuting traffic makes it unlikely that any future growth in Bullis summer programs will adversely impact traffic levels at local intersections.

III. AUXILIARY USES

Traffic associated with Bullis summer programs is addressed in the companion application, and will not be discussed in detail here. Bullis does not permit many auxiliary uses beyond summer programs. The recurring auxiliary uses that generate significant traffic include:

- A. Jack Schore Tennis Training Center. Tennis patrons enter and exit campus throughout the day and evening, seven days a week, between 6:00 am and 11:00 pm. Traffic volume associated with JSTTC programs and court rentals probably rarely exceeds 40 cars per hour. No significant growth in JSTTC traffic is foreseen over the next few years.
- B. Potomac Theatre Company. A long-time user of Bullis facilities, PTC stages three performances each year, each of which is typically performed on six weekend afternoons and evenings. Typical attendance rarely exceeds 400. No traffic management measures have been necessary to date to prevent on- or off-campus problems. Growth over the next ten years is difficult to forecast, but will likely be modest.
- C. National Multiple Schlerosis Society (DC chapter). Bullis allows the local MS chapter to use all parking spaces on campus once each year, on a spring Saturday, in connection with the MS walk-a-thon. MS chapter staff provide on-campus traffic management. Approximately 800 participants in 600 vehicles use the Bullis campus for this event. No significant off-campus traffic impacts have been observed. Growth over the next ten years in not possible to predict.

Stacking Plan and Queue Projections

Exhibit 1 shows how the School plans to stack traffic on-campus at 900 students in order to ensure smooth traffic flow on-campus and to prevent traffic spillage onto public roads. The stacking plan, which describes afternoon traffic conditions since queues are longest then, is based on the following baseline data collected on a typical school day (April 19, 2004).

Maximum observed afternoon queue length by division on 4/19/04

<u>Division</u>	<u>Length</u>	<u>Time</u>	<u>Queue location</u>
Lower School:	29 cars	3:35 pm	Cross-campus road between North and South Halls
Middle School:	15 cars	3:40 pm	Ring road between South Hall and front circle
Upper School:	11 cars	2:45 pm	Road running behind Founders' Hall and North Hall

Queue lengths, without any active traffic management, were observed to be 22.8' per vehicle in the Lower School queue, which is the longest line. This can be safely assumed to represent an average per-vehicle length at Bullis, based on the observed similarity between the queue on April 19th and queues observed on numerous other dates in the last few years.

In developing the stacking plan, the following assumptions were applied to the baseline data:

1. The locations of the Middle and Lower School queues will be flipped, so that the Lower School queue is located adjacent to the new Lower School building. The Middle School queue will be moved to the cross-campus road linking North and South Halls.
2. With the traffic management measures described starting on page 9, queue lengths will average 20' per vehicle. Current observed queue lengths, without active management, are approximately 23'.
3. With the traffic minimization measures proposed starting on page 3, we assume that queue lengths at 900 students will be 40% longer than current queues at 604 students. As enrollment grows by 50%, from 604 to 900 students, we project that the benefits obtained from measures to increase carpooling and bus ridership at Bullis will allow queue lengths to grow by 40% -- somewhat less than proportional growth as compared to enrollment.

The stacking plan demonstrates that the current campus road system will be adequate to contain the queues that we can anticipate at an enrollment of 900 students, with reasonable assumptions concerning the results that will be achieved under the Traffic Management Plan. Should any of these assumptions prove incorrect as Bullis grows toward 900 students, the traffic management measures described starting on page 9 will be sufficient to prevent queues from spilling onto public roads. If traffic management on a daily basis becomes burdensome from the standpoint of staffing, there are additional options that can be employed to reduce queue lengths, including mandatory carpooling for the Lower School, as well as moving one queue to the other end of campus near the Athletic Center and using shuttle busses to move students to their classroom building.

Summary

The foregoing Transportation Management Plan is intended to mitigate the potential impacts a growing Bullis might have on local traffic loads and flow, as well as to improve access and circulation on the Bullis campus for the benefits of the members of the Bullis community, its neighbors and the general traveling public. Through this multifaceted plan, based on Bullis' strength in bus transportation resources and accessibility via public transportation, Bullis intends to manage its growth in a manner that will avoid vehicular congestion within the campus and on the surrounding transportation network.

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