

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

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d. Policy Planning and Sustainability Administration

MEMORANDUM

TO: Sara Bardin
Director, Office of Zoning

FROM: Samuel Zimbabwe *[Signature]*
Associate Director

DATE: November 2, 2012

SUBJECT: BZA Case No. 18431 – The Field School – 2301 Foxhall Road NW

BOARD OF ZONING ADJUSTMENT
District of Columbia

CASE NO. 18431

EXHIBIT NO. 30

APPLICATION

The Field School (the "Applicant") proposes to increase the current school enrollment cap from 320 to 400 students and increase the faculty and staff cap from 74 to 110, along with an increase in parking spaces from 110 to 128 spots at their 2301 Foxhall Road NW campus.

RECOMMENDATION IN BRIEF

The District Department of Transportation (DDOT) reviewed the final Traffic Impact Study (TIS) submitted by the Applicant on October 29, 2012. As noted in the Applicant analysis, the existing roadway network within the study area is currently operating at or over capacity. DDOT concludes that the increase in student and faculty will have a negative impact on the existing transportation network, unless it is appropriately mitigated.

As a condition of approval, DDOT requests that the Board of Zoning Adjustment (BZA) require the Applicant to:

- Limit inbound trips to 106 during the intersection peak hour;
- Require all faculty and staff needed at the start of class arrive prior to the intersection peak hour;
- Submit and install an approved school warning signage plan to support the school;
- Install 4 bicycle parking spaces in front of main entrance;
- Adopt a robust TDM plan; and

- Complete and submit annual Performance Monitoring reporting to DDOT and the ANC.

TRANSPORTATION ANALYSIS

DDOT is committed to achieving an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, constructing safer streets and providing outstanding access to goods and services. As one means to achieve this vision, DDOT works through the zoning process to ensure alternative modes of transportation are adequate to accommodate new travel demand while discouraging single occupancy vehicle trips. The following analysis evaluates the Applicant's TIS to determine its accuracy and consistency with the District's vision and goals for its transportation network.

Trip Generation

DDOT evaluated the amount of vehicle trips that can be expected to access the site. The Applicant provided two separate counts, one for turning movements taken on April 24, 2012 and another for vehicle occupancy counts on May 8th, 2012. Based on the turning movement counts and vehicle occupancy counts provided in the TIS, the existing number of inbound vehicles during the AM peak hour is recorded as follows:

<u>Time Period</u>	<u>Turning Movement Count</u>	<u>Vehicle Occupancy Count</u>
7:30 – 8:30 AM	86	78
7:45 – 8:45 AM	114	111

Driveway counts were based on 323 students and the proposed student increase was factored in to project expected future trip generation rates. The Applicant anticipates that the future student population will increase to 107 inbound AM trips during the 7:30-8:30 period. No projection was provided for the 7:45-8:45 AM peak period. DDOT estimates based on the Applicants methodology project that inbound trips are expected to increase to 143 trips during the 7:45-8:45 AM peak period.

<u>Peak Hour</u>	<u>Future Inbound Trips</u>
7:30 – 8:30 AM	107
7:45 – 8:45 AM	143

In 2000, the Applicant projected approximately 106 inbound vehicle trips during the morning peak hour of 7:45-8:45 AM. However, the zoning order was written to require adherence to a peak hour of 7:30-8:30 AM. The Applicant has exceeded their original projection of vehicle trips during the peak hour of 7:45-8:45 AM peak hour. This condition was originally placed on the school to minimize the worst case scenario. By having the condition specify the exact morning peak, the Applicant has been able to demonstrate that they have achieved the required cap of inbound vehicle trips, while exceeding the worst case scenario enshrined in the previous order.

Roadway Network, Capacity, and Operations

DDOT and the Applicant agreed that the following seven intersections would be included in the study area:

1. Foxhall Road and Garfield Street NW
2. Foxhall Road and W Street NW
3. Foxhall Road and Whitehaven Parkway NW
4. Foxhall Road and Reservoir Road NW
5. Foxhall Road and Site Driveway
6. Garfield Street and New Mexico Avenue, NW
7. MacArthur Boulevard and W Street, NW

Under the existing traffic conditions, the intersections of Foxhall Road and W Street NW; Foxhall Road and Reservoir Road; and MacArthur Boulevard and W Street NW are operating at unacceptable levels of service. These three intersections will continue to degrade under future conditions with the proposed background developments, and with the proposed school cap increase. DDOT is concerned that there is a significant difference in the number of trip estimates, especially during the AM peak hour when the northbound approach of the Foxhall Road and the Site Driveway intersection is projected to deteriorate from a Level of Service (LOS) "E" to "F" between the background and build-out conditions. Given the expected increase in the inbound AM vehicle trips, DDOT expects that the impacts are greater than what has been analyzed in the Applicant's TIS.

The below table identifies the Level of Service (LOS) analysis for each intersection under existing and future conditions as described in the TIS:

Intersection	Existing (2012) Conditions				2018 Future Background Conditions without Development				2018 Total Future Conditions with Development			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		Mitigated AM*	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Garfield St & Foxhall Rd												
Eastbound	14.5	B	8.6	A	16.0	B	9.5	A	16.2	B	16.2	B
Westbound	22.1	C	27.1	C	21.8	C	25.4	C	21.8	C	21.8	C
Northbound	32.3	C	32.3	C	32.6	C	29.0	C	32.7	C	32.7	C
Southbound	11.3	B	5.9	A	13.0	B	7.8	A	13.1	B	13.1	B
	11.6	B	4.5	A	13.8	B	5.7	A	14.2	B	14.2	B
2. W St & Foxhall Rd												
Eastbound	69.6	F	32.2	D	115.3	F	58.4	E	110.0	F	110.0	F
Westbound	76.4	F	17.9	C	118.4	F	19.8	C	115.1	F	115.1	F
Northbound Left	1.1	A	1.3	A	1.4	A	1.5	A	1.4	A	1.4	A
Southbound Left	0.2	A	0.1	A	0.3	A	0.2	A	0.3	A	0.3	A
3. Whitehaven Pkwy & Foxhall Rd												
Eastbound	11.2	B	6.6	A	12.3	B	7.2	A	12.5	B	11.4	B
Westbound	28.8	C	44.1	D	29.5	C	44.6	D	29.5	C	29.5	C
Northbound	6.7	A	2.9	A	8.4	A	4.1	A	8.8	A	8.8	A
Southbound	7.0	A	3.3	A	8.2	A	3.5	A	8.3	A	6.1	A
4. Reservoir Rd & Foxhall Rd												
Eastbound	88.2	F	132.6	F	104.4	F	155.3	F	106.1	F	106.2	F
Westbound	100.4	F	63.7	E	107.0	F	63.7	E	107.0	F	107.0	F
Northbound	35.8	D	45.1	D	35.6	D	46.3	D	35.5	D	35.5	D
Southbound	70.1	E	30.3	C	89.3	F	31.6	C	92.5	F	92.5	F
	121.2	F	360.2	F	146.5	F	423.6	F	148.4	F	148.6	F
5. Site Driveway & Foxhall Rd												
Eastbound	29.6	C	6.2	A	40.0	D	6.3	A	43.8	D	15.4	B
Westbound	26.4	C	46.3	D	26.4	C	46.3	D	26.4	C	26.4	C
Northbound	54.5	D	6.8	A	76.3	E	7.0	A	84.2	F	22.8	C
Southbound	7.0	A	3.1	A	8.1	A	3.4	A	8.3	A	8.1	A
6. Garfield St & New Mexico Ave												
Eastbound	16.4	C	14.0	B	17.1	C	14.4	B	17.1	C	17.1	C
Northbound Left	2.0	A	2.4	A	2.1	A	2.6	A	2.2	A	2.2	A
7. W St & MacArthur Blvd												
Eastbound	76.6	F	28.8	D	82.5	F	30.2	D	83.2	F	83.2	F
Westbound	31.7	D	23.5	C	33.0	D	24.2	C	32.7	D	32.7	D
Northbound Left	0.2	A	0.1	A	0.2	A	0.1	A	0.2	A	0.2	A
Southbound Left	2.3	A	1.7	A	2.4	A	1.9	A	2.5	A	2.3	A

* Mitigated AM Conditions show the impact of signal retiming at intersection 5 across the entire study area.

Summary of Capacity Analyses - Based on the analysis, there are three intersections that are operating and projected to operate at unacceptable levels of service. The Applicant proposes signal timing modifications as a mitigation measure for the intersection of Foxhall Road and Site Driveway during the AM peak hour. However, the proposed signal timing adjustment is shown as having no effect on the levels of service at the other study area intersections. DDOT expects worse congestion than shown in the TIS given the projected increase in the trip generation by the school. As such, inbound AM vehicle trips should be limited to 2000 levels.

Safety

DDOT's policy is to require that applicants conduct safety analyses to demonstrate that specific land developments will not create or exacerbate new or existing safety issues for all modes of travel. The TIS reviewed crash data and analysis concluded that the accident rate did not meet the threshold for further study.

Existing school zone warning signage does not meet current MUTCD and DDOT standards. DDOT requests that the Applicant submit a proposed signage plan and install needed warning signs in support of the school.

Bicycle and Pedestrian Facilities

The Applicant currently provides 19 bicycle parking spaces and proposes to install 4 additional spaces by its southern parking area. DDOT recommends that these additional spaces be located at the main entrance of the building in order to facilitate ridership and access. These secured bicycle parking spaces should be easily accessible and visible to users.

The Applicant did not provide sufficient quantitative data and analysis to support their qualitative statement that sidewalks are "adequate." In the future, DDOT requests that the Applicant submit data ensuring that all sidewalks and ADA ramps meet ADA and DDOT design standards within the walk shed of the campus. In addition, DDOT requests that the Applicant complete a baseline analysis of the site mode split to include pedestrian and bicycling counts to better understand how many students and staff do arrive via alternative modes of transportation to better address the needs of their site.

Transit Services

DDOT and the Washington Metropolitan Transportation Authority (WMATA) have partnered to provide extensive public transit service in the District. DDOT's vision is to leverage these investments to increase the share of non-automotive travel modes so that economic development opportunities increase with minimal infrastructure investment.

As noted by the Applicant, the nearest bus stop is approximately ¼ mile from the site. In the future, DDOT requests that the Applicant complete a baseline analysis of the site mode split to better understand how many students and staff do arrive via alternative modes of transportation to better address the needs of their site.

Site Access and Loading

There are two site entrances to the Field School; a northern site driveway and a southern site driveway, both intersecting Foxhall Road. The northern site driveway is closed to regular access and is only utilized in instances of an emergency or for large vehicles accessing the northern portion of the site. The southern site driveway serves as the main entry/exit point for the school and was signalized as part of a prior zoning approval. No changes are recommended at this time.

Parking

The overall parking demand created by the development is primarily a function of land use, development square footage, and price/supply of parking spaces. However in urban areas, other factors contribute to the demand for parking such as the availability of nearby high-quality public transit. Given the site location and existing school shuttle services, DDOT expects medium demand for parking on the site.

Current zoning requires 123 parking spaces for the proposed increase in student and staff and the Applicant is proposing to provide 128 parking spaces. The parking occupancy analysis in the TIS shows medium to low demand for parking under existing conditions. Without proper Transportation Demand Measures in place, parking demand is expected to increase due to the proposed increase in faculty. DDOT requests that the Applicant include parking demand management strategies performance measures in their annual report to ensure that parking demand is minimized.

Streetscape and Public Realm

In accordance with District policy and practice, any substantial new building development or renovation is expected to rehabilitate streetscape infrastructure between the curb and the property lines. This includes curb & gutter, street trees and landscaping, street lights, sidewalks, and other appropriate features within the public rights of way bordering the site.

Per the Applicant, no impacts or changes are proposed within the public space. DDOT requests that the Applicant submit and install an approved school zone warning signage to support the existing school location, to include removal and upgrades to the existing signage, which does not meet current standards.

Performance Monitoring & Measuring

DDOT recognizes the continuing impact that developments can have on the transportation network and local community, and therefore requires the Applicant to compose a performance monitoring plan. This plan should consist of the establishment of benchmark goals with regard to TDM measures, along with a commitment to increase TDM efforts should the Applicant fail to reach these goals.

DDOT requests that the Applicant provide annual reporting on their trip generation rates and mode split data to ensure that 106 AM inbound trips are not exceeded during the peak hour at the intersection. In addition, the Applicant should include a detailed description of their TDM measures and propose any future mitigation measures to ensure that the trip cap is not exceeded.

Transportation Demand Management (TDM)

TDM is a set of strategies, programs, services and physical elements that influence travel behavior by mode, frequency, time, route, or trip length in order to help achieve highly efficient and sustainable use of transportation facilities. In the District, this typically means implementing infrastructure or programs to maximize the use of mass transit, bicycle and pedestrian facilities, and reduce single occupancy vehicle trips during peak periods.

The Applicant has proposed the following TDM measures:

- Continue existing shuttle services;
- Continue existing carpooling requirements and incentives;
- Continue staggered school schedule;
- Install 4 additional bicycle parking spaces; and
- Evaluate shuttle ridership and operations as needed.

The previous TDM plan has not ensured the maximum trip cap of 106 vehicles during the AM peak hour. With the expected growth in student and staff population, additional measures will be needed in order to further reduce their projected trip generation to align with the 106 inbound trip cap during the AM peak hour. According to the traffic counts in the TIS, the Applicant has not ensured that faculty and staff arrive prior to 7:30am as had been proposed in their 2000 traffic management plan. In light of their inability to achieve their trip cap, DDOT requests that the BZA:

- Require as a condition of approval that all faculty and staff needed at the start of class arrive prior to the intersection peak hour.

DDOT recommends that the Applicant add the following TDM commitments to their plan:

- Designate a TDM coordinator to evaluate and oversee the implementation of all TDM measures;
- Require all faculty and staff needed at the start of class arrive prior to the intersection peak hour;
- Educate parents on TDM measures available;
- Add a ride-matching component to the Applicant's website that will integrate Google maps with the School's directory to show ridesharing opportunities;
- Consider SchoolPool from the Metropolitan Washington Council of Government (MWCOC) to create on-line profiles that can be used to find other parents for trip-sharing;
- Subsidize public transit and walking/cycling for employees;
- Participating in the District's Safe Routes to Schools program;
- Incorporating "semi-regular" walk/bike to school days that incentivize biking and walking for students;
- Install the proposed bicycle racks at their main building entrance; and
- Complete a full mode split study to establish baseline rate and set future mode split goals.

SUMMARY AND RECOMMENDATION

In summary, DDOT concludes that the student and staff cap increase will adversely impact the surrounding transportation network. As a condition of approval, DDOT requests that the Board of Zoning Adjustment (BZA) require the Applicant to:

- Limit inbound trips to 106 during the intersection peak hour;
- Require staff to arrive prior to the intersection peak hour;
- Submit and install an approved school warning signage plan to support the school;
- Install 4 bicycle parking spaces in front of main entrance;
- Adopt a robust TDM plan; and
- Complete and submit annual Performance Monitoring reporting to DDOT and the ANC.

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