FRIENDS OF ST. PATRICK'S
TRANSPORTATION IMPACT STUDY
WASHINGTON, D.C.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
ZONING COMMISSION
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Prepared for:
Friends of St. Patrick's

Prepared by:
Wells & Associates, LLC

September 7, 2005

BZA
CASE No. 17429
EXHIBIT No. 12

Board of Zoning Adjustment
District of Columbia
CASE NO.17429
EXHIBIT NO.12

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Section 1
INTRODUCTION

This report presents the results of a transportation impact study of the Friends of St. Patrick's (FOSP) proposal to redevelop the Brady Estate, which is located on the east side of Foxhall Road, between Hoban Road and Whitehaven Parkway, in the northwest section of Washington, D.C., as shown on Figure 1-1.

The Colony Hill residential neighborhood is located immediately adjacent to and south of the subject property. National Park Service property and the Philips Estate, which also is proposed to be redeveloped, are located immediately to the north. The German Embassy is located across Foxhall Road, to the west.

Several independent schools are located within the study area, including The Field School, The Lab School, Our Lady of Victory, River School, and the George Washington University Mount Vernon Campus. The St. Patrick's lower school campus (Nursery through grade 6) is located on the south side of Whitehaven Parkway, west of Foxhall Road. Forty (40) St. Patrick's 7th and 8th graders currently attend classes at 4925 MacArthur Boulevard (at Ashby Street). Other nearby independent and public schools located outside of the study area include Rock Creek International School, Georgetown Day School, Key Elementary School, and Mann Elementary School.

FOSP proposes to develop the 17.30-acre site with an independent school, grades 7 through 12, and 28 single-family detached residential dwellings. Middle and upper schools campuses are proposed on the north; residential dwellings are proposed on the south, as shown on Figure 1-2. The middle school would consist of grades 7 and 8 with an enrollment of 55 to 65 students each, or 120 students. The upper school would consist of grades 9 through 12 with an enrollment of 68 to 90 students each, or 320 students. Faculty and staff are expected to number 100.

One hundred seventy (170) parking spaces would be provided on a single level in a structure beneath the academic buildings. Additional off-peak period curb parking spaces could be provided along the on-site loop circulator road.

All vehicular access to the school would be provided at a new, full-movement, signalized intersection on Foxhall Road. Timing of this new signal would be coordinated with other, existing signals along Foxhall Road. Vehicular access to the residences would be provided at a new driveway on Hoban Road, opposite 45th Street.

For purposes of this traffic analysis, this development was assumed to be completely built and occupied by 2012.

Tasks undertaken in this study included the following:

1. FOSP's proposed development plans, various traffic studies and plans prepared by the District Department of Transportation (DDOT), and other background data were reviewed.

2. A field reconnaissance of existing roadway and intersection geometrics, traffic controls, traffic signal phasing/timings, and speed limits was conducted.

3. Agreement with DDOT staff regarding the traffic study scope was achieved.

4. Counts of existing traffic at 11 off-site intersections were collected.

5. Analysis of existing levels of service at these intersections was completed.

6. Background future traffic volumes were forecasted for 2012.

7. Background levels of service were calculated at key intersections based on background traffic forecasts, existing traffic controls, and existing intersection geometrics.

8. The number of peak hour vehicle-trips that would be generated by the St. Patrick's Middle and Upper Schools was estimated based on: (1) projected numbers of faculty, staff, and students and (2) the St. Patrick's TDM program.

9. The number of peak hour vehicle-trips that would be generated by the proposed new residences were estimated based on Institute of Transportation Engineers (ITE) trip generation rates, which were corroborated by counts at the nearby Foxhall Crescent neighborhood.

10. Total future traffic volumes were forecasted for 2012.

11. Total future levels of service were calculated at key intersections based on total future traffic forecasts, existing traffic controls, and existing intersection geometrics.

12. Operational improvements required to adequately accommodate site traffic were identified.

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Sources of data for this analysis included: traffic counts conducted by Wells & Associates; the Institute of Transportation Engineers (ITE); the Washington Metropolitan Area Transit Authority (WMATA); the District of Columbia; Palisades Traffic Impact Study[1]; Barnes Vanze Architects, Inc.; St. Patrick's Episcopal Day School; and FOSP.

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The conclusions of this study are as follows:

1. ***The Brady Estate is located on Foxhall Road, within a connected network of arterial, collector, and local streets.***

2. ***All vehicular access to the school would be provided at a new, full-movement, signalized intersection on Foxhall Road. Timing of this new signal would be coordinated with other, existing signals along Foxhall Road. Vehicular access to the residences would be provided at a new driveway on Hoban Road, opposite 45th Street.***

3. ***The signalized Foxhall Road/Garfield Street, Foxhall Road/Field School Driveway, and Foxhall Road/Whitehaven Parkway presently operate at an acceptable overall level of service (LOS) "D" or better during all times of day.***

   The signalized Reservoir Road/MacArthur Boulevard (West) and Reservoir Road/MacArthur Boulevard (East) intersections operate at or over capacity at an overall LOS "E" or "F" during the AM peak hour and at an acceptable overall LOS "A" or "B" during the school and commuter PM peak hours.

   The signalized Foxhall Road/Reservoir Road intersection operates at capacity at an overall LOS "F" during the AM peak hour and near capacity at LOS "E" during the school and commuter PM peak hours.

4. ***Redevelopment of the Philips Estate and background traffic growth would have a small impact on intersection levels of service.***

[1] Traffic Services Administration, District Department of Transportation, District of Columbia, Palisades Traffic Impact Study, August, 2002.

5. *The St. Patrick's Travel Demand Management (TDM) Plan would consist of the following elements:*

   a. *Walk initiative.*
   b. *Carpool initiatives,*
   c. *Shuttle bus service.*
   d. *Parking controls.*
   e. *Staggered class start and dismissal times.*

6. *The St. Patrick's middle and upper schools would generate approximately 257 AM peak hour vehicle-trips, 175 school PM peak hour vehicle-trips, and 188 commuter PM peak hour vehicle-trips, at the ultimate enrollment of 120 middle school and 320 upper school students.*

7. *The school will ultimately increase peak hour traffic on Foxhall Road north of the driveway by five to 14 percent, and would increase peak hour traffic on Foxhall Road south of the driveway by two to four percent.*

8. *The 28 new homes would generate approximately 21 AM peak hour vehicle-trips, 17 school PM peak hour vehicle-trips, and 28 commuter PM peak hour vehicle-trips.*

9. *Redevelopment of the Brady Estate would have a small impact on intersection levels of service. It would add 12 or fewer seconds of additional average vehicle delay for motorists passing through the signalized intersections on Foxhall Road and MacArthur Boulevard.*

10. *The proposed school would add fewer than three seconds of additional average vehicle delay for Colony Hill motorists.*

11. *The proposed new Foxhall Road/St. Patrick's signalized intersection would operate at an overall acceptable LOS "A" or "B" at all times of day. Traffic turning left into the driveway from Foxhall Road also would operate at an acceptable LOS "C" or "D" and traffic turning right into the driveway from Foxhall Road would operate at an acceptable LOS "A" or "B". Traffic turning left or right to exit the driveway onto Foxhall Road would operate at acceptable LOS "A".*

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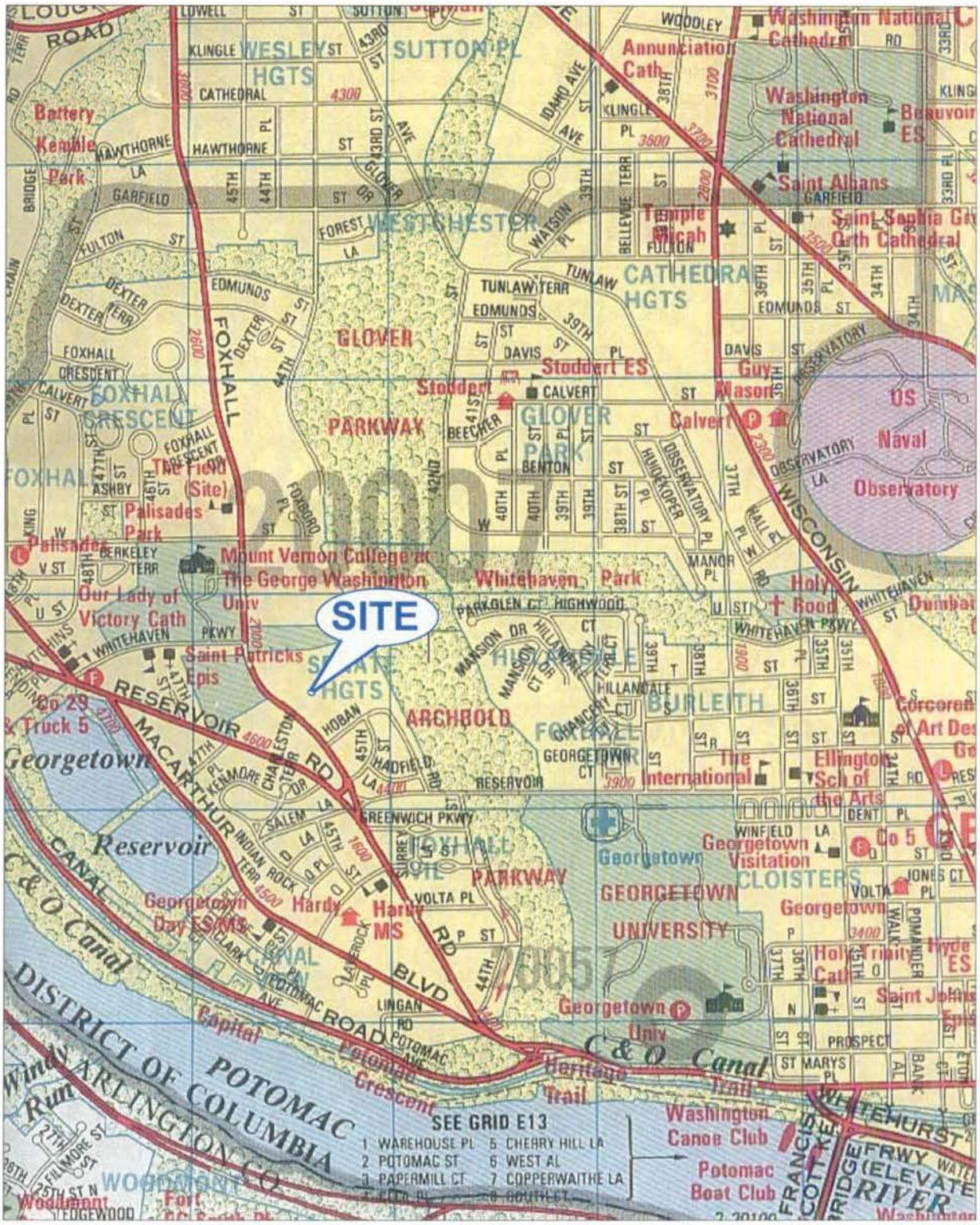

Figure 1–1
Site Location

North
Schematic

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