



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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SHAILEN P. BHATT
SECRETARY

MEMORANDUM

TO: John Garcia, New Castle County Review Coordinator, DelDOT Planning

FROM: Claudy Joinville, Project Engineer *CJ*

DATE: February 25, 2014

**SUBJECT: Community Education Building Corporation
Results of Traffic Operational Analysis Review**

We have reviewed the traffic operational analysis (TOA) for the proposed Community Education Building Corporation charter school (CEBC), prepared by Apex Engineering, Inc., dated December 16, 2013. The analysis evaluates the traffic impacts of the proposed redevelopment, to be located on the northeast corner of the intersection of 12th Street (New Castle Road 9) and French Street in the City of Wilmington, Delaware. Currently, Bracebridge IV, an office building previously occupied by the Bank of America, and before that by MBNA, is located at this site. This redevelopment would replace the office space with schools.

The proposed redevelopment would consist of four schools: two private elementary schools with a total of 1,340 students, one middle / high school with 700 students, and a high school with 700 students. Employees and student drivers will utilize the parking garage, located within the building, with access on Walnut Street. Per the TOA, the existing parking spaces along 12th Street, between Walnut Street and French Street, will be utilized for parent drop-offs and pick-ups. Additionally, at a meeting on February 21, 2014, to discuss the this issue, the developer, the City of Wilmington Public Works Department and DelDOT's Traffic Section have agreed on closing French Street between 12th Street and 13th Street during parent drop-offs and pick-ups to allow buses to occupy the street when loading and unloading. Per the TOA, the roadbed of French Street can accommodate approximately 17 buses. There is currently no formal documentation to confirm the agreement between the developer, the City of Wilmington and DelDOT on permitting parent drop-offs and pick-ups to occur on 12th Street and the closing of French Street to allow for buses to load and unload.

For the two private elementary schools, the TOA assumes that 35 percent of students will ride the bus to and from school while 5 percent walk to and from school. The private schools, Kuumba Academy and Academia Antonia Alonso, would operate from 8:00 a.m. to 3:00 p.m. and from 8:30 a.m. to 3:30 p.m., respectively. Because both schools end prior to the peak hour of the adjacent street traffic, the afternoon trips were not added to the road network in the study area. The high school and the middle / high school would operate from 7:00 a.m. to 2:00 p.m. and from 7:30 a.m. to 2:30 p.m., respectively. The morning trips of both schools would occur before the peak hour of the adjacent street traffic, therefore those trips were not added to the road network in the study area. Although both schools end prior to the afternoon peak hour, the afternoon trips were added to the road network as middle and high school students are assumed to participate in after school activities. As a result, the students' trips home would coincide with the adjacent street peak hour.

Based on our review, we find that the intersections of 12th Street and French Street would operate at level of service (LOS) B during the weekday morning and weekday evening peak hours for both present and future conditions, and would meet the LOS criteria listed in our Standards and Regulations for Subdivision Streets and State Highway Access.

It is possible that vehicles will queue in a line beginning on 12th Street, just east of Walnut Street, and wrap around to Wilson Street, which is a one-way street, and 13th Street. To accommodate this queue, the TOA proposes to change the direction of Wilson Street between 12th Street and 13th Street. Currently, Wilson Street serves traffic traveling northbound from 12th Street. The developer and City of Wilmington have also agreed on the direction change on Wilson Street. The developer should coordinate with the City of Wilmington Public Works Department regarding details and implementation of a direction change on Wilson Street. The developer has agreed to submit a traffic control plan to the City of Wilmington and DelDOT for review. The traffic control plan will include design and signage proposals pertaining to the closing of French Street, direction change on Wilson Street and parking prohibition during parent drop-offs and pick-ups on westbound 12th Street between Walnut Street and Wilson Street.

Please note that this analysis generally focuses on capacity and level of service issues. Any safety and operational issues not identified or addressed in this review may be discussed during our Subdivision plan review process. A Level of Service table for the existing and future cases is attached with this memorandum.

CJ:cjm

cc: Carol Ohm, Apex Engineering, Inc.
David Blankenship, Director of Transportation, City of Wilmington Public Works Department
Drew Boyce, Director of Planning
J. Marc Coté, Assistant Director, Development Coordination
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Kevin Canning, Canal District Public Works Engineer, Canal District, DOTS
John Garcia, New Castle County Subdivision Coordinator
Pao Lin, Subdivision Manager, Development Coordination
Ahmed Abdelmoteleb, Traffic Engineer, Traffic, DOTS
Troy Brestel, Project Engineer, Development Coordination

Table 1
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Community Education Building Corporation TOA
 Prepared by Apex Engineering, Inc.

Signalized Intersection ¹	LOS per TOA		LOS per DelDOT ²	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
12 th Street & French Street				
2013 Existing	C (20.3)	C (23.1)	B (19.2)	B (19.3)
2018 without Community Education Building Corporation	C (24.5)	C (23.5)	B (19.1)	B (19.2)
2018 with Community Education Building Corporation	C (31.6)	C (24.2)	B (20.0)	B (19.6)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.
² DelDOT used the signal timings and phasing specifications provided by the City of Wilmington. As a result, DelDOT's analysis shows better level of service than the TOA results.