



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
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DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

MEMORANDUM

TO: Wendy Polasko, Kent County Review Coordinator, DelDOT Planning

FROM: Claudy Joinville, Project Engineer *C.J.*

DATE: July 21, 2016

SUBJECT: **Blue Hen Apartments – Phase II
Results of Traffic Operational Analysis (TOA) Review**

The Department has completed its review of the TOA for the proposed Blue Hen Apartments – Phase II residential development (Tax Parcels 2-05-077.00-01-19.03, 19.05, 19.07). The TOA was prepared by Becker Morgan Group, Inc., dated May 11, 2016. The analysis evaluates the traffic impacts of the proposed development, proposed to be located on the south side of South Little Creek Road (Kent Road 67), along Blue Hen Boulevard, in the City of Dover.

The proposed development would consist of 192 apartment units. Two (2) access points are proposed for this project: the first entrance would be located at the existing access point along South Little Creek Road by way of Haslett Street, and the second entrance would be located at the existing access point on Bay Road (Delaware Route 7) by way of Blue Hen Boulevard. Construction is anticipated to be complete by 2021.

The subject property is currently zoned as RG-2 (General Residence) in the City of Dover, and the applicant does not propose to rezone the land.

Per our scoping letter, dated December 31, 2015, the developer had expressed interest in a traffic signal at the intersection of Haslett Street and South Little Creek Road. As result, DelDOT's Traffic Section indicated that a traffic signal justification study, including a traffic signal warrant analysis, should be completed for this intersection. However, the final TOA report did not include such a study. In a telephone conversation with the developer's consultant on July 6, 2016, DelDOT learned that the developer had decided to not pursue the installation of a traffic signal at this intersection.

Based on our review, we find that all three (3) intersections analyzed, the two mentioned above and the intersection of South Little Creek Road and Levy Court Lane, would operate at a level of service (LOS) C or better during the morning and evening peak hours for both present and future conditions, and would meet the LOS criteria listed in Chapter 2 of the Development Coordination Manual.

The analysis of the two (2) site entrances along South Little Creek Road by way of Haslett Street, and along Bay Road by way of Blue Hen Boulevard shows that they are able to adequately accommodate the traffic associated with the proposed 192 apartment units without any improvements. However, the results of the TOA were not unexpected given that the site entrances were built to serve the original Blue Hen Mall (later Blue Hen Corporate Center) which was a higher traffic generator. We anticipate that the site entrances might show deficiencies should the Blue Hen Corporate Center redevelop to a land use comparable to its previous use.

Should the City of Dover choose to approve the proposed development, the following item should be incorporated into the site design and reflected on the record plan by note or illustration. All applicable agreements (i.e. letter agreements for off-site improvements and traffic signal agreements) should be executed prior to entrance plan approval for the proposed development.

The developer should enter into a traffic signal agreement with DeIDOT to fund an equitable portion of any needed improvements and / or maintenance for the intersection of Bay Road and Blue Hen Boulevard. The agreement should include pedestrian signals, crosswalks and interconnection at DeIDOT's discretion. One or more developers may enter into a traffic signal agreement for this intersection. A previous owner of the Blue Hen Corporate Center and the above-mentioned parcels entered into a signal agreement with DeIDOT to fund the installation and maintenance of a traffic signal at this intersection; however, that agreement was never recorded.

Please note that this analysis generally focuses on capacity and level of service issues. Level of Service (LOS) tables for the existing and future cases are attached with this memorandum.

If you have any questions, please contact me at (302) 760-2124.

CJ:km

Enclosures

cc: Ann Marie Townshend, City of Dover
Mary Ellen Gray, Kent County Levy Court
Christopher Duke, Becker Morgan Group, Inc.
Drew Boyce, Director, Planning
J. Marc Coté, Assistant Director, Development Coordination
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
Peter Haag, Traffic Studies Manager, Traffic, DOTS
Thomas Greve, Central District Engineer, Central District
Steve McCabe, Public Works Engineer, Central District
Mark Galipo, Traffic Engineer, Traffic, DOTS
Troy Brestel, Project Engineer, Development Coordination
Jonathan Moore, Subdivision Manager, Development Coordination

Table 1
 PEAK HOUR LEVELS OF SERVICE (LOS)
based on Traffic Operational Analysis for Blue Hen Apartments – Phase II
Report dated May 11, 2016
Prepared by Becker Morgan Group, Inc.

Unsignalized Intersection ¹ Two-Way Stop Control (T-intersection)	LOS per TOA		LOS per DeIDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
South Little Creek Road & Haslett Street				
2016 Existing (Case 1)				
Westbound South Little Creek Road (Left)	A (7.8)	A (8.3)	A (7.8)	A (8.3)
Northbound Haslett Street	B (12.5)	B (12.7)	B (12.5)	B (13.0)
2021 without Blue Hen Apartment – Phase II (Case 2)				
Westbound South Little Creek Road (Left)	A (7.8)	A (8.4)	A (7.8)	A (8.4)
Northbound Haslett Street	B (12.5)	B (12.9)	B (12.4)	B (13.2)
2021 with Blue Hen Apartments – Phase (Case 3)				
Westbound South Little Creek Road (Left)	A (7.9)	A (8.6)	A (7.9)	A (8.6)
Northbound Haslett Street	B (14.8)	C (15.5)	B (14.6)	C (15.8)
2021 with Blue Hen Apartments – Phase (Case 3) - with separate westbound left-turn lane				
Westbound South Little Creek Road (Left)	A (7.9)	A (8.6)	A (7.9)	A (8.6)
Northbound Haslett Street	B (14.8)	C (15.5)	B (14.6)	C (15.8)

¹ For both unsignalized and signalized intersection analyses, the numbers in parentheses following levels of service (LOS) are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 2
 PEAK HOUR LEVELS OF SERVICE (LOS)
based on Traffic Operational Analysis for Blue Hen Apartments – Phase II
Report dated May 11, 2016
Prepared by Becker Morgan Group, Inc.

Unsignalized Intersection ² Two-Way Stop Control (T-intersection)	LOS per TOA		LOS per DeIDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
South Little Creek Road & Levy Court Lane				
2016 Existing (Case 1)				
Eastbound South Little Creek Road (Left)	A (8.8)	A (8.1)	A (8.8)	A (8.1)
Westbound South Little Creek Road (Left)	A (8.0)	A (8.1)	A (8.0)	A (8.1)
Northbound Levy Court Lane	B (13.4)	C (18.1)	B (13.4)	C (18.2)
Southbound JH Brown Boulevard	B (13.6)	C (16.5)	B (13.2)	C (16.7)
2021 without Blue Hen Apartments – Phase 2 (Case 2)				
Eastbound South Little Creek Road (Left)	A (8.8)	A (8.2)	A (8.2)	A (8.2)
Westbound South Little Creek Road (Left)	A (8.1)	A (8.2)	A (8.1)	A (8.3)
Northbound Levy Court Lane	B (13.9)	C (19.3)	B (14.7)	C (21.3)
Southbound JH Brown Boulevard	B (14.0)	C (17.3)	B (14.2)	C (18.2)
2021 without Blue Hen Apartments – Phase 2 (Case 3)				
Eastbound South Little Creek Road (Left)	A (9.0)	A (8.3)	A (8.3)	A (8.2)
Westbound South Little Creek Road (Left)	A (8.1)	A (8.4)	A (8.2)	A (8.4)
Northbound Levy Court Lane	B (14.6)	C (21.5)	C (15.5)	C (23.2)
Southbound JH Brown Boulevard	B (14.8)	C (18.8)	C (15.1)	C (19.3)

² For both unsignalized and signalized intersection analyses, the numbers in parentheses following levels of service (LOS) are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 3
PEAK HOUR LEVELS OF SERVICE (LOS)
based on Traffic Operational Analysis for Blue Hen Apartments – Phase II
Report dated May 11, 2016
Prepared by Becker Morgan Group, Inc.

Signalized Intersection ³	LOS per TOA		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Bay Road & Blue Hen Boulevard				
2016 Existing (Case 1)	B (16.0)	B (17.3)	B (15.4)	B (17.8)
2021 without Blue Hen Apartments – Phase II (Case 2)	B (15.5)	B (18.0)	B (15.8)	B (18.1)
2021 with Blue Hen Apartments – Phase II (Case 3)	B (16.1)	B (18.4)	B (16.4)	B(18.5)

³ For both unsignalized and signalized intersection analyses, the numbers in parentheses following levels of service (LOS) are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.