




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

CAROLANN WICKS, P.E.
SECRETARY

MEMORANDUM

TO: File

FROM: Troy Brestel, Project Engineer 

DATE: May 29, 2008

SUBJECT: Barley Mill Plaza
Minutes of Traffic Operational Analysis (TOA) Scoping Meeting 05/27/08

ATTENDANCE: T. William Brockenbrough, DelDOT Planning
Josh Schwartz, DelDOT Planning
Troy Brestel, DelDOT Planning
John Janowski, New Castle County Department of Land Use
Owen Robotino, New Castle County Department of Land Use
Carol Ohm, Apex Engineering, Inc.
Steve Davies, Apex Engineering, Inc.
Pam Scott, Saul Ewing
Roger Roy, Stoltz Reality, Inc.

Background and Discussion

The developer, Barley Mill, LLC, seeks to develop 1,485,000 square feet of office space, 731,250 square feet of retail space, and 1,575 dwelling units on a 96-acre assemblage of parcels (Tax Parcels 07-029.40-097, 07-032.20-003, 048, 049, 050, 051, 052, 053, 054, 055, 057, 07-033.30-072) in New Castle County. The parcels are currently zoned OR (Office Regional) with the exception of Tax Parcel 07-029.40-097, which is zoned S (Suburban). The developer does not plan to rezone the parcels. The proposed land use would replace the existing 1,012,049 square feet of office space located on the site.

The development is located on the northeast corner of the intersection of Lancaster Pike (Delaware Route 48) and Centre Road (Delaware Route 141). Three access points are proposed: two along Lancaster Pike, and one along Centre Road.

Cases to be Evaluated

The study shall evaluate the weekday morning, weekday evening, and Saturday mid-day peak hours for the following situations:

- 1) Existing (2008);
- 2) 2018 without development; and
- 3) 2018 with full development.

Facilities to be Evaluated

The TOA should evaluate conditions at the following intersections for capacity and level of service using the Highway Capacity Software (HCS). It should also evaluate the extent to which they meet the relevant DelDOT, AASHTO and MUTCD standards for geometry and traffic control devices.

- 1) Centre Road (Delaware Route 141) / Barley Mill Road (New Castle Road 259) / Site Entrance A
- 2) Lancaster Pike (Delaware Route 48) / Entrance to DuPont Chestnut Run Site / Site Entrance B
- 3) Lancaster Pike / Site Entrance C
- 4) Delaware Route 141 / Montchanin Road (Delaware Route 100)
- 5) Delaware Route 141 / Kennett Pike (Delaware Route 52) Interchange
- 6) Centre Road / Lancaster Pike
- 7) Centre Road / DelleDonne Corporate Center Entrance / Entrance to DuPont Chestnut Run Site
- 8) Centre Road / Ferris School Complex Entrance / Entrance to DuPont Centre Road Site
- 9) Centre Road / Faulkland Road (Delaware Route 34)
- 10) Lancaster Pike / Centreville Road (New Castle Road 273)
- 11) Lancaster Pike / Pathmark Shopping Center Entrance
- 12) Lancaster Pike / North DuPont Road
- 13) Lancaster Pike / South DuPont Road (Delaware Route 100)

Traffic Counts

The Consultant should count traffic **and pedestrians** from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. on a Tuesday, Wednesday, or Thursday, and from 10:00 a.m. to 2:00 p.m. on a Saturday, to determine when the peaks occur.

The traffic counts should be submitted to DelDOT both electronically as PETRA/Excel files and as draft report figures showing peak hour volumes (labeled with date and peak hour interval) posted on diagrams of the road network.

The Consultant should include counts of pedestrians, a separate count of right-turn on red (as opposed to right-turn movement counts), and a separate count of heavy vehicles.

The Consultant should be alert for events affecting the traffic counts, such as accidents or nearby construction and shall inform me of any such events when submitting the counts. As necessary, I reserve the right to reject the counts or require adjustments to them.

Trip Generation should be done using the 7th edition of the ITE Trip Generation report.

Trip Distributions for the proposed and committed developments should be submitted with the traffic counts.

Growth Factors and Committed Developments

The Consultant shall apply growth factors to the traffic counts. DelDOT will develop those factors after we receive the Consultant's traffic counts.

The Consultant should also determine what portions of the following developments were complete at the time of any traffic counts to be used in the study and shall add in projected traffic from any un-built portions. The following information is tentative and should be verified with New Castle County.

- 1) Little Falls Centre Lot 4 (61,800 square feet of office space)
- 2) Little Falls Centre Lots 9 and 11 (229,500 square feet of office space, a 6,000 square foot restaurant, a 10,000 square foot daycare)
- 3) L.A. Associates Expansion (41,106 square feet of office space)
- 4) Tatnall School (a 37,736 square foot addition to existing school)
- 5) DuPont Chestnut Run Plaza (856,825 square feet of office space)

Highway Capacity Software

The Consultant shall use the most recent version of the Highway Capacity Software (HCS) that implements the 2000 Highway Capacity Manual (HCM). Presently that is Version 4.1f or HCS+.

Seasonal Adjustment Factors for the roads in the study area are as follows:

Roads	May	June	July
Centre Road / Barley Mill Road (Delaware Route 141)	0.98	0.97	0.99
Lancaster Pike (Delaware Route 48)	0.98	0.97	0.99
Montchanin Road (Delaware Route 100)	0.93	0.91	0.92
North / South DuPont Road (Delaware Route 100)	0.98	0.97	0.99
Faulkland Road (Delaware Route 34)	0.98	0.97	0.99
Kennett Pike (Delaware Route 52)	0.98	0.97	0.99
Barley Mill Road (New Castle Road 259)	0.96	1.01	1.00
Centreville Road (New Castle Road 273)	0.96	1.01	1.00
All Other Roads	1.00	1.00	1.00

DeIDOT Projects

There is one specific DeIDOT capital project in the study area, which is the Delaware Route 141 / Faulkland Road improvement project. The Consultant shall contact DeIDOT's project manager for this project, Mr. Tom Brooks, become familiar with the work that is proposed, and report on it in the TOA. Mr. Brooks may be reached at (302) 760-2353.

Mitigation Agreements

Sections 11.220 and 11.230 of the New Castle County Unified Development Code (UDC) address the role of traffic mitigation measures in the land development process. Briefly, however, the County requires such measures if the TOA finds unacceptable levels of service (LOS). It has become a standard practice to document mitigation measures, primarily those dealing with transportation demand (UDC Paragraph 11.230.B.1) in a mitigation agreement executed by the applicant and DeIDOT. DeIDOT's primary contact in these matters is Mr. Daniel LaCombe, a Transportation Planning Supervisor in the Intermodal Programs Section. He can be reached at (302) 760-2161.

Where unacceptable LOS could occur at one or more intersections in the study area, New Castle County urges the applicant to contact Mr. LaCombe early in the TOA process and to pursue a mitigation agreement in parallel with the TOA.

Transit, Bicycle, and Pedestrian Facilities

The study should describe the existing and proposed transit service in the project area and should also describe the existing and needed transit, bicycle, and pedestrian facilities on or near the project site. In determining these items, the Consultant shall contact Mr. Ivan Mitchell, a Service Development Planner at the Delaware Transit Corporation (DTC), and Mr. Anthony

Aglione, Bicycle and Pedestrian Coordinator for Statewide & Regional Planning. Mr. Mitchell may be reached at (302) 576-6062. Mr. Aglione may be reached at (302) 760-2509.

General Notes

- 1) The Consultant shall assume an ideal saturation flow rate of 1,900 pcphgpl for all signalized intersections.
- 2) The Consultant shall calculate the peak hour factors for existing conditions. Where no increases in volumes are projected, the Consultant shall use those observed peak hour factors for future conditions as well. Where increases in volumes are projected, the Consultant shall use peak hour factors of 0.88 or 0.92, in accordance with the Highway Capacity Manual, except that higher values may be used where they are observed to already exist. The Consultant shall calculate all peak hour factors by lane group.
- 3) The Consultant shall use default lane utilization factors for all signalized intersections.
- 4) The Consultant shall contact Mr. James Clacher both of DelDOT's Transportation Management Center (TMC), to obtain advance approval for the use of any signal timings. Mr. Clacher may be reached at (302) 659-2403.
- 5) Both DelDOT and the New Castle County reserve the right to change this scope of work if the study is not performed within a reasonable time.
- 6) The developer may choose to have DelDOT's Consultant perform the TOA rather than use their own Consultant. If this option is of interest, the developer should contact Mr. Todd Sammons at (302) 760-2134 to request a cost estimate.

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- 7) By copy of this memorandum I ask those copied and those in attendance to contact me at (302) 760-2167 regarding any significant errors or omissions.

TB:km

cc: those in attendance
Ralph A. Reeb, Director, Planning
Drew A. Boyce, Assistant Director for Project Development North, DOTS
Theodore Bishop, Assistant Director, Development Coordination
Thomas E. Meyer, Special Projects Manager, Traffic, DOTS
James Clacher, TMC Supervisor, Traffic, DOTS
J. Marc Cote, Subdivision Engineer, Development Coordination
Mark Alexander, Canal District Engineer
Mark C. Tudor, Project Manager, Project Development North, DOTS
Tom Brooks, Project Manager, Project Development North, DOTS
Darren O'Neill, Project Manager, Project Management, DOTS
Ivan Mitchell, Service Development Planner, Delaware Transit Corporation
Anthony Aglio, Bicycle and Pedestrian Coordinator, Statewide & Regional Planning
Daniel C. Lacombe, Transportation Planning Supervisor, Statistics, Research & Special Programs
Todd Sammons, Project Engineer, Development Coordination