

**FREDERICK P. CLARK ASSOCIATES, INC.**

Planning/Development/Environment/Transportation  
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July 2, 2008

Mr. Jeremy Ginsberg  
Planning and Zoning Director  
Darien Town Hall  
Planning and Zoning Office  
2 Renshaw Road  
Darien, Connecticut 06820



Subject      **Traffic Access and Site Plan Review – Leroy-West Senior Residence, 77  
Leroy Avenue, Darien, Connecticut**

Dear Mr. Ginsberg:

At your request, we have reviewed the Site Plan prepared by Hannons LLC, dated January 19, 2008 and the Traffic Study prepared by DLS Consulting and dated May 12, 2008.

The site is located at 77 Leroy Avenue and specifically in the southwest corner of the intersection of Leroy Avenue and West Avenue. The proposal is to construct a 16-unit, multi-family, senior housing development, with access to Leroy Avenue.

This review is limited to the traffic aspects of the Application and includes site access, pedestrian access and circulation, safety and overall operation of adjacent roadways and the proposed access drive to Leroy Avenue.

**Project Description**

As noted above, the site is located in the southwest corner of the intersection of Leroy Avenue and West Avenue. The proposal is to construct a 16-unit, senior housing development, with access to Leroy Avenue, approximately 100 feet south of the

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signalized intersection with West Avenue. The site is proposed to have 20 parking spaces, with the main entrance to the building from Leroy Avenue.

### **Applicant's Traffic Engineer's Summary**

A Traffic Study was prepared for the proposed development and included the following information:

1. *Existing Conditions* – The Traffic Report provides a description of Leroy Avenue and West Avenue in the immediate vicinity of the subject property frontage. It described the number of travel lanes, posted speed limit and traffic control near the site.
2. *Traffic Volumes* – The Applicant installed an Automatic Traffic Recorder (ATR) on Leroy Avenue and West Avenue in early December 2007. Results of these field surveys indicated that the daily volume on Leroy Avenue was 6,950 vehicles. The weekday morning peak hour, two-way volume, was 542 vehicles. The weekday afternoon peak hour volume was 519 vehicles.

An ATR was installed on West Avenue in December 2007. The recorded daily, two-way, volume was 8,530 vehicles. The weekday morning and weekday afternoon peak hour volumes were identified to have 595 and 713 vehicles, respectively.

3. *Accident History* – The Applicant obtained accident data from the Connecticut Department of Transportation (ConnDOT) for a period beginning October 1, 2004 through September 30, 2007 for Leroy Avenue. This data included the approaches to West Avenue.

Based on a review of the accident data, the Applicant determined that there were a total of three rear-end collision accidents on the northbound approach of Leroy Avenue at West Avenue during this time period. No other data was obtained or described in this section of the report.

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4. *Sight Distance* – The Applicant evaluated the available sight distance at the proposed access drive to the subject property on Leroy Avenue. Based on this analysis it was determined that over 400 feet of sight distance was available in both directions on Leroy Avenue.

Based on the results of field surveys to identify the 85<sup>th</sup> percentile speed of motorists traveling on Leroy Avenue, the Applicant determined that the speed was up to 30 miles per hour in both directions. The posted speed limit is 25 miles per hour in the vicinity of the subject property frontage.

Based on criteria set forth by ConnDOT for 30 miles per hour, the minimum recommended intersection sight distance in both directions on Leroy Avenue was 335 feet. Based on this analysis, the Applicant determined that sight lines were good for the posted and measured 85<sup>th</sup> percentile speed of motorists traveling on Leroy Avenue.

5. *No-Build Traffic Volumes* – The 2007 baseline traffic volumes obtained by the Applicant were expanded to reflect a future design year for 2009 conditions by adding a two percent per year growth rate and traffic related to other identified developments in the immediate vicinity of the subject property, which may impact the roadways in front of the subject property.
6. *Site-Generated Traffic Volumes* – The Applicant provided a comparison of trip generation rates and estimates for site traffic based on trip generation rates provided by the Institute of Transportation Engineers (ITE) and published in “Trip Generation,” 7<sup>th</sup> Edition, 2003. In addition to this information, the Applicant’s Traffic Consultant obtained traffic data at three similar facilities. These facilities were identified as South Pond Village in Bloomfield and Chapman Farms in Niantic. Other information was obtained from Southwick in Cheshire.

Based on the results of this analysis and field surveys conducted by the Applicant, trip generation rates were obtained and used to estimate traffic for the 16 unit development proposed on Leroy Avenue.

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The trip generation rates provided ITE are for senior adult housing and actually is very low compared to senior developments identified in this report and data obtained by Frederick P. Clark Associates, Inc.

The Applicant used an average rate of ITE and the three developments identified above to estimate the level of traffic that may be generated by the proposed development.

The Applicant estimated, based on this analysis, that a development of this type and size will likely generate 4 and 6 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively.

7. *Capacity Analysis* – The Applicant conducted a capacity analysis of the proposed access drive to the subject property on Leroy Avenue. This analysis was completed for a build condition and included a weekday morning and weekday afternoon peak hour.

Results of the analysis indicate this proposed driveway would operate at Level of Service “B” or better during both peak hours.

The analysis includes the peak hour vehicle queues on the northbound Leroy Avenue approach to West Avenue. The report notes that the approximately length of these queues to be 4 to 7 vehicles. The report also notes that there is approximately 100 feet of storage capacity between the STOP bar on Leroy Avenue at the West Avenue approach to the intersection and the proposed access drive.

8. *Conclusion* – Based on results of the analysis provided by the Applicant’s Traffic Consultant it notes that the accident history did not indicate any particular patterns related to accidents in the immediate vicinity of the subject property and it is likely that the site-generated traffic will have no impact.

The report notes that available sight lines at the proposed access drive to Leroy Avenue are adequate to accommodate the proposed driveway. It indicates that there will be no significant impacts on safety or traffic operations due to the proposed development. The

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nearby traffic signal at West Avenue will result in brief queuing related to delays to site traffic; however, it will also create gaps on Leroy Avenue for site traffic to exit the subject property.

### **Review Comments**

The following is a summary of the results of the review of the Traffic Report and Site Plan.

1. *Roadway Network* – The Traffic Report and the Site Plan provide information related to the conditions found on Leroy Avenue and West Avenue along the site frontage. The Traffic Report notes the signalized intersection of Leroy Avenue at West Avenue, which is located immediately adjacent to the subject property and approximately 100 feet north of the location of the proposed access drive to the site to Leroy Avenue.

The Traffic Report should have included more descriptive information for area roads, such as sidewalks to and from the Train Station and U.S. Route 1 (Boston Post Road). For example, are there crosswalks or pedestrian signals at the signalized intersection of Leroy Avenue and West Avenue?

It is assumed the location of this senior housing development hopefully will result in residents walking to and from the Train Station and the Business District in Downtown. If this is the case, additional information is necessary to determine if residents can safely walk to and from the Train Station and Downtown.

2. *Traffic Volumes* – The report provides hourly and directional traffic volumes on Leroy Avenue and West Avenue. However, it does not provide any analysis of the signalized intersection of Leroy Avenue and West Avenue for the weekday morning and weekday afternoon peak hours.

The report notes a queuing description of vehicles traveling northbound on Leroy Avenue; however, it is unclear how this queuing was identified or analyzed to determine potential impact to the proposed access drive.



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3. *Accident History* – The Applicant obtained accident data from ConnDOT for a three-year period. However, since these are all local roads, it would have been more beneficial to obtain accident data from the Darien Police Department for Leroy Avenue and West Avenue in the vicinity of the subject property. This data should be analyzed to identify accidents, types of accidents, probable cause, injuries and other pertinent information necessary to identify safety concerns, if there are any safety concerns to identify.
4. *Sight Distance* – The Applicant determined the appropriate distance for sight lines is 335 feet based on the identification of actual speeds of motorists traveling on Leroy Avenue. It notes that 400 feet of sight distance is available from the location of the proposed access drive.

The Site Plan should include the intersection sight distance at the proposed access drive so that the Town can determine if the intersection sight distance was measured based on standards followed by ConnDOT. For example, was the intersection sight distance measured 15 feet back from the edge of pavement of Leroy Avenue and was it based on an eye height high of 3.5 feet from the driver exiting the driveway to a point on the approaching lanes of Leroy Avenue at 3.5 feet? Since the area is generally flat, the only request is that the intersection sight distance be shown on the Site Plan. Therefore, no profiles are necessary to show intersection sight distance.

The Applicant should address the impact to sight distance at the intersection of Leroy Avenue and West Avenue. The Town has a regulation (Section 221) that indicates a clear corner sight area is needed and measures 30 feet from the intersecting street. This area must be kept clear of fences, walls or plantings, which measure three feet above the pavement.

5. *No-Build Traffic Volumes* – The 2007 volumes were expanded to reflect a 2009 design year by applying a two percent per year growth rate and traffic from other developments. These developments include Whole Foods, senior housing on the Library site and the mixed-use development on Boston Post Road, which is identified as the Darien-Rowayton Bank/Dolcetti Properties.

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The no-build traffic volumes applied to the 2007 baseline volumes are appropriate for purposes of completing this analysis.

6. *Site-Generated Traffic Volumes* – The Applicant has provided appropriate information to determine estimates for site traffic for this type of development. It is a senior development for residents 62 years and older. The estimate that this development will likely generate 4 and 6 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively is appropriate.

For comparison purposes, if the Applicant was to apply an apartment or condominium-type development the trip rate for 16 units a development of this type and size, without any age restrictions, could generate approximately 8 vehicle trip ends during each peak hour. Although these numbers are higher than the volumes used in the analysis, the difference or net increase in site traffic will have an insignificant impact on the overall operation of nearby intersections.

7. *Capacity Analysis* – The Applicant provided an analysis of the proposed access drive to Leroy Avenue. However, the Applicant should have provided, at a minimum, an analysis of the signalized intersection of Leroy Avenue and West Avenue. The purpose of this analysis is not to specifically identify the potential impact from this development; however, to identify how this intersection is currently operating during peak hours. This intersection has traffic related to the Train Station, commuters traveling to and from Boston Post Road and Interstate 95 and residents traveling to and from nearby Schools.

The results of this analysis will provide more information, with regard to the vehicle queue of northbound motorists traveling on Leroy Avenue along the site frontage.

The Applicant's statement that the vehicle queue length of the northbound approach of Leroy Avenue at the traffic signal at West Avenue indicates that it could be 100 to 155 feet (5 to 7 vehicles) south of the signalized intersection and would block the proposed site access drive at certain times. This could have a negative impact on exiting movements from the site driveway.

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Again, as noted above, the request for an analysis of the signalized intersection is not specifically to identify potential impact of this proposed residential development; however, to identify current and anticipated operation of this intersection and the need, if any, to modify traffic signal timing or any other changes to improve overall safety and operation.

The report does not identify the level of pedestrian activity at this intersection and the need to modify the intersection, if necessary, to accommodate pedestrians.

8. *Site Access* – The Site Plan does not show any separate sidewalk from the sidewalk along Leroy Avenue into the subject property and the main entrance to the building. It implies that pedestrians and residents will walk along the driveway from Leroy Avenue into the parking garage and have access to a walkway to the entrance to the building. It may be more appropriate to provide a sidewalk or walkway area separate of the driveway to the sidewalk on Leroy Avenue.

As noted above, the Site Plan should indicate if there are crosswalks at the signalized intersection of Leroy Avenue and West Avenue. If there are no crosswalks and/or no handicap ramps at this intersection, at least at the corner of the site access, it may be appropriate to provide these amenities.

9. *Summary* – The Applicant has provided information in both the Site Plan and Traffic Study, which we would typically require. However, there are certain areas that the Applicant should provide additional information for so that the Town can better understand the overall operation of nearby roadways, safety aspects of adding pedestrians to the nearby signalized intersection and the ability to walk to and from the Train Station and Business District along Boston Post Road.

The Applicant needs to provide additional information with regard to intersection sight distance at the proposed driveway.

The Applicant should also identify on-street parking availability along both Leroy Avenue and West Avenue, if there is parking along these two streets is there any



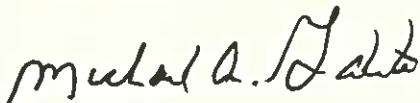
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need to prohibit parking to ensure appropriate intersection sight distance at the proposed driveway on Leroy Avenue.

Please note, I will not be able to attend the July 8<sup>th</sup> meeting; however, will attend the July 15<sup>th</sup> meeting to respond to any questions.

Sincerely,



Michael A. Galante  
Executive Vice President