

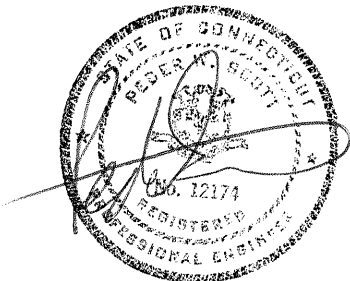
**2 Hollyhock Road
Wilton, CT**

PARKING STUDY

Prepared by:

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Brewster, NY 10509

Date: April 29, 2020
Updated: January 11, 2021



Parking Study

Project: 2 Hollyhock Road
Conversion from an Office Building to 8-30g Apartment Building.

Scope

The following is an analysis of the parking requirements resulting from the conversion of an office building use to that of an apartment building based upon the Town of Wilton Regulations with a comparison to the ITE Parking Generation Manual, 5th edition. The ITE manual provides parking rates for various land use types (Residential, Retail, etc) in various settings (Suburban, dense urban and city center core, etc.) The ITE data also includes an Affordable housing component which shall be discussed in the following report.

The project as submitted consists of 18 apartments with studios, one- and two-bedroom units as outlined below of which 30% are affordable, made up of 15% (3 units) at 85% market rate and 15% (3 units) at 60% market rate.

Apartment	Affordable Housing (6 Units)	Floor	Type
1		1st	Studio
2		1st	1 -Bed
3		1st	1 -Bed
4	AF4	1st	Studio
5	AF5	1st	2-Bed
6 Handicap		1st	Studio
7		1st	2-Bed
8	AF2	2nd	2 -Bed
9	AF3	2nd	Studio
10		2nd	2-Bed
11		2nd	Studio
12	AF1	2nd	1 -Bed
13		2nd	Studio
14 Handicap		2nd	1 -Bed
15		3rd	2-Bed
16		3rd	2-Bed
17		3rd	Studio
18	AF6	3rd	Studio

Based upon the site plan prepared, the project proposes 23 parking spaces plus one handicapped space which is not considered in this analysis, refer to attachment Figure 1.0.

Methodologies

Parking requirements for various land uses are typically determined based upon the municipality Zoning Regulations. However, since the project is considered unique in nature due to the following factors, the parking regulations for the project can be different than what is required for a typical residential use:

- The relatively small size of the units
- Affordability housing designation classification for a portion of the units.
- Proximity of the units to the main commercial corridor of the municipality.

The above factor could potentially result in reduced parking demand for the proposed project. Hence to determine the required parking demand for this unique project, this analysis evaluates the forecast parking demand of the project utilizing the following various methodologies and sources.

- Parking required based on the Town of Wilton Parking Regulations.
- Parking required based upon the Institute of Transportation Engineers (ITE) Parking Generation Manual 5th Edition (January 2019);
- Parking required based upon similar projects submitted to the Town of Wilton

I) Municipal Zoning Regulations

Based upon the Town of Wilton zoning regulations, the following is the parking requirements for multi-family dwelling.

Parking required per Town of Wilton Zoning	
Studio	1.5/unit
One-bedroom	2/unit
Two bedroom	2/unit
Visitor Parking	1 space per 2 units

Project Parking Capacity required per Town of Wilton Zoning					
Land Use	Quantity	Units	Parking Required	Total Parking	
Studio	8	dwelling units	1.5	12	spaces
One-bedroom	4	dwelling units	2	8	spaces
Two bedroom	6	dwelling units	2	12	spaces
Visitor Parking	10	1&2 bedroom	0.5	5	spaces
			Total req'd	37	
			Round-up	37	spaces
			Parking Provided:	23	spaces
			Compliance to regulations	-14	spaces
			Percentage of req'd parking	62.16%	spaces
					percentage

II) Parking required based on the ITE Parking Generation Manual

The Institute of Transportation Engineers (ITE) Parking Generation Manual is a widely accepted source for the determination of parking demand. The Manual contains parking requirements and rates for various land uses based upon empirical and recorded data from existing sites. The most recently updated Manual consists of an updated data base reflecting the impacts of rider sharing companies, trends in vehicular use by younger adults and other factors which effect parking demand.

The fact is that the municipal codes adopted by most communities reflect a general land use in which one regulation fits all residential land uses while the ITE Manual creates numerous categories which reflect demand based upon unit densities, locations and the affordability index. The ITE also breaks down the parking requirements for weekday, Saturday and Sunday conditions. With this project, in which the predominant land uses on Hollyhock Road are commercial, the weekend parking requirements do not govern the capacity of the project due to street side parking opportunities.

The ITE Manual has developed parking requirements based upon either bedroom count or unit count. With a project which includes 2- bedroom units and the demographics of the area in which each unit can house couples with several vehicles, the unit count analysis is more accurate than that based upon bedroom count.

For the use category of Low Rise housing (category 220) for weekday parking within an Urban/Suburban area, for the peak demand period, the parking demand is based upon an equation: $P-1.34(x) - 8.06$ in which x is the number of units. Since the project is of a minor size, an average of 1.25 spaces per unit with the 85% percentile of 1.4 spaces per unit can be utilized to determine the parking demand, refer to the attached ITE data sheet.

The affordable housing analysis completed by the ITE Parking Generation Manual includes all multi-family housing that is rented at below market rate to households that include at least one employed member. The eligibility to live in an affordable unit is based upon housing income and/or the resident's age. Most of the studies completed by ITE consisted of between 75% to 100% affordable with units, recorded at sites in the general urban/suburban setting.

The affordability index for the proposed units in the Wilton area must be reviewed based upon the demographics and the respective income ranges to that of vehicle ownership. The occupant income levels for the "85% of market Affordable units" will not impact the number of vehicles owned, and thus these units are analyzed under the ITE Low-Rise housing category. The occupant income level of the "65% of market Affordable units" would have a significant impact on vehicular ownership and are therefore analyzed under the ITE Affordable category.

Based upon 5th Edition ITE Manual-Affordable Housing required parking is;

Weekend: 0.99 spaces/dwelling unit
 Saturday: 0.79 spaces/dwelling unit
 Sunday: 0.96 spaces/dwelling unit

An analysis combining the (15) units of Low-Rise Housing category and the (3)-65% percentile market rate Affordable category for the weekday peak is tabulated below based upon the ITE manual. The handicapped space allocation is assumed to be constant for the two categories of use.

Project Parking Capacity Planned to be provided per ITE Manual					
weekday: 11:00 pm to 6:00 am					
Land Use	Quantity	Units	Parking Required	Total Parking	
Low Rise units	15	dwelling units	see equation	12.05	spaces
Affordable	3	dwelling units	0.99	2.97	spaces
Visitor Parking	10	1&2 bedroom	0.5	5	spaces
			Total req'd	20.02	spaces
			Round-up	20	spaces
			Parking Provided:	23	spaces
			Compliance above ITE Manual	3	spaces
			Percentage of ITE manual parking	115.00%	percentage

The above analysis is based upon the 85% percentile of prediction, refer to the attached ITE Category Data Sheet. Based upon the ITE analysis completed, the project has proposed adequate parking for the intended Apartment use.

III) Comparison to similar projects

The standard for the review and approval of projects is based upon the premise that each project is reviewed equally relative to the zoning codes of the municipality. Accordingly, precedents are established in how the regulations applied, especially with regards to parking regulations and actual parking at similar projects.

One such study completed in 2015 by Malone & MacBroom Traffic Engineers reviewed numerous apartment complexes in Fairfield County with regards to actual observed parking use. While many of the projects were larger in size, the trend indicates that for smaller projects, less than 50 units, the actual parking is less than that required by the municipality.

This analysis indicates that this while deficient in parking spaces required per the Town of Wilton regulations, meets the predicted parking demands based upon an ITE analysis.

IV) Findings and Conclusions

Based upon the Town of Wilton regulations, 37 parking spaces are required.

Predicted by ITE Parking Generation Code

Based upon this analysis, 23 spaces are required.

Since 23 spaces are proposed, this project meets the 85% percentile parking demand in compliance with ITE recommendations.

The adequacy of parking is met based upon the predicted parking demands estimated by the ITE Manual. This addresses trends in reduced parking for apartments due to changes in vehicular use, use of ride share capabilities and proximity to facilities along the Route 7 corridor. With the completion of the sidewalk, a pedestrian walkable environment has been created with a bus stop across the street. The trends anticipated in many studies is a reduction in vehicular use in the near future, with the potential of alternate means of mass transit, such as bus routes, autonomous vehicles and ride share capabilities. This is in addition to the impacts of expanded virtual work environments coupled with delivery services and expansion of key commercial and office facilities in walking distance to the subject apartments, all of which reduce the need for individual vehicle use. Accordingly, there is no anticipated increase in parking required for this occupancy.

The geometry of the site also provides for additional parking along Hollyhock Road which during daylight hours is used by several of the commercial establishments and visitors to the apartments after business closing hours or on weekends. While a specific on-site parking analysis was not completed, this anticipated additional capacity if available and additional to the parking proposed on the site plan. The sidewalks improvements along Route 7 have been completed which assist in pedestrian's access to the site.

Respectfully Submitted:

A handwritten signature in black ink, appearing to read 'Peder W. Scott', with a long, sweeping horizontal stroke extending to the right.

Peder W. Scott, P.E., R.A.
President

1/12/2021

Date

DRIVEWAY DAVIS CORP.

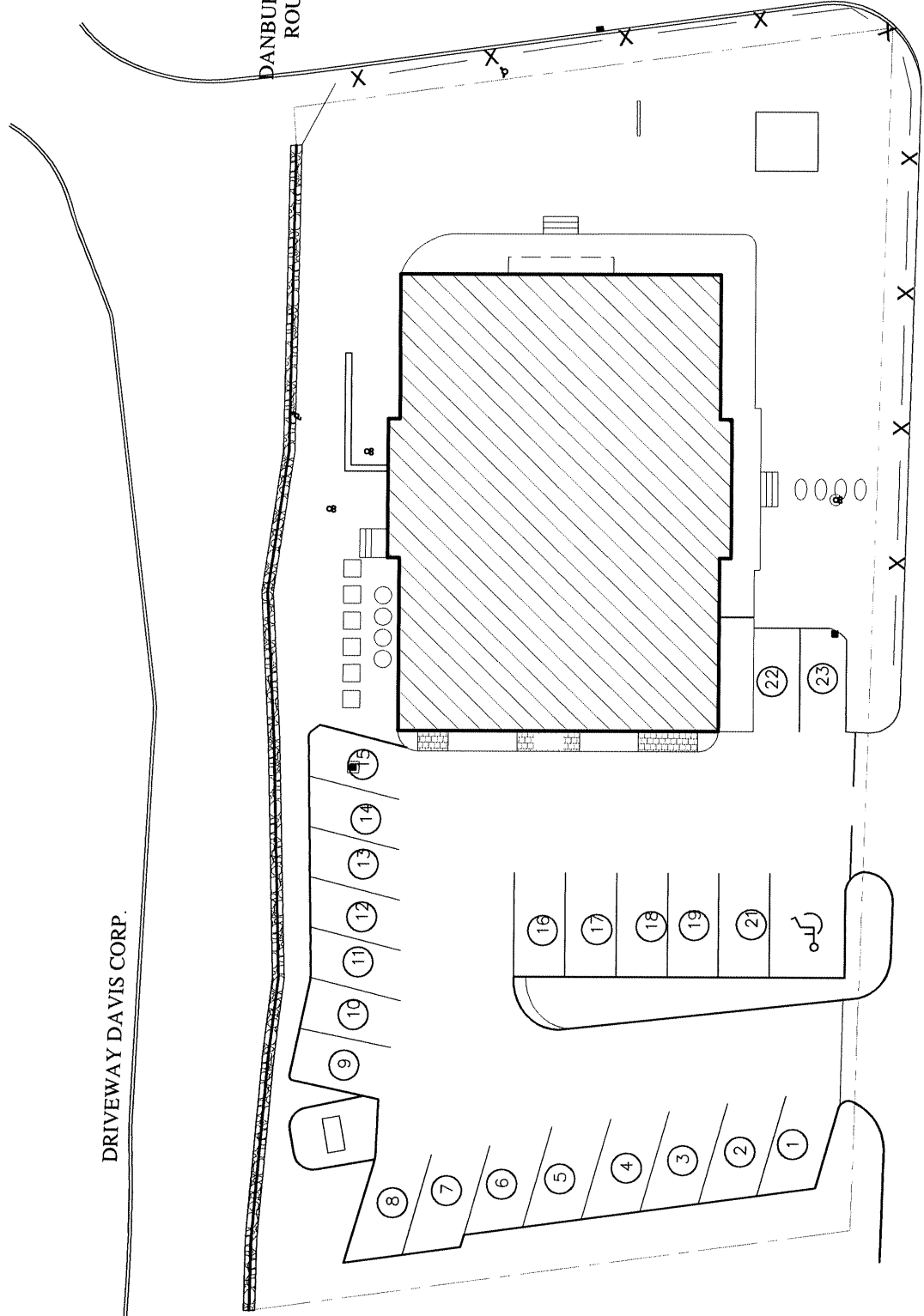
DANBURY ROAD
ROUTE 7

HOLLYHOCK ROAD

SITE PLAN

SCALE: NTS

FIGURE 1.0





Memorandum

TO: Timothy S. Hollister, Esq.

FROM: Dave Sullivan, P.E., Milone & MacBroom, Inc.

DATE: May 19, 2015

RE: Residential Parking Assessment
Wheelers Woods Residential Community
Milford, Connecticut
MMI #4962-01-21

De Sullivan
RECEIVED AT
PUBLIC HEARING

MAY 19 2015

MILFORD
P & Z BOARD

It is proposed that the Wheelers Woods Residential Community development provide an on-site parking supply based on 1.8 parking spaces for all one-bedroom units and 2.0 parking spaces for all two-bedroom and three-bedroom units. The City of Milford parking requirement, however, is 2.0 parking spaces for efficiency and one-bedroom units and 3.0 parking spaces for two-bedroom and three-bedroom units. Nevertheless, based on our research of parking at residential multifamily developments, the proposed parking supply at Wheelers Woods Residential Community is expected to be adequate. Milone & MacBroom, Inc. (MMI) has undertaken extensive study of residential parking in Connecticut over the years, finding that overall parking usage at residential apartment and condominium developments is consistently less than 2.0 parked vehicles per dwelling unit.

The proposed Wheelers Woods Residential Community is to have 180 dwelling units: 62 one-bedroom units, 100 two-bedroom units, and 18 three-bedroom units. Overall, there will be 1.76 bedrooms per unit at the proposed residential development. A total of 352 parking spaces is proposed based on the aforementioned ratios, which equates to an aggregate on-site parking supply of 1.96 spaces per unit.

Attached to this memo is a spreadsheet containing empirical data on parking usage collected at various residential developments in Fairfield and New Haven Counties from 1998 to the current day. Each of the 59 individual observations found a parking demand ratio of less than 2.0 occupied parking spaces per unit. The majority of observations found the residential parking at less than 1.5 parked vehicles per unit. Only one of the 59 observations yielded a ratio near what Wheelers Woods Residential Community is proposing. This was at Harbour Woods in Stratford, a 36-unit luxury development with all two-bedroom units and no one-bedroom units.

Review was also made of national data on parking use published by the Institute of Transportation Engineers (ITE).¹ ITE contains parking data for numerous different land uses. For "Low/Mid-Rise Apartments," the average peak-period parking demand was found to be 1.23 vehicles per dwelling unit, with a 95% confidence level of 1.37 parked vehicles per unit. For "Rental Townhouses," the average peak parking demand was 1.62 vehicles per unit. For "Rental Condominium/Townhouses," the average peak parking demand was 1.38 vehicles per unit.

Based on all of this data, we believe that typical parking use at the Wheelers Woods Residential Community will be less than 2.0 parked vehicles per unit. If we assume a parking demand of around say

¹ *Parking Generation - 4th Edition*. Institute of Transportation Engineers, 2010

1.5 vehicles per unit, for example, the 180 proposed units would generate 270 parked vehicles. With a total of 352 parking spaces proposed, this would leave around 80 empty parking spaces on the site under typical peak conditions. During atypical times such as holidays, parties, and events at the community clubhouse, we believe that the on-site supply of 352 spaces will still be adequate to accommodate any temporarily heightened parking demands.

Enclosure

4962-01-21-m1915-memo

RESIDENTIAL PARKING COUNT DATA

Site Location		Count Date	Number of Units	Number Bedrooms per Unit	Parked Vehicles per Unit
Avalon Haven	North Haven	Tue, 7/10/01	128	1.77	1.43
Avalon Haven	North Haven	Wed, 10/10/01	128	1.77	1.05
Avalon Haven	North Haven	Wed, 10/10/01	128	1.77	1.52
Avalon Haven	North Haven	Sat, 10/13/01	128	1.77	1.20
Avalon Haven	North Haven	Sat, 10/13/01	128	1.77	1.40
Avalon Springs	Wilton	Wed, 11/17/99	102	2.30	1.69
Avalon Walk East	Hamden	Thu, 12/3/98	334	1.42	1.16
Avalon Walk West	Hamden	Thu, 12/3/98	430	1.73	1.43
Foxbridge Village	Branford	Thu, 11/18/99	140	2.00	1.84
Golden Hill Apts.	Milford	Tue, 7/10/01	80	2.00	0.60
Harbour Woods	Stratford	Thu, 6/28/01	36	2.00	1.97
Hawley Glen	Stratford	Thu, 6/28/01	40	1.35	1.75
Hickory Woods	Stratford	Thu, 6/28/01	42	1.62	1.64
Milford Apartments	Milford	Mon, 7/9/01	22	1.00	1.27
Milford Chase	Milford	Mon, 7/9/01	20	1.00	1.05
Milford Hunt	Milford	Mon, 7/9/01	32	1.00	1.03
Southwick	Milford	Tue, 7/10/01	27	2.00	1.48
St. John Common	North Haven	Thu, 12/3/98	70	2.00	1.54
St. John Common	North Haven	Wed, 12/11/98	70	2.00	1.31
The Stratford Arms	Stratford	Thu, 6/28/01	94	1.37	0.71
Tide Harbor	Stratford	Thu, 6/28/01	128	1.13	1.10
Woodland Hills	Branford	Thu, 11/18/99	97	2.60	1.82
Residential Community In	Milford	Thur, 2/14/08	246	1.25	1.26
Residential Community In	Milford	Sat, 2/16/08	246	1.25	1.19
Residential Community In	Milford	Sun, 2/17/08	246	1.25	1.22
Residential Community In	Hamden	Thur, 2/14/08	764	1.59	1.09
Residential Community In	Hamden	Sat, 2/16/08	764	1.59	1.23
Residential Community In	Hamden	Sun, 2/17/08	764	1.59	1.31
Residential Community In	Orange	Thur, 5/1/08	168	1.50	1.13
Residential Community In	Orange	Sat, 5/3/08	168	1.50	1.09
Residential Community In	Orange	Sun, 5/4/08	168	1.50	1.15
Residential Community In	Danbury	Thur, 2/14/08	268	1.71	1.31
Residential Community In	Danbury	Sat, 2/16/08	268	1.71	1.34
Residential Community In	Danbury	Sun, 2/17/08	268	1.71	1.38
Residential Community In	New Canaan	Wed, 4/16/08	104	2.10	1.64
Residential Community In	New Canaan	Sat, 4/12/08	104	2.10	1.60
Residential Community In	New Canaan	Sun, 4/13/08	104	2.10	1.58
Residential Community In	Stamford	Thur, 5/29/08	323	1.48	1.14
Residential Community In	Stamford	Sat, 5/31/08	323	1.48	1.04
Residential Community In	Stamford	Sun, 6/1/08	323	1.48	1.04
The Fairfield Apartments	Stamford	Thur, 4/24/14	258	1.47	1.11
The Fairfield Apartments	Stamford	Fri, 4/25/14	258	1.47	1.00
The Fairfield Apartments	Stamford	Sun, 5/4/14	258	1.47	1.00
The Fairfield Apartments	Stamford	Tue, 5/6/14	258	1.47	0.98
Eastside Commons	Stamford	Tue, 7/12/11	108	2.14	1.39
Glenview House Apts	Stamford	Tue, 7/12/11	135	2.22	1.33
Glenview House Apts	Stamford	Tue, 6/12/12	135	2.22	1.33
Glenview House Apts	Stamford	Wed, 7/11/12	135	2.22	1.28
Glenview House Apts	Stamford	Thur, 7/12/12	135	2.22	1.30
Glenview House Apts	Stamford	Thur, 8/23/12	135	2.22	1.32
Glenview House Apts	Stamford	Wed, 8/29/12	135	2.22	1.36
Glenview House Apts	Stamford	Thur, 9/6/12	135	2.22	1.18
Glenview House Apts	Stamford	Fri, 9/7/12	135	2.22	1.23
Avalon (on Woodmont)	Milford	Thur, 5/14/15	246	1.25	1.33
Avalon (on Woodmont)	Milford	Sat, 5/16/15	246	1.25	1.30
Avalon (on Woodmont)	Milford	Sun, 5/17/15	246	1.25	1.30
1060 New Haven Ave	Milford	Thur, 5/14/15	138	1.57	1.44
1060 New Haven Ave	Milford	Sat, 5/16/15	138	1.57	1.38
1060 New Haven Ave	Milford	Sun, 5/17/15	138	1.57	1.41

PROPOSED WHEELERS WOODS RESIDENTIAL COMMUNITY

180

1.76

Proposed Number of Parking Spaces per Unit:

1.96

83