

**Zoning Board of Appeals
Approved, October 29, 2020
ZBA FY2020-39**

Parking Study / AMHERST STUDIO HOUSING Development

132 Northampton Road, Amherst, MA

Parcel 14C-8

Prepared by Berkshire Design Group & Valley CDC
May 19, 2020

The project proposes to locate 28 low to moderate income studio residential units within walking distance of downtown. The selected parcel is located less than ½ mile to Amherst Town Center with amenities such as Town Hall, the Library, and many restaurants and shops. The 0.88-acre parcel has frontage along Northampton Road/ Route 9. The parcel is bordered to the north by Route 9, a residential property to the east, and by Amherst College's Pratt Field to the south and west.

Plans are currently in process (75% design completion phase) by MA Department of Transportation, which owns and maintains Northampton Road (a State Highway), to improve sidewalks on Northampton Road, creating 5' wide walk-ways. There will be a new sidewalk connecting the building with the sidewalks on Northampton Road, with the sidewalk onsite safely separated from the site driveway and parking area.

The project is proposing 16 parking spaces at a ratio of 0.57 spaces per unit. 132 Northampton Road is a highly walk-able location, 4/10 mile from nearest bus stop, and close to the bike trail. From a review of locally verifiable information, the parking utilized or needed for these types of facilities has consistently shown a reduced requirement for onsite parking below the 0.57 ratio we are proposing.

On February 19, 2020, the applicant met with the Amherst Planning Board to provide an overview of the proposed development and allow for comment. The Planning Board Chair commented that that amount of parking (at that time only 14 spaces, or .5 spaces / unit) seemed "appropriate" for the use, as did the use of a portion of grass-crete paved parking area.

There are four combined factors that reduce the parking demand for the proposed development from a residential average. Studies, as cited later in this document, show that: (1) rental housing generates less parking demand than ownership housing; (2) small units generate less parking demand than larger units; (3) affordable housing generates less demand than market rate housing; (4) housing in walk-able locations, in proximity to public transit, generates less demand than housing in less central locations.

The accessory use of this property (service coordination) will naturally be timed so as to share parking with tenant uses. On-site staff (1-2 persons at any given time) and service provider visits will occur primarily during weekday business hours. Whereas peak demand for tenant parking will occur overnight and on weekends. Based on experience at other properties, up to 50% of tenants with cars will drive to work or other daily activities, freeing up parking spaces during the weekday for staff or providers.

The table on the following page gives multiple, similar local examples of actual parking provided and utilized for low to moderate income housing:

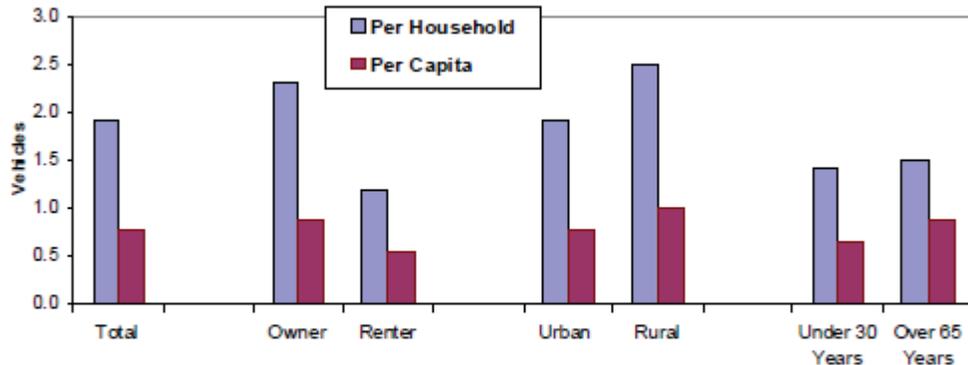
Location	Number of Units	Property Type	Number of Occupying Adults	Parking Provided	Average Daily Parking Utilized	Utilization Ratio per Occupying Adult
96-98 King Street Northampton	10	Affordable Single Person Studio Apts.	10	0	0	0
82 Bridge Street Northampton	15	Affordable Lodging House	15	8	4	.5
16 N Maple Street Florence	11	Affordable Single Person Studio Apts.	11	0	0	0
1-3 N Main Street Florence	17	Affordable Lodging House	17	0	0	0
Sergeant House Expansion Northampton	31	Affordable Single Person Studio Apts.	31	14	Permitted Not Yet Occupied	N/A
Earle Street Northampton	14	Affordable Single Person Studio Apts.	14	16	8	.57
The Lorraine, 96 Pleasant Street, Northampton	28	Affordable Single Person Studio Apts.	28	0	0	0
Live 155, 155 Pleasant Street, Northampton	70	Mixed income studios and 1-bedroom Apts.	70+	0	0	0
The Lumber Yard	55	Affordable Family Housing (1,2,3 bedroom Apts.)	64	41	37	.58
Chestnut Crossings, 275 Chestnut Street, Springfield	101	Affordable Single Person Studio Apts.	101	100	34	.34
Average Utilization for All Properties						.22
Average Utilization for Properties that Provide Parking						.49

I. Rental Housing Generates Less Parking Demand than Ownership Housing

Parking studies, such as the example excerpted below, document that statistically rental housing as a type of housing generates lower demand for parking spaces than ownership housing types.

“Vehicle holdings and parking demand for apartment renters are much lower than for owners. This is consistent with prior research. In purpose-built market rental sites, the parking demand range is 0.58 – 0.72 vehicles per apartment unit.”¹

Figure 5 Vehicles Per Household (BLS, 2002)



Household vehicle ownership rates vary depending on factors such as home tenure, location and resident age.

Source of Figure: *Parking Requirement Impacts on Housing Affordability* Victoria Transport Policy Institute, March 2020, p 5

As the figure above illustrates, typical per capita vehicles for rental households is 0.5. Per capital rates are most applicable to the proposed development, which includes only single person occupancy units.

II. Small housing units generate less parking demand

“Auto ownership increases with the number of bedrooms.”²

Many Cities and Towns are starting to directly address the disproportionate impact of “one size fits all” per unit parking requirements on small or micro housing units. Both Northampton, MA and Berkley, CA have residential zones that prescribe the required number of parking spaces based upon gross square footage (GSF) of living area, requiring one parking space for every 1,000 GSF of living space. An excerpt from Northampton’s zoning bylaw, Section 350-8.1, below is applicable to all zones in Northampton with the exception of the Central Business Zone, which does not require parking. In all zones other than Central Business, one parking space is required for every:

¹ The Metro Vancouver Apartment Parking Study, Technical Report, Sept 2012, p iv

² The Metro Vancouver Apartment Parking Study, Technical Report, Sept 2012, p 13

Multifamily dwelling for elderly and people with disabilities, lodging house, dormitory, SRO, and halfway house *1,000 square feet of gross floor area, up to a maximum of one per dwelling unit for multifamily dwellings*

Providing one parking space for every 1,000 GSF in the proposed development at 132 Northampton Road (which is just under 12,000 GSF) would require 12 parking spaces.

Seattle’s Planning Department recommended one parking space for every four micro dwelling units. By this standard, the proposed development would require 7 parking spaces.³

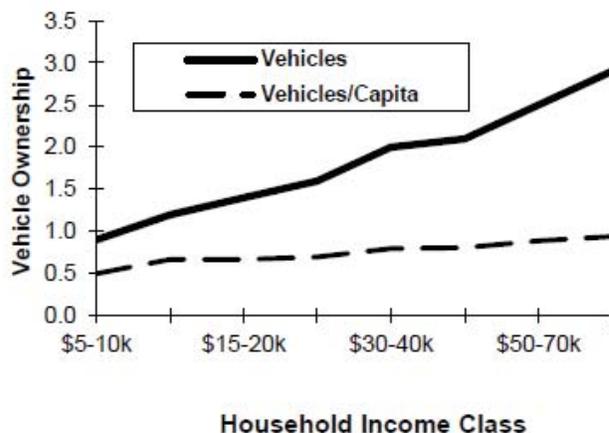
III. Affordable Housing generates less parking demand

“The likely residents of affordable housing do not require a great deal of parking. Studies show that the correlation between income and vehicle ownership is strong, with the likelihood of owning more than one vehicle increasing with income. Low-income families, seniors, and special needs populations are less likely to require the use of more than one parking space, if that at all. The need for parking also decreases for residents in dense areas near transit.”⁴

Parking Demand by Households

Automobile ownership varies significantly, and is affected by demographic, geographic and management factors (“Parking Evaluation,” VTPI, 2005; Hexagon Transportation Consultants 2008; San Diego 2011; Metro Vancouver 2012). Twelve percent of U.S. households do not own a motor vehicle, with higher rates of zero-vehicle households in larger cities and lower-income communities (BLS, 2003). Motor vehicle ownership rates tend to increase with income and household size, as indicated in figures 2 through 5 (also see Rice, 2004; CNU, 2008).

Figure 2 **Vehicle Ownership by Household Income (BLS, 2003)**



Lower income households own fewer automobiles than wealthier households.

³ City of Seattle Department of Planning and Development, Director’s Report and Recommendation Micro-housing and Congregate Residences, October 1, 2013, p 22

⁴ Parking Requirements Guide for Affordable Housing Developers, Southern California Association of Non-Profit Housing, 2004, p 3

Source of Figure: *Parking Requirement Impacts on Housing Affordability* Victoria Transport Policy Institute, March 2020, p 4

As illustrated above, and as evidenced by the parking counts from local affordable housing properties, the lower a household's income, the fewer vehicles that household is likely to own. In the above chart, the per capita ownership rates (which are most comparable to the proposed development) remain well below 1.0 cars per capita in the low and mid-range income brackets.

IV. Parking demand is less in walkable locations near public transit

“Numerous studies of other regions, the Bay Area and San Francisco have shown that vehicle ownership is lower in neighborhoods that provide quality alternatives to driving such as neighborhood shopping and frequent, high quality transit service.”⁵

Locus Maps provided in this permit application illustrate the wide array of community amenities that are within walking distance (typically less than 6/10 of a mile) from the site. Several bus stops are located 4/10 of a mile from the site. A well-used bike trail is nearby. With the increase in electric bikes, bike transportation is becoming more popular and available to persons in a wider range of ages and fitness levels. There are two electric bike share locations within walking distance of the site.

“High parking levels work in a cycle that actually increases congestion. In housing, here’s how it works: lots of parking means its price is “free” (despite its cost), free parking reduces the cost of, and thus increases the rate of car ownership, more vehicles means more driving on local roads. Breaking the cycle means ending mandates for high parking supplies.....Fewer cars mean more trips by walking and on transit, which serve to reduce neighborhood congestion.”⁶

The increasing use of ride services, such as Uber, also reduce the need for every individual to own their own car.

Summary:

The proposed parking ratio of 0.57 is more than what other similar facilities are providing. Additional parking would be unused and unnecessary extra paved surfaces. Studies show that: (1) rental housing generates less parking demand than ownership housing; (2) small units generate less parking demand than larger units; (3) affordable housing generates less parking demand than market rate housing; (4) housing in walk-able locations, in proximity to public transit, generates less parking demand than housing in less central locations.

⁵ Rethinking Residential Parking: Myths & Facts, Non-Profit Housing Association of Northern California (NPH), April 2001, p 3

⁶ Rethinking Residential Parking: Myths & Facts, Non-Profit Housing Association of Northern California (NPH), April 2001, p 5

Traffic Study / AMHERST STUDIO HOUSING Development

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The project proposes to locate 28 studio residential units within walking distance of downtown. The selected parcel is located in Amherst on the south side of the road just east of the Amherst College Pratt Field and less than ½ mile to Amherst Town Center with amenities such as Town Hall, the Library, and many restaurants and shops. The 0.88 acre parcel has frontage along Northampton Road/ Route 9. The parcel is bordered to the north by Route 9, a residential property to the east, and by Amherst College's Pratt Field to the south and west.

Plans are currently in process (75% design completion phase) by MA Department of Transportation, which owns and maintains Northampton Road (a State Highway), to improve sidewalks on Northampton Road, creating 5' wide walk-ways from University Drive to the Town Center on both sides of the road, and adding two crosswalks with blinking lights at the Orchard and Hazel cross streets. This will place one crosswalk just east of 132 Northampton Road and one just west of the site. The site contains an internal walkway system which separates the pedestrians from the drive. The walkways connect to the existing and proposed to be improved walkways on Northampton Road

The project proposes to demolish the existing house at 132 Northampton Road, and construct the new 28 unit studio residences in a single building near the rear of the parcel. The Drive has been relocated about 14 feet to the west of the original location. This is mostly to allow for turning radius required by MA DOT but also to accommodate immediate residential neighbor by providing a larger area for a planting buffer between the new driveway location and the property boundary. This location also provides the safest entry/exit from the site in that it separates the entrance at the furthest/safest distance from the Pratt Field entrance and the Dana Street/Route 9 intersection. There is adequate and safe sight distance at this location, which is over 400 ft to the east and over 800 feet to the west.

Between the Building and Route 9 the project is proposing 16 parking spaces at a ratio of 0.57 spaces per unit. The width of the access drive to these units is 20' with a 5' sidewalk to the west of the drive. The drive terminates in a hammerhead which also provides storage for dumpsters on site and services as an emergency vehicle turn around space.

Traffic Generation

The Institute of Transportation Engineers (ITE) "Trip Generation" report uses actual field surveys to estimate trips associated with a variety of land uses and is a nationally accepted standard. Although the ITE report does not specifically have traffic data for low income housing, which typically has much lower traffic generation than apartments, the traffic generation for apartments as listed in the ITE report was used to project traffic volumes for the proposed use of the property. Weekday Average Daily Traffic, (ADT), AM and PM Weekday Peak Hour, and Saturday ADT and Saturday Peak Hour generation values were developed.

The ITE report was used to project existing and proposed traffic volumes for the property. The existing use for the property is a single family residence and ITE Land Use Code 210 -*Single Family Detached Housing* was used for computation of existing traffic generation. The ITE Land Use Code 220 – *Apartments* was used assuming 28 units. Traffic generation from low income housing are typically less than an average apartment, and the trip generations listed in this report are actually higher than anticipated and as such reflect conservative estimate

of traffic impacts and the trip generations listed in this report are actually higher than anticipated and as such reflect a conservative estimate of traffic impacts.

A conservative estimate of the traffic to be generated by the project during the weekday morning peak hour, the weekday evening peak hour and the total weekday daily traffic is summarized below:

Traffic generation based upon ITE Land Use Code 220 – Apartment and 210 Single Family

Weekday ADT	Rate/Unit	% Enter	Trips enter	% Exit	Trips exit	Total trips
28 Residential Units	6.7	50	94	50	94	188
Minus 1 Single Family Unit	10	50	5	50	5	10
TOTAL			89		89	178

Weekday AM Peak	Rate	% Enter	Trips enter	% Exit	Trips exit	Total trips
28 Residential Units	0.75	36	8	64	13	21
Minus 1 Single Family Unit	0.75	35	1	65	1	1
TOTAL			7		12	20

Weekday PM Peak	Rate	% Enter	Trips enter	% Exit	Trips exit	Total trips
28 Residential Units	1.01	60	17	40	11	28
Minus 1 Single Family Unit	1.01	58	1	42	1	1
TOTAL			16		10	27

The current 75 % Mass DOT design plans list traffic counts conducted in 2016 which shows an average daily traffic, (ADT) on Route 9 in the vicinity of the project as 14,514 vehicles per day. The plans also listed as the Design Hourly Volume, (DHV) as 1,313, vehicles per hour, and the Directional Design Hourly Volume (DDHV) as 656 vehicles per hour.

Summary:

The site drive is located with adequate and safe sight distance, the site has an internal walkway separating pedestrians from driveway traffic, and the site will have pedestrian access to the central downtown amenities, thereby reducing the requirements for auto traffic generation by the residents

The anticipated MAXIMUM peak hour traffic to be generated by this project results in a traffic generation of only 27 vehicles per hour, or approximately 2 minutes between trips. In reality, it is anticipated that this number will actually be much less. This in comparison with the existing peak hour traffic on Route 9 of 1,313 vehicles per hour indicate that the additional traffic generated by this project will result in a very small incremental increase in traffic volumes on Route 9 that will have minimal impact on traffic operations on Route 9 or any other adjacent roadways or intersections.