

THE CLASS OF 1964 POLICY RESEARCH SHOP **WORKFORCE HOUSING IN HANOVER, NH**



PRESENTED TO THE TOWN OF HANOVER

Robert Houseman, Director of Planning, Zoning, and Codes for the Town of Hanover

This report was written by undergraduate students at Dartmouth College under the direction of professors in the Nelson A. Rockefeller Center. Policy Research Shop (PRS) students produce non-partisan policy analyses and present their findings in a non-advocacy manner. The PRS is fully endowed by the Dartmouth Class of 1964 through a class gift given to the Center in celebration of its 50th Anniversary. This endowment ensures that the Policy Research Shop will continue to produce high-quality, non-partisan policy research for policymakers in New Hampshire and Vermont. The PRS was previously funded by major grants from the U.S. Department of Education, Fund for the Improvement of Post-Secondary Education (FIPSE) and from the Ford Foundation and by initial seed grants from the Surdna Foundation, the Lintilhac Foundation, and the Ford Motor Company Fund. Since its inception in 2005, PRS students have invested more than 70,000 hours to produce more than 200 policy briefs for policymakers in New Hampshire and Vermont.

PRS POLICY BRIEF 2122-01
DECEMBER 2, 2021



PREPARED BY:
CECILY CRAIGHEAD
ASHKAAN MAHJOOB
JASMINE OH

NELSON A. ROCKEFELLER CENTER FOR PUBLIC POLICY AND THE SOCIAL SCIENCES

Contact:

Nelson A. Rockefeller Center, 6082 Rockefeller Hall, Dartmouth College, Hanover, NH 03755
<http://rockefeller.dartmouth.edu/shop/> • Email: Ronald.G.Shaiko@Dartmouth.edu

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
1 INTRODUCTION	3
2 PURPOSE STATEMENT	3
3 METHODOLOGY	3
4 THE SCOPE OF THE PROBLEM–THE NEED FOR HOUSING IN HANOVER	5
4.1 HOUSING DEFICIT IN THE REGION	5
4.2 COST OF HOUSING	5
4.3 COMMUTING IN THE REGION	6
4.4 EMPLOYEE SHORTAGE	7
5 FACTORS CONTRIBUTING TO THE HOUSING SHORTAGE IN HANOVER	8
5.1 STUDENT HOUSING	8
5.2 LANDLORD MONOPOLIES	9
5.3 VACANT HOUSING	10
5.4 SHORT-TERM RENTALS	10
5.5 ZONING AND REGULATION	11
6 CASE STUDIES	14
6.1 SANTA CRUZ, CA	14
6.2 TWIN CITIES, MN	15
6.3 WOODSTOCK, VT	17
7 POTENTIALLY APPLICABLE SOLUTIONS	19
7.1 TYPES OF HOUSING	19
7.1.1 MIXED-USE HOUSING	19
7.1.2 ACCESSORY DWELLING UNITS (ADUs)	20
7.2 LEGISLATIVE/REGULATORY CHANGES	22
7.3 OTHER POTENTIALLY APPLICABLE SOLUTIONS	22
8 CONCLUSION	24

EXECUTIVE SUMMARY

This policy brief explores the issue of and potential solutions for workforce housing in Hanover, New Hampshire. The Upper Valley region is predicted to be in need of an additional 10,000 housing units by 2030, simply to meet ongoing demand for affordable housing.¹ The lack of affordable workforce housing drives Hanover employees to seek accommodation in surrounding towns, with some commuting as far as an hour each way. This problem has resulted in a labor shortage for local employers; currently, the Dartmouth-Hitchcock Medical Center (DHMC) struggles to find workers to fill approximately ten percent of its workforce positions.² Furthermore, many Dartmouth College employees and workers at local Hanover businesses must also commute long distances due to unaffordable market prices.

The Town of Hanover seeks to alleviate this housing crisis and is currently developing a revised Master Plan. Potentially applicable solutions successfully implemented in Santa Cruz, California, Minneapolis-St. Paul, Minnesota, and Woodstock Vermont are increasing comprised of mixed-use housing and accessory dwelling units (ADUs). In addition, regulatory and legislative reforms such as inclusionary zoning mandates for new developments and a less restrictive definition of family have relieved some of the barriers to the development of sustainable workforce housing projects. Additional solutions include a moratorium on short-term rentals, developing a Community Trust, and employer-sponsored housing.

1 INTRODUCTION

The U.S. Department of Housing and Urban Development (HUD) defines affordable housing as “housing on which the occupant is paying no more than 30 percent of gross income for housing costs, including utilities.”³ Our report focuses on workforce housing, which is most often defined as “households that earn too much to qualify for traditional affordable housing subsidies... with incomes between 80 and 120 percent” of Area Median Income (AMI).⁴ Households that qualify for federal subsidies earn below 80 percent AMI. Our report focuses on a subset of affordable housing that houses people who earn between 80 and 120 AMI, thereby making them ineligible for federal subsidies. Given that these residents are unable to find housing at market-level prices, our research has identified workforce housing as the most pressing need in Hanover, New Hampshire.

Hanover has long struggled to meet the high housing demand for its workers and residents. Student housing, landlord monopolies, vacant houses, short-term rental housing, and restrictive zoning laws have all contributed to limited affordable workforce housing. Hanover is situated at the heart of the Upper Valley, a region composed of New Hampshire and Vermont towns surrounding the Connecticut River.⁵ The town is uniquely positioned in its proximity to the two major employers in the Upper Valley region: DHMC and Dartmouth College, which are also two of the top three employers in the entire state of New Hampshire.⁶

While Hanover is a major contributor to the Upper Valley economy and attracts many workers to the region, many of the people working in Hanover are unable to live in the town itself due to the high housing prices. The Town of Hanover recognizes that this issue must be addressed and is working to develop a Master Plan to increase affordable housing in hopes of reducing the cost burden that many regional employees face.

2 PURPOSE STATEMENT

The purpose of this report is to present research that will help Hanover assess its housing problem, particularly concerning the lack of workforce housing, in four ways. First, this report will assess the current scope of the housing problem in Hanover. Second, it will then evaluate contributing factors to the housing shortage. Next, this report will examine case studies to explore successful solutions in other areas of the country and assess their applicability for the Town of Hanover. Finally, we will present these potentially applicable solutions to the Town of Hanover.

3 METHODOLOGY

To understand the size and scope of the issue within Hanover, we began by reviewing relevant literature, such as briefs published in the Dartmouth College Rockefeller Center for Public Policy Research Shop, newspaper articles, legislation, real estate reports, reports published by local non-profits, and press releases. We then identified and met with key stakeholders. These included town

officials and local nonprofit leaders working to alleviate this housing shortage, as well as Hanover employees, residents, and students who are most directly impacted by the housing shortage. Then, we conducted interviews with these stakeholders, from which we extracted key insights about community needs.

To develop best practices and strategies for affordable housing initiatives, we identified areas across the United States that have successfully addressed these needs. These case studies had similar attributes to Hanover, such as geographic proximity, socioeconomic demographics, and a university and hospital as major employers. We spoke to individuals involved in the implementation of housing solutions in the locations of our case studies and extracted insights about which solutions would be viable for Hanover. Santa Cruz, California and the Minneapolis-St. Paul, Minnesota are both home to colleges and hospitals that have a major impact on the region's labor and housing markets. Santa Cruz also has implemented higher density mixed-use housing initiatives that have been successful in generating more housing and its school district is exploring an employee-sponsored workforce program that might benefit Hanover. Minneapolis-St. Paul was selected as a relevant case study because of the recent implementation of more inclusive legal definitions to amplify affordable housing stock. They also increased the number of unrelated persons that can live in the same unit. Our third case study is Woodstock, Vermont. It is located twenty miles from Hanover and shares similar socioeconomic and cultural demographics. Local government leaders have found success by collaborating with a local non-profit. Woodstock has also successfully passed limitations on short-term rentals, a problem that Hanover currently faces. In Section 6, we present our analysis of the affordable housing initiatives implemented by three case studies.

After reviewing these findings, we synthesized evidence of potentially applicable and transferable solutions to mitigate the negative impacts of the problem at hand. Housing has a direct impact on numerous interconnected groups—students to the workforce to the elderly to those living below the poverty line. Our team prioritized a human-centered research approach to identify needs, evaluate case studies, and generate recommendations. These efforts are crucial in gaining a better understanding of the issue through learning from multiple perspectives, identifying crucial knowledge gaps, and evaluating potential areas for synergies. We ultimately concluded that to best serve the Hanover community, we should direct the scope of our research to focus on workforce housing.

4 THE SCOPE OF THE PROBLEM – THE NEED FOR HOUSING IN HANOVER

Hanover is at the center of a regional housing shortage. Across income levels, Upper Valley residents are severely impacted by the lack of housing stock. Demand is so great that an additional 10,000 units will be needed by 2030 to meet housing demand in the Upper Valley region.⁷ Such high demand incentivizes landlords to increase rent prices above market level, and the presence of Dartmouth College students exacerbates the housing crisis as they are able and willing to pay inflated rates. Under these circumstances, the need for affordable housing is especially pressing.

4.1 HOUSING DEFICIT IN THE REGION

One-third of Upper Valley households are considered cost-burdened, meaning that they spend over thirty percent of their income on housing.⁸ Individuals who earn less than 80 percent of the area's median income qualify for housing subsidy programs such as Housing and Urban Development (HUD) funded housing vouchers.⁹ However, the group referred to as the “missing middle,” who earns between 80 and 200 percent of the AMI cannot afford market-rate rentals without spending over thirty percent of their income on rent. In Hanover, workforce housing is defined as between 80 and 120 percent of the Grafton County Area Median Income – \$69,920 and \$104,880.¹⁰ These individuals fall in this “missing middle” category and struggle to find housing in Hanover as they seek below-market rentals or subsidized housing to avoid being cost-burdened.¹¹

4.2 COST OF HOUSING

A major factor contributing to the “missing middle” being priced out of housing is the high cost of land in Hanover. The disparities between the cost of land in Hanover and Claremont, Enfield, and Springfield, three Upper Valley towns with high Hanover workforce populations, are stark. See Table 1 below for information regarding the number of commuters and miles commuted to Hanover. The median price per square foot for a Hanover listing was \$302.¹² The median price per square foot of Claremont, Enfield, and Springfield are \$92,¹³ \$183,¹⁴ and \$103¹⁵ respectively. In the state of New Hampshire, the median price per square foot is \$160. The cost per square foot in Hanover is more than triple the cost per square foot in a town thirty miles away. Only around ten miles outside of Hanover, in Enfield, the cost per square foot is almost cut in half but still above the statewide average. For workforce households that need housing below the median price per square foot, the most enticing options are at least thirty miles away which results in substantial transportation costs, dissuading many from accepting employment offers in Hanover.

Table 1: Median Cost Per Square Foot of Upper Valley Towns with High Hanover Workforce Populations

TOWN	MILES FROM HANOVER	NUMBER OF COMMUTERS	MEDIAN COST PER SQUARE FOOT
Hanover, NH	-	-	\$302
Enfield, NH	13	500-1000	\$183
Claremont, NH	31	500-1000	\$92
Springfield, VT	39	200-400	\$103

Source: *Regional Gaps and Needs Upper Valley Draft V2*, Steadman Hill Consulting Inc., pg. 9 and Realtor.com

The median cost of housing per square foot in Hanover when compared to three Upper Valley towns with high commuter populations—Claremont, Enfield, and Springfield—is higher by an average of \$176. Due to lower cost of land in nearby towns, Upper Valley workers are incentivized to live outside of Hanover.

4.3 COMMUTING IN THE REGION

As emphasized in the prior PRS report “Affordable Housing in the Upper Valley: Serving Dartmouth-Hitchcock Medical Center Employees,” a critical part of the tension between jobs and housing is the time spent commuting to work.¹⁶ As seen in Figure 1, while 9,302 people work in Hanover, only 1,540 Hanover employees live in town. Of the Hanover workforce, 83.4 percent commute from outside Hanover.¹⁷ Among workers who commute to Hanover, 4,740 travel less than ten miles, whereas an additional 1,167, or 12.5 percent of all people working in Hanover, commute more than 50 miles to work.¹⁸

Figure 1: Working and Living in Hanover



Source: *The Upper Valley—OnTheMap: A Profile of the Lebanon-Hanover NH-VT Micropolitan NECTA, 2012 Report*, pg. 9

In addition, parking in Hanover has been a substantial problem for commuters working in Hanover. A 48-page “Hanover Downtown Parking Plan Update” report commissioned by the Town of Hanover presented in March 2019 found that “much of the Town’s public parking supply was found to be overutilized,” making it “very difficult, if not impossible” to find parking in the downtown area during the weekday.¹⁹ The report suggested the increased use of off-street lots for customers and workers. As a result, the town put new parking rates and fines into effect to encourage commuters to park in 10-hour meter spaces on the outskirts of downtown. Although such efforts have mitigated the problem of crowded downtown parking to some degree, the situation once again highlights the difficulties of the workers who must commute to Hanover after being unable to find affordable housing in town.

4.4 EMPLOYEE SHORTAGE

In Hanover, the combination of low unemployment rates and the lack of affordable housing has left local business owners struggling to recruit employees. According to an article from the campus newspaper, *The Dartmouth*, Lou’s Diner owner Jarett Berke noted that “labor has always been tough in the Upper Valley” and Town manager Julia Griffin emphasized how the shortage of job seekers has been particularly acute with the onset of the COVID-19 pandemic.²⁰ Restaurants have even had to compromise the quality of service they offer due to being short-staffed. According to Olivia Nadworny ‘22, she was shocked by the service she received in her most recent visit to the popular Molly’s Restaurant, where her table was not served water for forty-five minutes after waiting over half an hour to be seated.²¹ In responding to her complaints about slow service, the manager attributed the long wait and poor service to being short-staffed. Additionally, businesses in town have reduced their hours due to this labor shortage. The café Nest Kitchen cut back their hours by almost fifty percent and reduced their menu offerings because they do not have enough staff.²² Asian restaurant Han Fusion has suspended indoor dining and Starbucks closed on Sundays and Mondays for the month of October 2021.²³ The Hanover Town Manager, Julia Griffin, highlighted three contributing factors to the labor shortage: inaccessibility of transportation, limited employee training opportunities, and the deficit in affordable housing stock.²⁴

DHMC, in neighboring Lebanon, is unable to fill job openings due to this housing deficit and is estimated to face an employee shortage of ten percent, or 900 jobs.²⁵ This deficit has tangible effects on the care DHMC offers. According to the COO Patrick F. Jordan III, MBA, “In order to continue to attract and maintain the level of candidates needed to uphold our standard of care, more choice in accessible, affordable housing within a reasonable commuting distance of DHMC and other Dartmouth-Hitchcock Health (DHH) facilities is necessary.”²⁶ Reviews for the hospital boast a mere two star-average on Yelp and repeatedly cite excessive wait times as a major issue patients have encountered.²⁷ This feedback sheds light on how the housing shortage contributes to workforce shortages in the area.

5 FACTORS CONTRIBUTING TO THE HOUSING SHORTAGE IN HANOVER

With the Hanover downtown steps away from Dartmouth College, much of the town's limited housing supply does not go to its workforce. Unlike neighboring Upper Valley towns, Hanover faces a unique circumstance—college students who wish to live within walking distance of the campus. This student demand is relatively inelastic when compared to many Upper Valley residents, as students are willing and able to pay much higher prices for rental units.

5.1 STUDENT HOUSING

According to Robert Houseman, Director of Planning, Zoning, and Codes for the Town of Hanover, approximately one quarter of Hanover housing stock is registered as rental units and undergraduate students occupy over half of all rentals.²⁸ The rental market tends to cater to students by structuring leases around the Dartmouth academic calendar because landlords can expect to charge higher rent for student housing. Many students seek off-campus housing for a single ten-week term due to the Dartmouth quarter system, and landlords structure leases and advertise ten-week sub-leases to accommodate these demands and make sub-leases more convenient for students. As more landlords are incentivized by the higher rent prices they can charge students, more Hanover housing becomes student housing and the supply of long-term rentals available for the workforce is further depleted. This cycle results in even more inflated rent prices for all residents.

The pandemic has only further exacerbated the housing crisis. With the college offering reduced spaces on campus to mitigate the spread of the virus, many students have sought off-campus housing to remain within close proximity to the campus.²⁹ Limited supply of Hanover housing along with increasing demand has resulted in students finding short term leases in nearby towns such as Quechee (approximately a twenty-five-minute drive) or in some cases, even pursuing long-term stays at hotels.³⁰

An example of the latter was when Six South Street Hotel opened its doors to Dartmouth students for the 2020-2021 academic year. The hotel, which has rooms on its second, third, and fourth floors, rented out the entirety of its second floor and part of its third floor to Dartmouth students for the fall, winter, and spring terms. Students were charged on a per night basis at a reduced price. A room with one bed cost \$60 per night, while a room with two beds was \$40 a night. A student staying in a room with one bed was paying \$1,800 a month, which is significantly more expensive than most Hanover leases. The rooms did not have kitchens, and many of the students we interviewed relied primarily on take-out meals from restaurants in town or microwaveable meals since the College did not allow off-campus students to have a meal plan at this time.³¹ Upon contacting Six South Street Hotel, they informed us that this program is no longer available for the 2021-2022 academic year and beyond.

This situation highlights the inelastic demand of Dartmouth students' housing in Hanover. They are able and willing to pay much higher prices, even living in conditions lacking kitchens, while other

community members cannot or are not willing to pay the same prices for living spaces with these conditions. This example demonstrates the extent of the housing shortage across demographics, but the option to pay high prices is not available to the missing middle that seeks workforce housing. When students are forced to pursue unconventional housing options such as hotels, it is because there is simply not enough supply for them in the housing market, and these are individuals who are predominately willing and able to pay higher prices than the workforce. If the student housing market were less saturated, there would be more space available for the workforce that desperately needs more supply to offset the prices.

5.2 LANDLORD MONOPOLIES

Rental market pricing is further skewed by the concentration of properties in the hands of a select few. Jolin Kish, who leases approximately 600 units out of Hanover's 1000 rental units to Dartmouth students, explains: "Downtown Hanover is a pretty limited geographical area, which is what keeps the cost so expensive in the first place for real estate, because it's such a limited supply."³² In fact, the supply is limited to the extent that an employee from Kish Consulting & Contracting stated that in her eight years overseeing Kish's properties in Hanover, she has seen zero vacancies. For more desirable off-campus student apartments, she reported that students typically reserve leases 2 years in advance, and this lead time is only growing.³³ Another real estate management company, First Safe Company, owns an additional 29 units of student housing.³⁴ Although the high rent for student apartments can be attributed to high demand, many students have expressed concerns that landlord monopolies result in renters paying inflated prices. Janice Chen, a Dartmouth student of the 2019 class, commented, "When there are two or three main people who essentially have a monopoly on student housing, they feel like it gives them the power to set the rental price at whatever they want."³⁵ Year on year, landlords raise the prices, as explained by Ella Ryan, a Dartmouth 2018 graduate, who felt that she "paid too much for the place [she] was living in."³⁶ Ryan added that the three-bedroom apartment that she felt she was already overpaying for at \$600 per person each month rose to \$900 per person for the following year.³⁷

Landlords also commonly employ questionable legal practices to accommodate these high prices, such as cramming more students into housing than zoning and fire codes permit to maximize profits. Although the town ordinance permits only "A cumulative total of up to three (3) adult persons (18 years old or older)," many rentals are advertised to students as four-bedroom apartments to offset the high rental prices.³⁸ One student who wished to remain anonymous explained that her landlord advertised her unit as a four-bedroom unit, but upon committing to the apartment, she learned that only three individuals were allowed to be on the lease.³⁹ The landlord was aware of this violation of the town ordinance, but it is commonplace for Hanover landlords to knowingly turn a blind eye and even encourage such practices because students face so few housing options.

5.3 VACANT HOUSING

Due to the constraints on development, it is important to understand how inefficient use of existing housing units contributes to the overall deficit in Hanover. A notable factor are vacant homes, defined by the Census Bureau’s American Community Survey as homes where no one is living there at the time of the survey.⁴⁰ In the case of Hanover, 18.3 percent—636 of the 3,473 homes—are vacant compared to the national average of 12.1 percent.⁴¹ The majority of vacant units in Hanover are vacation homes, meaning that the homeowners have another primary place of residence and their additional homes are unoccupied for most of the year. More specifically, 410 of the 636 vacant homes in Hanover are vacation homes, which is 11.8 percent of the total Hanover housing stock. This number is far higher than the four percent national average.⁴²

5.4 SHORT-TERM RENTALS

Short-term rentals are another factor contributing to the shortage of workforce housing. Until 2020, there was a ban against property owners renting their homes on a short-term basis, defined as 30 days or less in Hanover.⁴³ Due to demand from property owners and visitors to Hanover, especially Dartmouth alumni, the town revisited this ban in January 2020. The Town’s 2021 Zoning Ordinance now permits short-term rentals with restrictions.⁴⁴ The amendments state that “un-hosted” short-term rentals—rentals without owners present—require a special exception from the Zoning Board.⁴⁵ Additional limitations include a 30-day cap for guest stays, a limit on renting rooms for only 90 days per year, and a ban on “investor-owned” properties, referring to properties purchased with the intention of earning a return on their investment through rental income.⁴⁶

Despite the passage of the zoning amendment, the issue remains divisive due to concerns that short-term rentals could negatively impact traditional renters and the character of Hanover’s neighborhoods. According to Hanover Town Manager Julia Griffin, permitting short-term rentals raises concerns about “non-residential property investors who come in, buy up homes and apartments and condos and rarely visit them,” which in turn “drives up property values.”⁴⁷ This phenomenon “results in a lot of big houses that are dark much of the time, all while regular folks struggle to find housing they can afford.”⁴⁸ Short-term rentals harm the community in two key ways: they increase rental costs and prevent socioeconomic diversity.⁴⁹ Commercialized short-term rentals through sites such as Airbnb attract higher rent than traditional leases, leading homeowners to pursue this option and removing housing supply from the market.⁵⁰ Consequently, renters are harmed as more homes are converted into short-term rentals, driving up the price of remaining units. Additionally, traditional renters are unable to compete with the budget of vacationers and are replaced by short-term renters who are not involved or invested in the local community. Inflated prices also impact neighborhood diversity as households with lower incomes, especially younger households looking to start families, are priced out of the neighborhood.⁵¹ Residents have raised concerns that short-term rentals will benefit the select few in Hanover who are able to rent out their vacant homes while harming the rest of the residents and community.⁵²

5.5 ZONING AND REGULATION

Restrictive zoning and regulations are also key factors to the town’s housing crisis. Currently, planned residential development and multi-family dwellings, which are critical to keep up with the growth in demand for workforce housing, are permitted only in the following zones: Residence and Office (RO), Downtown (D) under the permitted use of “Downtown residential”, General Residence (GR) in areas zoned GR-3 and GR-4 or by special exception, and Institution (I) by special exception. As seen in Figure 6, the areas with limited development potential according to zoning restrictions—single resident, forestry and recreation, and natural preserve zones—are shown in blue, green, and yellow. Compared with the overall area of the town, the general residence and downtown areas that have potential for development, shown in brown and red, are limited and require undergoing a lengthy process of receiving special exception for high-density development. Though it is standard for towns and their residents to want to preserve the rural character of the town and to emphasize the importance of preserving wildlife, the limited land permissible for workforce housing is often placed in the already crowded downtown area.⁵³

Efforts to include multi-family dwellings in zoning map RO zones have also failed. One example of was a petition to include the duplex at 59 and 61 Lyme Road within the RO zoning district at a Hanover town meeting in July 2021; 705 voted in favor and 901 voted against.⁵⁴ These attempts suggest the town is hesitant to grant exceptions to accommodate more commercial and residential spaces essential for developing workforce housing. Nonetheless, there are parcels of land in spaces already approved for multi-family dwellings, such as GR-3 and GR-4.⁵⁵

In that vein, Hanover zoning ordinances also make it difficult for the college to develop student housing whilst they are already experiencing a shortage within the college. The purpose of the ordinance on Zone I was to ensure that the developments of the college would not harm the rural character of the town. However, the restriction, following a growth in the student population of Dartmouth College, has resulted in more students seeking housing off-campus. Of course, that is not to say that the college is not also responsible for the housing shortage. Due to the lack of undergraduate housing for the fully residential fall 2021 term, campus housing hit capacity. Consequently, the College offered a one-time lottery incentive for up to 200 students to withdraw their fall housing request in exchange for a \$5,000 payment, collectively a \$1 million housing lottery.⁵⁶ Such actions by the College have contributed to the further depletion of the Hanover housing stock, as the lack of on-campus housing has motivated more students to seek leases in Hanover. However, in their Strategic Master Plan, updated in early July of this year, the College has expressed intent to help alleviate the housing shortage. The plan creates opportunities for over 1,150 new undergraduate housing units and 680 new graduate student, faculty, and staff housing units within walking distance to the campus over the next three decades.⁵⁷

Presently, restrictive zoning laws are supported by some town residents who state that they want to de-emphasize development and commerce outside already developed areas. Residents have also expressed that they do not want their town to resemble more commercial developments like Concord or Lebanon. Instead, they have emphasized a desire to preserve the rural character by promoting higher density in built-up areas.⁵⁸ These sentiments resurfaced when the town voted on Article Four, an amendment to the town's zoning law, in a town meeting in July 2021. Among the five articles introduced, Article Four would "amend the definition of family to include a number of people (not related by blood or marriage or adoption) not to exceed two adult persons per bedroom occupying a single dwelling unit."⁵⁹ Though it did not pass, the amendment would have had significant impacts on the character of all residential properties in the town. The effects on students desiring roommates would have been especially pronounced. Though the amendment would have legally kept large populations of students out of local housing, it also would have had unintended consequences. Unrelated people, especially those in the workforce more likely to be unable to afford a unit or house by themselves or with one other person, would be disproportionately affected in an expensive housing market.

6 CASE STUDIES

This section provides illustrative workforce housing case studies drawn from Santa Cruz, California, Minneapolis-St. Paul, Minnesota, and Woodstock, Vermont. Each of the case studies provides useful strategies and development plans that are applicable to the current housing conditions in the Town of Hanover.

6.1 SANTA CRUZ, CALIFORNIA

Santa Cruz is a small, seaside city in Northern California with a population of roughly 64,000, a median annual income of \$82,234, and a poverty rate slightly above 20 percent.⁶⁰ In contrast, the 2020 national median annual income was \$69,560 and poverty rate was 11.4 percent.⁶¹ Santa Cruz only has 1,980 affordable units for rent, despite the fact that over ten thousand more people live below the poverty line. More than one thousand (1,160) of these apartments are income based, meaning that the tenants usually do not pay more than 30 percent of their total income for both rent and utilities.⁶² This program already exists in several other states, such as New Hampshire, where the New Hampshire Housing Finance Authority (NHHFA) pays the remaining amount of needed rent and utility funds directly to the landlord.⁶³ Santa Cruz is also home to the University of California, Santa Cruz (UCSC), which hosts around 17,000 undergraduates and 2,000 graduate students.⁶⁴ UCSC is the largest employer of the city, accounting for over 7,500 jobs.⁶⁵

The Executive Director of the Housing Authority in Santa Cruz County estimates that approximately one-in-three households qualify for federal assistance in paying rent. To be eligible for this program, households must make under 50 percent of the national median household income. Santa Cruz is

currently working on a number of solutions to meet the needs of its constituents, but while undoubtedly helpful, experts believe that they are not enough to solve the housing shortage.⁶⁶

These regulatory and funding changes have had significant impacts on key stakeholders. Local activists, lobbying groups such as Housing Santa Cruz County, and nonprofit organizations like Mercy Housing California have done immense work to improve the state of affordable housing in Santa Cruz. On the other hand, many property owners have lobbied against apartment projects in hopes of increasing scarcity. These landlords then capitalize on increased market demand and keep supply low, driving up rent prices and only further exacerbating the situation. Some “pro-affordable housing” residents also demonstrate a “Not In My BackYard” (NIMBY) mentality by opposing measures that they feel will disrupt the look and feel of their neighborhood. Essentially, they want affordable housing, but not near their properties.

Despite opposition, many innovative affordable housing solutions have come to fruition or have been approved for development. These developments were made possible by California SB 35, which aims to help increase housing stock, particularly affordable housing, within communities that lack it. More specifically, the bill required the creation of a general plan for housing development that includes standardizations, clearer definitions, and a more streamlined approval process overseen by local entities.⁶⁷ California SB 35 was intended to help cities like Santa Cruz that have neglected to meet the Regional Housing Need Allocation (RHNA) requirements for minimum affordable housing construction.⁶⁸ Due to the organizational changes implemented through this bill and a \$5 million grant from the Local Housing Fund awarded in 2021, Santa Cruz has recently begun the process of pursuing new developments. The new 831 Water Street Project boasts 77 low-income and 47 very low-income units in taller buildings. In addition, the residences would have 9,000 square feet of retail businesses on the ground floor, 80 parking spaces underground, and a 2,000 square foot rooftop space for public leisure. This development is particularly exciting because it places affordable housing within reach of local businesses while simultaneously opening new ones with added, out-of-sight parking spaces. Other developments, such as Pacific Station North, also include a similar model with new retail businesses on the ground floor and roughly 100 affordable housing units on top. While the buildings have not yet been fully developed, Santa Cruz has begun increasing mixed-use housing to increase space for businesses, parking, community space, and affordable housing.

Some employers, such as the Santa Cruz School District, are also working to alter the inclusionary ordinance of the city to permit employer and school-sponsored housing. Changing this law would allow them to build workforce housing specifically for the employees of the school district. Restrictions on who can live in specific units are not new to Santa Cruz. There are ample affordable housing units available that will only rent to elderly or people with disabilities. Efforts have also been made to allow more duplexes, triplexes, and quadplexes in cities zoned for single families. Nearby cities like Berkeley, Oakland, and South San Francisco have already successfully changed their zoning laws to permit the construction of such units.⁶⁹

6.2 MINNEAPOLIS-ST. PAUL, MINNESOTA

The Twin Cities area of Minnesota, consisting of Minneapolis and St. Paul, is the fourteenth largest metropolitan economy and the sixteenth largest metropolitan area by population in the nation (2.8 million).⁷⁰ St. Paul has a population of roughly 308,000, a median household income of \$57,876, and a poverty rate of 18.9 percent. Minneapolis is the most populous city in Minnesota with a population of roughly 429,000, a median household income of \$62,583, and a poverty rate of 19.1 percent.⁷¹ The Twin Cities area is home to the University of Minnesota, which hosts around 47,550 undergraduate and graduate students and accounts for 24,070 jobs.⁷² It is also home to nearly twenty other colleges. Along with the large student population, Minneapolis grew by 37,000 residents between 2010 and 2016. The Minneapolis metropolitan region is also expected to grow by almost ten percent to 3.7 million residents by 2040.

However, the rapid increase in population and the decreasing median income of Minneapolis renters over the past decade have shed light on rising home prices and the lack of housing, particularly of the “missing middle” properties such as duplexes.⁷³ The housing shortage in the Twin Cities is now the worst in the nation, even in comparison to high-demand metropolitan areas such as Los Angeles, Seattle, Denver and Austin.⁷⁴ A recent analysis from the Institute for Social Research and Data Innovation of the University of Minnesota found that the Twin Cities metropolitan region has a vacancy rate of 4.62 percent, and that it has the tightest vacancy rate in the country for cities over one million people. For reference, the Los Angeles-Long Beach-Anaheim region, Seattle-Tacoma-Bellevue region and Washington, DC-Arlington-Alexandria region have vacancy rates of 4.81 percent, 5.20 percent, and 5.57 percent respectively.⁷⁵ According to the Minnesota Housing Finance Agency, the state is expected to fall 40,000 houses and apartments short of what is needed over the next five years to keep pace with population growth.⁷⁶ Due to the economic growth present in this region, the city and nearby areas have faced increasing pressure on developing affordable housing and creating a zoning plan that caters to all of its residents, such as the growing diverse college student population and the longtime residents of the area.

Regarding student housing, the City of Saint Paul has taken arguably more active measures than Minneapolis through legislation. Ordinance 12-34 largely catered to the non-transient residents of the neighborhoods and their concerns about maintaining its personality. The law aimed to limit more student housing to “preserve the character of predominantly one- and two-family dwelling neighborhoods.” The ordinance required that a student dwelling in the overlay district, or a special designation on a zoning map in which all the properties require specific additional regulations, obtain a fire certificate of occupancy in which at least one of the units had at least three, but no more than four students. The dwelling also had to be located at least 150 feet from any other student dwellings and could be revoked of its privileges.⁷⁷

In an effort to provide a more diverse and inclusive social landscape, the city amended its 46-year-old definition of “family” on March 10, 2021. As a result, the city now allows up to six unrelated adults to live in a single dwelling and uses the word “household” instead of “family.” The amendment arose

after the Twin Cities Fair Housing Implementation Council found the narrow definition of family as potentially discriminatory or arbitrary in 2017. The change generated backlash from the neighborhoods near the University of Saint Thomas due to concerns that more students would pursue off-campus housing. A resident of the overlay neighborhood Michael McDonald said, “this suggests that the only beneficiaries of this change will be remote landlords who might realize a 50 percent increase in rent. That will create favorable conditions to convert more single-family homes to student housing and destroy the balance we enjoy today.” Other members of the community have also suggested that the other codes particular to the overlay district would still limit occupancy in the area. However, no additional statements or actions have been taken by the City Council to address McDonald and other residents’ concerns, but it will be a topic noteworthy of attention if pursued.⁷⁸

Similar to St. Paul, the City of Minneapolis has made significant legislative progress with the formal adoption of the Minneapolis 2040 comprehensive plan. Formally adopted October 2019, the plan addressed one hundred goals and topics, including affordable housing. A policy that gathered national attention was the ban on single-family zoning in every neighborhood. One of the most contentious elements of the plan, the new zoning policy allowed people to build duplexes and triplexes in areas where only single-family houses had been allowed.⁷⁹ Though it will take more time to assess the overall success of the policy, city officials have stated that more single-family and small developers are “now seeing duplex and triplex as an incremental step into building multifamily buildings.”⁸⁰ Another notable change was a new inclusionary zoning policy requiring developers to create affordable housing units, donate land to the city, or pay a fee. Though council members have stated that their intention is to level the playing field for affordable housing, the new policy has faced backlash from developers who believe that there is not enough financial support to making the policy feasible.⁸¹

As part of the plan rollout in 2020, the City Council introduced triplexes to single-family neighborhoods and are beginning to focus on affordable housing contributions from new apartments with more than twenty units. In particular, the affordable housing mandate has been incorporated to a 225-unit project in the Mill District, which will provide a total of 18 affordable units. Another positive sign of the plan’s success has been the rise of four-to-six-unit projects in neighborhoods that were once single-family zoned, thus further helping to alleviate the housing crisis in Minneapolis.⁸²

6.3 WOODSTOCK, VERMONT

Woodstock is a small town in Windsor County, Vermont with a population of roughly 2,900, a per capita income of \$43,403, an average median household income of \$73,380, and a poverty rate slightly below ten percent.⁸³ Woodstock includes the villages of South Woodstock, Taftsville, and Woodstock. Its largest industries are Accommodation & Food Services, Educational Services and Health & Social Assistance.⁸⁴ Woodstock shares similarities with Hanover in size and the small-town nature that both towns value. As a part of the Upper Valley region that needs to build around 10,000 new homes by 2030 to meet the needs of the community, Woodstock is also facing an urgent housing crisis.

According to Jill Davies, a member of the Board of Trustees for the nonprofit organization Woodstock Community Trust, the problem has reached a crisis point. Businesses are not operating during a weekday because they are short-staffed.⁸⁵ This phenomenon occurs because employees cannot find a place to live and are leaving the region as a result. Megan Rudy, an orthopedic trauma nurse at DHMC and mother of two children, has experienced this situation firsthand. In mid-June, her landlord shared their plan to move back to the home, displacing Rudy. Unfortunately, Rudy could not find a place in Woodstock and like many others, had to settle for something outside of town. Unfortunately, the lease did not begin for several months, so she stayed on the couches of friends. She noted, “It’s very, very humbling, more humbling than getting divorced. I don’t know what I did wrong. I’m very fiscally responsible and save and so all that stuff.”⁸⁶ To assess the larger scope of the problem in how rental properties were affecting the housing market and the residents of Woodstock, like Rudy, the town commissioned a housing study that revealed short-term rentals led to an estimated 50 to 55 single-family homes being pulled out of the primary rental or ownership markets.⁸⁷ Though the town has not found a complete solution to the housing crisis, Woodstock is a valuable case study as it offers insights on methods taken to attack the problem in a town with similar demographics to Hanover. Such methods include regulations on short-term rentals and actions by community-led nonprofits.

Since their launch, websites like Airbnb have facilitated guest stays at short term rentals all over the country and Vermont is no exception. According to a 2017 report by the Vermont Department of Health, Vermont accounts for 3,600 of the seven million listings on Airbnb.⁸⁸ In January 2020, the Woodstock Select Board approved short-term rental regulations. The regulations require that owners of short-term rental properties register and pay fees of \$115 per property and \$100 per guest room. The regulation also limited the number of times the short-term rentals could be rented to, which was ten for un-hosted rentals and fifteen for hosted rentals annually. However, owners in five-acre residential and short-term rental zones may have fifteen un-hosted rentals and unlimited hosted rentals. As for those who register and obtain permits, the town required a satisfactory fire safety inspection by the local fire chief. According to Woodstock Town Planner Michael Brands, the regulation was implemented not for the purpose of preventing residents from taking advantage of the growing demand for short-term rentals, but to prevent the rentals from changing the residential character of the area.⁸⁹

After adopting these regulations for short-term rentals, Woodstock approved a nine-month moratorium on new short-term rentals in July 2021, particularly noting the pandemic as the reason for this new measure. The moratorium along with the previous regulations in the town capped the total number of short-term rental units in the town to 285.⁹⁰ With the onset of the pandemic, rural Airbnb hosts saw surges in business as people throughout the country sought to escape the confines of their home while still practicing social distancing outdoors. According to Airbnb, hosts in rural areas of the U.S. earned over two-hundred million dollars in June 2020, an increase of more than 25 percent from last June.⁹¹ Woodstock Town Supervisor Bill McKenna noted that “the temporary limit on new short-term rentals will protect the welfare of its residents, especially those who have struggled to find

affordable housing in the wake of the region's pandemic-related estate boom." McKenna once again emphasized that the purpose of the moratorium was not to restrict, but to assess the developments needed in the community, particularly affordable rentals, to review the Comprehensive Plan that the town generated and compose solutions.⁹²

However, the regulations and moratoriums have not escaped opposition. Real estate agent Peter Cantine acknowledged that affordable housing was a problem that needed to be addressed but that a moratorium was not an adequate solution. Cantine believed that Woodstock did not have a zoning problem, but an enforcement problem, given that few short-term rental hosts had replied to the 189 letters of compliance sent out in 2020.⁹³ Those who sought to get a short-term rental permit for their second home also shared their discontent. One resident stated that it seemed wasteful to keep it empty during months the family does not stay there and that they did not want a long-term tenant with yearly leases because they wanted flexibility to use the home throughout the year. Though McKenna agreed that second homes would most likely never become affordable long-term rentals and that short-term rentals were not the sole cause of the problem, regulations and moratoriums helped make the point that short-term rentals contribute to the problem by crowding out affordable rental units on the market.⁹⁴

Another notable actor in alleviating the Woodstock housing problem has been the Woodstock Community Trust. Founded in 1997, the trust aims to provide "community-centered solutions for housing and preservation of agricultural land and natural areas, while working toward a sustainable economic and environmental future for Woodstock and its citizens." As a tax-exempt nonprofit organization, the trust raises funds for projects that would not provide an adequate return to attract developers and cooperates with regional and state organizations, such as Twin Pines Housing Trust and Upper Valley Land Trust.⁹⁵ The trust is particularly committed to preserving housing for the "missing middle," or individuals earning between 80 and 200 percent AMI, and does so by using the invest, refresh and fund model. The trust invests in a residential property located in the village, refreshes the property by making necessary repairs, such as foundational ones that are costly for the homeowner. They then fund the down payment with a deed restricting the property to qualified households even when initial buyers decide to resell the house.⁹⁶ The trust has invested in two projects so far, with the first, Maple Street, sold in August 2019 and second, Rose Hill Condos, sold in January 2021.⁹⁷ Davies noted that in the early stages of development, the trust had to outbid 11 people because it was a perfect property to turn into an Airbnb and a lot of people thought they could live upstairs while renting downstairs.⁹⁸ Though it has not repurposed many houses, the trust features an organized grassroots approach to contribute to alleviating the housing crisis by creating and keeping property for the "missing middle," especially through its example of transforming the property to condominiums.

7 POTENTIALLY APPLICABLE SOLUTIONS

This final substantive section of the report provides a variety of policy options for the Town of Hanover to consider as it attempts to address the current workforce housing shortage.

7.1 TYPES OF HOUSING

To accommodate the needs of the Town of Hanover, one potential solution is to pursue a higher density of housing. Parts of Main Street already implement higher density housing, with notable examples including the apartments above Murphy's on The Green or Ramunto's. This solution would aim to preserve the surrounding natural scenery and make use of existing land by developing upwards instead of outwards. The two types of higher density housing that we recommend are mixed-use housing and accessory dwelling units (ADUs). While some residents are concerned that densifying the town would change its character, Hanover's lack of affordable housing has become so extreme that the town is experiencing staffing shortages that cannot be ignored. Creating spaces for workers to live is requisite to salvage the town economy and continue offering numerous necessary services within close proximity.

7.1.1 MIXED-USE HOUSING

Mixed-use housing are buildings that are designated in a certain zone for multiple uses; for example, the bottom may be a storefront while the top floors are apartments. It also generally signifies that the area that the building is in is walkable.⁹⁹ This type of housing is often implemented in situations aiming to accommodate more living situations through higher density solutions. An example of a building in a mixed-use zone is a three-story building with a large grocery store on the ground floor and several apartments above it. Santa Cruz has begun designing and developing several mixed-use buildings. Some of them, such as the 831 Water Street Project will generate 124 new units of affordable housing, 80 underground parking spaces, and 9,000 square feet of retail space on the ground floor. Hanover could adopt a similar model to quickly increase housing stock.

This solution is particularly feasible as it is already being implemented within the Town of Hanover. Many of the stores along Main Street are zoned to be mixed-use buildings, with retail space on the ground floor and apartments above. A key example of such a development are the Murphy's apartments. Developing more mixed-use buildings with plans to increase parking underground could significantly increase housing stock.

Mixed-use housing has many benefits. Primarily, it increases access to resources by placing residents within a short distance of grocery stores, restaurants, public transportation, and additional services. Constructing more mixed-use buildings would simultaneously provide the space to house a workforce for many of the already understaffed businesses, while also incentivizing further economic growth and vitality through new businesses. In Hanover, residents would be within walking distance of Advance Transit and key resources like the Co-Op, CVS Pharmacy, Hanover High School, and Dartmouth College. This solution may also appease many NIMBYists—individuals who oppose solutions that

alter the character of their neighborhood. NIMBYists are more likely to support mixed-use zoning because this solution increases affordable housing stock in the downtown area away from where most single-family homes are located. This approach would also preserve the general aesthetic character of a neighborhood.¹⁰⁰

However, this solution also presents a few challenges. Notably, parking will become even more scarce. If implementing underground parking is not a viable option, the town would need to craft an innovative solution to address the existing parking issue that would only be exacerbated by higher density housing solutions. New parking lots or garages would need to be developed and easily accessible for these residents. Moreover, the town will need to garner public support for increasing development, likely doing so in a way that does not alter the architectural style and small-town community feel.

7.1.2 ACCESSORY DWELLING UNITS (ADUs)

Accessory Dwelling Units (ADUs) are defined as “a residential living unit that is within or attached to a single-family dwelling, and that provides independent living facilities for one or more persons, including provisions for sleeping, eating, cooking, and sanitation on the same parcel of land as the principal dwelling.”¹⁰¹ As seen in Figure 7 below, the six types of ADUs in New Hampshire are as follows: attic, addition, over garage, second floor, detached, and basement.

Figure 3: Types of ADUs



Source: New Hampshire Housing Finance Authority, 2017, pg. 1

The Town of Hanover offers its own checklist of stipulations for ADUs within its borders. The list includes some of the following requirements for an ADU:

- One of the units must be occupied by the owner of the building
- The primary unit is occupied by one family
- The unit only contains a maximum of one additional ADU
- The ADU has a limit of two bedrooms
- The square footage of the ADU must range between 350 and 1000 square feet, inclusive
- The exterior must comply with the character of the neighborhood¹⁰²

There are several benefits to ADUs. Primarily, they allow a town to add to the housing stock expeditiously without having to increase housing infrastructure. They also help create more affordable and workforce housing units without significant redevelopment plans. Moreover, for the aging population of New Hampshire who are being priced out of their homes, ADUs are a way for residents to generate another stream of income that would allow them to remain in their communities.¹⁰³ However, there are also a few drawbacks. Primarily, ADUs exacerbate parking problems by creating more high-density solutions, like mixed-use housing. This solution is also a primary target of NIMBYists. If not done properly, ADUs can add to excess noise and garbage as well as risk altering the general neighborhood aesthetics.

There are also significant hurdles to instantiating ADUs, namely intense restrictions surrounding external appearances that present cost and time barriers. Steps would need to be taken to reduce barriers in order to encourage residents to develop these units. Reducing the number of restrictions or streamlining the approval process for ADUs are potential methods of incentivizing more people to construct them. Generating a comprehensive plan to improve the current parking situation in Hanover may also make homeowners who are concerned about additional residents exacerbating parking struggles more comfortable with the idea of ADUs.

7.2 LEGISLATIVE/REGULATORY CHANGES

The town could mandate that new any housing developments, such as multi-family or planned residential developments, must include a certain percentage of units designated as affordable or workforce housing at the 50, 80 and 120 percent median family income (MFI) level. Minneapolis has successfully adopted a similar “inclusionary zoning” mandate, providing affordable housing as part of each new development. Though the mandate is relatively new, and the pandemic has limited its implementation, it has begun to have an impact on recent projects, including the 12-story apartment project in the Mill District.¹⁰⁴ By ensuring that affordable units are built within new housing developments, mixed class housing would also naturally develop, encouraging further socioeconomic integration. The town should create these requirements and enforce the Zoning Ordinance Section 520.5 in Hanover, which states that the occupants of the dwelling unit “are certified to meet but not exceed the median family income level appropriate to the affordable lot’s or unit’s income-level designation.”¹⁰⁵ These actions will mitigate the risk of people with an MFI level above 120 percent moving into the units earmarked for lower income households.

The town could also consider adopting a more inclusionary definition of family by increasing the number of unrelated adults per residence. Though Hanover recently proposed a failed amendment to decrease the number of unrelated adults to two residents from the current cap of three residents, the town's decision to increase the number of unrelated adults would help workforce members find housing in an expensive market.¹⁰⁶ However, there are key considerations to this potential solution. The increased number could result in more student groups finding off-campus housing, which would reduce the housing stock available to the workforce. A potential solution could be to establish a student overlay district in the zoning map and place requirements, such as obtaining a fire certificate of occupancy like that of St. Paul, to ensure that student dwellings would be further monitored.¹⁰⁷

7.3 OTHER POTENTIALLY APPLICABLE SOLUTIONS

In addition to housing and regulatory changes, mimicking the nine-month moratorium on new short-term rentals adopted in Woodstock could enact positive change. As emphasized by Woodstock Town Supervisor McKenna, though the solution would not solve the entirety of the housing crisis, the elapsed time would allow for careful assessment regarding the growing community impact of short-term rentals on the housing stock, needed workforce housing developments, and potential amendments to the master plan.¹⁰⁸ Additionally, as the COVID-19 pandemic continues to put pressures on the already limited housing stock, the moratorium could protect the welfare of residents who have been struggling to find affordable long-term housing.

The town could also consider supporting the creation of a Hanover-based non-profit organization that would recommend community-centered solutions for housing, similar to the Woodstock Community Trust.¹⁰⁹ The Town of Hanover currently collaborates with Twin Pines Housing, a nonprofit organization committed to developing and providing “affordable housing for low-and-moderate-income families in the Upper Valley.”¹¹⁰ However, the town would benefit from having a local grassroots organization that is particularly invested in preserving housing for the “missing middle”. The trust could be established through seed money from the Town, Dartmouth College, and other stakeholders, allowing for each entity to reiterate its commitment to supporting local workforce housing initiatives. By adopting the Woodstock Community Trust's “invest, refresh and fund model,” this potential grassroots organization could provide a way for passionate and committed residents to voice their opinions and advocate for equitable housing in Hanover.¹¹¹

Another potential solution is employer-sponsored developments, which would be created in partnership with a corporation who could subsidize the development cost in exchange for a percentage of the dwellings reserved for their employees. For example, the DHMC plan to construct a new mixed-use housing development that would include a certain number of the units would be reserved for members of their workforce before being made available to the public is imminently replicable. By facilitating similar measures in Hanover, employers would be encouraged to invest in the fundraising efforts in these developments. The efforts of the Santa Cruz School District to promote inclusionary ordinances that permit employer- and school-sponsored housing is also illustrative of this approach.

While this potential solution has not fully been implemented in Hanover, we want to highlight this effort as a potential solution to employers struggling to attract and retain staff due to the regional housing shortage.

8 CONCLUSION

This report analyzes the workforce housing crisis in Hanover, New Hampshire by evaluating the perspectives of multiple stakeholders and identifying potentially applicable solutions to best tackle the issue based on extensive research and case study analysis. Our findings reveal that while Hanover is the economic hub of the Upper Valley, the lack of affordable housing stock has resulted in a staffing shortage that has stagnated economic growth. Coupled with inelastic student demand and the ability of this demographic to pay much higher prices than other community members, necessary measures must be taken to meet the needs of the local workforce. Upon analyzing three case studies—Santa Cruz, California, Minneapolis-St. Paul, Minnesota, and Woodstock, Vermont—our team has identified three potentially applicable solutions for The Town of Hanover. Namely, the town could pursue more high-density housing options and certain regulatory reforms. The higher density housing options include mixed-use housing and ADUs, and new regulations would create a certain percentage of the housing stock for those in the “missing middle.” Another regulatory change would be to use a less restrictive definition “family,” to allow more individuals to live together.

REFERENCES

- ¹ 2030 Housing Needs Forecast,” Keys to the Valley, 2021, <https://www.keystothevalley.com/report/2030-home-projections/>.
- ² McDermott, Jessica and Tyler Work, “Affordable Housing in the Upper Valley: Serving Dartmouth-Hitchcock Medical Center Employees,” The Class of 1964 Policy Research Shop, 2019, <https://rockefeller.dartmouth.edu/report/affordable-housing-upper-valley>.
- ³ “HUD Archives: Glossary of Terms to Affordable Housing,” HUD (US Department of Housing and Urban Development, August 18, 2011), <https://archives.hud.gov/local/nv/goodstories/2006-04-06glos.cfm>.
- ⁴ Tiffany N. Ford and Jenny Schuetz, “Workforce Housing and Middle-Income Housing Subsidies: A Primer,” Brookings (Brookings, October 31, 2019), <https://www.brookings.edu/blog/up-front/2019/10/29/workforce-housing-and-middle-income-housing-subsidies-a-primer/>.
- ⁵ Alex Hanson, “Defining the Upper Valley: Dartmouth Geography Researcher Seeks the Public's Input,” Valley News (Valley News, December 19, 2016), <https://www.vnews.com/Researcher-Garrett-Nelson-asks-the-public-to-define-the-Upper-Valley-6919810>.
- ⁶ America's Career InfoNet Development Team, “State Profile: Largest Employers,” America's Career InfoNet: Largest Employers (US Department of Labor, 2021), <https://www.careerinfonet.org/oview6.asp?socode=&id=&nodeid=12&stfips=33&from=State>.
- ⁷ 2030 Housing Needs Forecast,” Keys to the Valley, 2021, <https://www.keystothevalley.com/report/2030-home-projections/>.
- ⁸ Ibid.
- ⁹ Tiffany N. Ford and Jenny Schuetz, “Workforce Housing and Middle-Income Housing Subsidies: A Primer,” Brookings (Brookings, October 31, 2019), <https://www.brookings.edu/blog/up-front/2019/10/29/workforce-housing-and-middle-income-housing-subsidies-a-primer/>.
- ¹⁰ “Affordable Housing in Hanover, Grafton County, New Hampshire,” Affordable Housing Online, 2021, <https://affordablehousingonline.com/housing-search/New-Hampshire/Hanover>.
- ¹¹ Big Sky Community Housing Action Plan Bridge. Retrieved from <https://www.explorebigsky.com/purchase-agreement-for-meadowview-property-signed/26378>.
- ¹² “Hanover, NH Real Estate MARKET: http://Realtor.com,” <http://realtor.com> (National Association of Realtors, 2021), https://www.realtor.com/realestateandhomes-search/Hanover_NH/overview
- ¹³ “Claremont, NH Real Estate MARKET: Realtor.com,” [realtor.com](https://www.realtor.com/realestateandhomes-search/Claremont_NH/overview) (National Association of Realtors, 2021), https://www.realtor.com/realestateandhomes-search/Claremont_NH/overview.
- ¹⁴ “Enfield, NH Real Estate MARKET: Realtor.com,” [realtor.com](https://www.realtor.com/realestateandhomes-search/Enfield_NH/overview) (National Association of Realtors, 2021), https://www.realtor.com/realestateandhomes-search/Enfield_NH/overview.
- ¹⁵ “Enfield, NH Real Estate MARKET: Realtor.com,” [realtor.com](https://www.realtor.com/realestateandhomes-search/Enfield_NH/overview) (National Association of Realtors, 2021), https://www.realtor.com/realestateandhomes-search/Enfield_NH/overview.
- ¹⁶ McDermott, Jessica and Tyler Work, “Affordable Housing in the Upper Valley: Serving Dartmouth-Hitchcock Medical Center Employees,” The Class of 1964 Policy Research Shop, 2019, <https://rockefeller.dartmouth.edu/report/affordable-housing-upper-valley>.
- ¹⁷ Finamore, Amy, Annette Nielsen and Elisabeth Richardson, *The Upper Valley — OnTheMap: A profile of the Lebanon-Hanover NH-VT Metropolitan NECTA, Economic and Labor Market Information Bureau*, November 2012, <https://www.nhes.nh.gov/elmi/products/documents/upper-valley-onthemap.pdf>.
- ¹⁸ Ibid.
- ¹⁹ Desman Design Management. “Hanover Downtown Parking Plan Update.” Town of Hanover, 2019. https://www.hanovernh.org/sites/g/files/vyhlf3226/f/uploads/hanover_parking_study_report_3.15.19_final_0.pdf.
- ²⁰ Palmer, Coalter, and Daniel Modesto, “Students confront housing shortage, high living costs in Upper Valley,” *The Dartmouth*, November 10, 2020, <https://www.thedartmouth.com/article/2021/05/hanover-businesses-grapple-with-regional-labor-shortage>.
- ²¹ Nadworny, Olivia. (Dartmouth Student). Interview with Cecily Craighead. August 29, 2021.
- ²² Anonymous Nest employee Interview with Ashkaan Mahjoob. October 16, 2021.
- ²³ Sign at Han Fusion Asian Restaurant in Hanover, NH. October 14, 2021.
- ²⁴ Palmer, Coalter, and Daniel Modesto, “Students confront housing shortage, high living costs in Upper Valley,” *The Dartmouth*, November 10, 2020, <https://www.thedartmouth.com/article/2021/05/hanover-businesses-grapple-with-regional-labor-shortage>.

- ²⁵ McDermott, Jessica and Tyler Work, “Affordable Housing in the Upper Valley: Serving Dartmouth-Hitchcock Medical Center Employees,” The Class of 1964 Policy Research Shop, 2019, <https://rockefeller.dartmouth.edu/report/affordable-housing-upper-valley>.
- ²⁶ Dartmouth-Hitchcock Newsroom, “Dartmouth-Hitchcock Health Seeks Developer for Affordable Rental Housing Project,” Dartmouth-Hitchcock, 2020, <https://www.dartmouth-hitchcock.org/stories/article/dartmouth-hitchcock-health-seeks-developer-affordable-rental-housing-project>.
- ²⁷ “Dartmouth-Hitchcock Medical Center.” Yelp. <https://www.yelp.com/biz/dartmouth-hitchcock-medical-center-lebanon>.
- ²⁸ Robert Houseman, email to Ronald Shaiko, May 21, 2021.
- ²⁹ Sasser, Andrew, “Number of students living in local off-campus housing nearly triples,” *The Dartmouth*, May 21, 2021. <https://www.thedartmouth.com/article/2021/05/number-of-students-living-in-local-off-campus-housing-nearly-triples>
- ³⁰ Sasser, Andrew, “Students rush to find off-campus housing,” *The Dartmouth*, July 17, 2020.
- ³¹ Readinger, Reagen. (Dartmouth Student). Interview with Ashkaan Mahjoob. July 27, 2021.
- ³² Palmer, Coalter, and Daniel Modesto, “Students confront housing shortage, high living costs in Upper Valley,” *The Dartmouth*, November 10, 2020, <https://www.thedartmouth.com/article/2020/11/students-confront-housing-shortage-high-living-costs-in-upper-valley>.
- ³³ Anonymous. (Kish Consulting & Contracting Employee). Phone Call with Cecily Craighead. November 15, 2021.
- ³⁴ “Properties.” First Safe Company. Accessed November 17, 2021. <http://www.firstsafeco.com/properties/>.
- ³⁵ Ibid.
- ³⁶ Ibid.
- ³⁷ Ibid.
- ³⁸ “Zoning Ordinance 2021, Hanover, New Hampshire,” Town of Hanover, New Hampshire, July 13, 2021. https://www.hanovernh.org/sites/g/files/vyhllf3226/f/uploads/2021_zo-combined.pdf.
- ³⁹ Anonymous. (Dartmouth Student). Interview with Cecily Craighead. August 14th, 2021.
- ⁴⁰ United States Census Bureau, “Housing Vacancies and Homeownership,” July 27, 2021, <https://www.census.gov/housing/hvs/index.html>.
- ⁴¹ “Housing in Hanover, New Hampshire,” BestPlaces.net, November 13, 2021, https://www.bestplaces.net/housing/city/new_hampshire/hanover.
- ⁴² Ibid.
- ⁴³ Lippman, John, “Hanover shows signs of accommodating short-term rentals,” Valley News, January 4, 2021, <https://www.vnews.com/Hanover-mulls-revising-ban-on-short-term-rentals-31673988>.
- ⁴⁴ “Zoning Ordinance 2021, Hanover, New Hampshire,” Town of Hanover, New Hampshire, July 13, 2021. https://www.hanovernh.org/sites/g/files/vyhllf3226/f/uploads/2021_zo-combined.pdf, pg. 9.
- ⁴⁵ Ibid.
- ⁴⁶ Ibid.
- ⁴⁷ John Lippman, “Hanover shows signs of accommodating short-term rentals.”
- ⁴⁸ Ibid.
- ⁴⁹ “The Problem with Commercialized Short-Term Rentals,” Keep Neighborhoods First! <https://www.keepneighborhoodsfirst.org/strproblem>.
- ⁵⁰ “Six Ways That Short-Term Vacation Rentals Are Impacting Communities,” Granicus, <https://granicus.com/blog/six-ways-that-short-term-vacation-rentals-are-impacting-communities/>. See also, Short-term Rentals: Regulations and Impacts in Vermont: Policy Options to Address an Uneven Playing Field,” PRS Policy Brief 1920-08, Nelson A. Rockefeller Center for Public Policy and the Social Sciences, Dartmouth College, May 14, 2020. <https://rockefeller.dartmouth.edu/sites/rockefeller.drupalmulti-prod.dartmouth.edu/files/prsshorttermrentalfinal.pdf>
- ⁵¹ “The Problem with Commercialized Short-Term Rentals,” Keep Neighborhoods First!
- ⁵² John Lippman, “Hanover shows signs of accommodating short-term rentals.”
- ⁵³ “Zoning Ordinance 2021, Hanover, New Hampshire,” Town of Hanover, New Hampshire, July 13, 2021. https://www.hanovernh.org/sites/g/files/vyhllf3226/f/uploads/2021_zo-combined.pdf.
- ⁵⁴ Mullins, Kyle, “Millman, Student Initiatives Defeated at Hanover Town Meeting,” *The Dartmouth*, July 13, 2021. <https://www.thedartmouth.com/article/2021/07/millman-student-initiatives-defeated-at-hanover-town-meeting>.
- ⁵⁵ “Zoning Ordinance 2021, Hanover, New Hampshire,” Town of Hanover, New Hampshire, July 13, 2021. https://www.hanovernh.org/sites/g/files/vyhllf3226/f/uploads/2021_zo-combined.pdf.
- ⁵⁶ Sasser, Andrew, “‘Paid to Stop Complaining’: Amid Housing Crunch, College’s \$1 Million Housing Lottery Sparks Frustrations,” *The Dartmouth*, June 20, 2021. <https://www.thedartmouth.com/article/2021/06/paid-to-stop-complaining-amid-housing-crunch-colleges-1-million-housing-lottery-sparks-frustrations>.

- ⁵⁷ “Planning for Possibilities: A Strategic Campus Framework,” Dartmouth College, November 2020. https://www.dartmouth.edu/masterplan/docs/20210316_final_planning_for_possibilities_webview.pdf.
- ⁵⁸ “Planning Board: Zoning,” Town of Hanover, New Hampshire, n.d. <https://www.hanovernh.org/planning-board/pages/zoning>.
- ⁵⁹ Adler, Lauren, “Divide between Students, Town Will Come under Focus at July 13 Hanover Town Meeting,” The Dartmouth, July 9, 2021, <https://www.thedartmouth.com/article/2021/07/divide-between-students-town-will-come-under-focus-at-july-13-hanover-town-meeting>.
- ⁶⁰ “Santa Cruz, California Population 2021,” Santa Cruz, California Population 2021 (Demographics, Maps, Graphs) (World Population Review, 2021), <https://worldpopulationreview.com/us-cities/santa-cruz-ca-population>.
- ⁶¹ “Income, Poverty and Health Insurance Coverage in the United States: 2020.” Census.gov, October 8, 2021. [https://www.census.gov/newsroom/press-releases/2021/income-poverty-health-insurance-coverage.html#:~:text=Policy%20Directive%202014\).-,The%20official%20poverty%20rate%20in%202020%20was%2011.4%25%2C%20up%201.0,million%20more%20than%20in%202019.](https://www.census.gov/newsroom/press-releases/2021/income-poverty-health-insurance-coverage.html#:~:text=Policy%20Directive%202014).-,The%20official%20poverty%20rate%20in%202020%20was%2011.4%25%2C%20up%201.0,million%20more%20than%20in%202019.)
- ⁶² “Affordable Housing in Santa Cruz Santa Cruz County, California.” Affordable Housing Online. Accessed November 14, 2021. <https://affordablehousingonline.com/housing-search/California/Santa-Cruz>.
- ⁶³ “Apply.” New Hampshire Housing. New Hampshire Housing Finance Authority, June 17, 2021. <https://www.nhhfa.org/rental-assistance/housing-choice-voucher-program/apply/>.
- ⁶⁴ “UC Santa Cruz,” Facts & Figures (University of California, Santa Cruz, December 7, 2020), <https://www.ucsc.edu/about/facts-figures.html>.
- ⁶⁵ “Employment,” Employment (County of Santa Cruz, 2021), <http://www.sccoplanning.com/PlanningHome/EconomicDevelopment/DataandDemographics/Employment.aspx>.
- ⁶⁶ Todd Guild, “The Future of Affordable Housing in Santa Cruz County,” Good Times Santa Cruz (Good Times Santa Cruz, April 20, 2021), <https://goodtimes.sc/santa-cruz-news/future-of-affordable-housing-santa-cruz-county/>.
- ⁶⁷ “SB-35 Planning and Zoning: Affordable Housing: Streamlined Approval Process.,” SB-35 Planning and zoning: affordable housing: streamlined approval process. (California State Legislature, September 29, 2017), https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB35.
- ⁶⁸ “Affordable Housing Streamlined Approval (SB-35).” Affordable Housing Streamlined Approval (SB-35) | SF Planning. City and County of San Francisco. Accessed October 20, 2021. <https://sfplanning.org/resource/sb35-application>.
- ⁶⁹ Todd Guild, “The Future of Affordable Housing in Santa Cruz County,” Good Times Santa Cruz (Good Times Santa Cruz, April 20, 2021), <https://goodtimes.sc/santa-cruz-news/future-of-affordable-housing-santa-cruz-county/>.
- ⁷⁰ “Economic Overview and Industry Strengths of Minneapolis/St. Paul,” Minnesota Department of Employment and Economic Development, July 2010, <https://www.stpaul.gov/DocumentCenter/Government/Mayor/Mayors%20Priorities/Sustainable%20Saint%20Paul/DEEDEconomicSiteProposalMSP.pdf>.
- ⁷¹ “QuickFacts: St. Paul, Minnesota; Minneapolis, Minnesota.” United States Census Bureau, n.d. <https://www.census.gov/quickfacts/fact/table/stpaulcityminnesota,minneapoliscityminnesota/PST045219>.
- ⁷² “Official Enrollment Statistics,” and “University of Minnesota: Employee Headcount Data,” University of Minnesota, <https://oir.umn.edu/student/enrollment>, <https://oir.umn.edu/hr/employee-count>.
- ⁷³ McCormick, Kathleen. “Rezoning History: Influential Minneapolis Policy Shift Links Affordability Equity.” Lincoln Institute of Land Policy, January 16, 2020. <https://www.lincolninst.edu/publications/articles/2020-01-rezoning-history-minneapolis-policy-shift-links-affordability-equity>.
- ⁷⁴ Buchta, Jim. “No wonder it’s hard to find a new home: The Twin Cities has the worst housing shortage in the nation.” Star Tribune, September 18, 2021. <https://www.startribune.com/no-wonder-its-hard-to-find-a-new-home-the-twin-cities-has-the-worst-housing-shortage-in-the-nation/600098521/?refresh=true>.
- ⁷⁵ Lindeke, Bill. “Why Tin Cities housing prices might see some major increases in coming years.” MinnPost, October 14, 2021. <https://www.minnpost.com/cityscape/2021/10/why-twin-cities-housing-prices-might-see-some-major-increases-in-coming-years/>.
- ⁷⁶ Buchta, Jim. “No wonder it’s hard to find a new home: The Twin Cities has the worst housing shortage in the nation.” Star Tribune, September 18, 2021. <https://www.startribune.com/no-wonder-its-hard-to-find-a-new-home-the-twin-cities-has-the-worst-housing-shortage-in-the-nation/600098521/?refresh=true>.
- ⁷⁷ “City of Saint Paul: Ordinance: Ord 12-34,” City of Saint Paul, August 8, 2012. https://www.stpaul.gov/DocumentCenter/Government/Safety%20&%20Inspections/Fire%20Inspections/One%20and%20Two%20Family%20Residential/Student%20Housing%20Ordinance%208-8-12_201302121301194959.pdf.
- ⁷⁸ McClure, Jane. “Saint Paul redefines what constitutes a single household.” MyVillager, March 17, 2021. <https://myvillager.com/2021/03/17/saint-paul-redefines-what-constitutes-a-single-household/>

- ⁷⁹ Navratil, Liz. “Changes approved in Minneapolis 2040 plan begin to take shape.” *Star Tribune*, December 30, 2019. <https://www.startribune.com/changes-approved-in-minneapolis-2040-plan-begin-to-take-shape/566241702/?refresh=true>.
- ⁸⁰ McCormick, Kathleen. “Rezoning History: Influential Minneapolis Policy Shift Links Affordability Equity.” *Lincoln Institute of Land Policy*, January 16, 2020. <https://www.lincolninstitute.org/publications/articles/2020-01-rezoning-history-minneapolis-policy-shift-links-affordability-equity>.
- ⁸¹ Navratil, Liz. “Changes approved in Minneapolis 2040 plan begin to take shape.” *Star Tribune*, December 30, 2019. <https://www.startribune.com/changes-approved-in-minneapolis-2040-plan-begin-to-take-shape/566241702/?refresh=true>.
- ⁸² Bruch, Michelle. “The 2040 plan’s code switch.” *Southwest Journal*, October 14, 2020. <https://www.southwestjournal.com/news/2020/10/the-2040-plans-code-switch/>
- ⁸³ “Woodstock town, Windsor County, VT,” *CensusReporter.Org*, 2019. <https://censusreporter.org/profiles/06000US5002785975-woodstock-town-windsor-county-vt/>
- ⁸⁴ “Woodstock, VT,” *DataUSA*. <https://datausa.io/profile/geo/woodstock-vt>.
- ⁸⁵ Davies, Jill (Member of Board of Trustees for Woodstock Community Trust). Interview with Cecily Craighead, Ashkaan Mahjoob and Jasmine Oh, August 12, 2021.
- ⁸⁶ Allen, Anne Wallace, and Colin Flanders. “Nowhere to Go: Vermont's Exploding Housing Crisis Hits Moderate Wage Earners.” *Vermont's Independent Voice: Seven Days*, August 23, 2021. <https://www.sevendaysvt.com/vermont/nowhere-to-go-vermonts-exploding-housing-crisis-hits-moderate-wage-earners/Content?oid=33532880>.
- ⁸⁷ Lippman, John. “Woodstock Hashes out Where to Go with Homestays.” *Valley News*, July 13, 2019. <https://www.vnews.com/Woodstock-grapples-with-issue-of-short-term-rentals-26893351>.
- ⁸⁸ Ramakrishna, Namrata, Emery Rheam and Blake McGill. (2020). “Short-term Rental Units: Regulations and Impacts in Vermont.” *The Class of 1964 Policy Research Shop*. Retrieved from <https://rockefeller.dartmouth.edu/sites/rockefeller.drupalmulti-prod.dartmouth.edu/files/prsshorttermrentalfinal.pdf>.
- ⁸⁹ Peterson, Curt. “Woodstock Board Votes to Regulate Short-Term Rentals.” *The Mountain Times*, February 12, 2020. <https://mountaintimes.info/woodstock-board-votes-to-regulate-short-term-rentals/>.
- ⁹⁰ Callahan, Cloey. “Woodstock Votes Yes on Short-Term Rental Moratorium.” *Times Union*, July 21, 2021. <https://www.timesunion.com/hudsonvalley/news/article/Woodstock-votes-yes-on-short-term-rental-16327542.php>.
- ⁹¹ Gao, Michelle. “Rural Airbnb Bookings Are Surging as Vacationers Look to Escape the Coronavirus.” *CNBC*, August 6, 2020. <https://www.cnn.com/2020/08/06/rural-airbnb-bookings-are-surging-as-vacationers-look-to-escape-the-coronavirus.html>.
- ⁹² Callahan, Cloey. “Woodstock Votes Yes on Short-Term Rental Moratorium.” *Times Union*, July 21, 2021. <https://www.timesunion.com/hudsonvalley/news/article/Woodstock-votes-yes-on-short-term-rental-16327542.php>.
- ⁹³ Henderson, Nick. “Woodstock Residents Weigh in on Law Addressing Housing Crisis.” *Hudson Valley One*, June 23, 2021. <https://hudsonvalleyone.com/2021/06/16/woodstock-residents-weigh-in-on-law-addressing-housing-crisis/>.
- ⁹⁴ Callahan, Cloey. “Woodstock Votes Yes on Short-Term Rental Moratorium.” *Times Union*, July 21, 2021. <https://www.timesunion.com/hudsonvalley/news/article/Woodstock-votes-yes-on-short-term-rental-16327542.php>.
- ⁹⁵ “About.” *Woodstock Community Trust*, n.d. <https://www.woodstockcommunitytrust.com/>.
- ⁹⁶ “Housing: Projects.” *Woodstock Community Trust*, n.d. <https://www.woodstockcommunitytrust.com/projects>.
- ⁹⁷ “Housing: Homes.” *Woodstock Community Trust*, n.d. <https://www.woodstockcommunitytrust.com/homes-1>.
- ⁹⁸ Chen, Anne Wallace. “Woodstock Affordable Housing Program Purchases Second Property.” *VT Digger*, August 11, 2020. <https://vtdigger.org/2020/08/11/woodstock-affordable-housing-program-purchases-second-property/>.
- ⁹⁹ “Mixed-Use Development,” *Planning for Complete Communities in Delaware (University of Delaware)*, <https://www.completecommunitiesde.org/planning/landuse/mixed-use-development/>.
- ¹⁰⁰ Kit Un, “What Are the Benefits of Mixed Use Development?,” *MAPC (MAPC, February 11, 2010)*, <https://www.mapc.org/resource-library/what-are-the-benefits-of-mixed-use-development/>.
- ¹⁰¹ Peter Morelli, “Accessory Dwelling Units in New Hampshire,” *AARP (AARP, May 2017)*, <https://www.aarp.org/livable-communities/housing/info-2017/adu-accessory-dwelling-units-law-new-hampshire.html#:~:text=The%20New%20Hampshire%20law%20defines,land%20as%20the%20principal%20dwelling%20%E2%80%A6%22>. See also, Emily Schneider, Paulomi Rao, Justin Kramer, and Michael Morck, “Accessory Dwelling Units in Norwich, Vermont: Investigating ADUs as an Affordable Housing Solution,” *PRS Policy Brief 1819-08*, Nelson A. Rockefeller Center for Public Policy and the Social Sciences, Dartmouth College, May 24, 2019. https://rockefeller.dartmouth.edu/sites/rockefeller.drupalmulti-prod.dartmouth.edu/files/prs_adus.05.24.2019.pdf
- ¹⁰² Accessory Dwelling Unit Checklist. Document on Hanover website.
- ¹⁰³ “ADUs in NH,” *Solid Roots Construction (Solid Roots Construction, January 22, 2019)*, <https://solidrootsconstruction.com/nh-adu-construction/>.

-
- ¹⁰⁴ Bruch, Michelle. “The 2040 plan’s code switch.” *Southwest Journal*, October 14, 2020. <https://www.southwestjournal.com/news/2020/10/the-2040-plans-code-switch/>.
- ¹⁰⁵ “Zoning Ordinance 2021, Hanover, New Hampshire,” Town of Hanover, New Hampshire, July 13, 2021. https://www.hanovernh.org/sites/g/files/vyhli3226/f/uploads/2021_zo-combined.pdf.
- ¹⁰⁶ Mullins, Kyle, “Millman, Student Initiatives Defeated at Hanover Town Meeting.” *The Dartmouth*, July 13, 2021. <https://www.thedartmouth.com/article/2021/07/millman-student-initiatives-defeated-at-hanover-town-meeting>.
- ¹⁰⁷ “City of Saint Paul: Ordinance: Ord 12-34,” City of Saint Paul, August 8, 2012. https://www.stpaul.gov/DocumentCenter/Government/Safety%20&%20Inspections/Fire%20Inspections/One%20and%20Two%20Family%20Residential/Student%20Housing%20Ordinance%208-8-12_201302121301194959.pdf.
- ¹⁰⁸ Callahan, Cloey. “Woodstock Votes Yes on Short-Term Rental Moratorium.” *Times Union*, July 21, 2021. <https://www.timesunion.com/hudsonvalley/news/article/Woodstock-votes-yes-on-short-term-rental-16327542.php>.
- ¹⁰⁹ “About.” Woodstock Community Trust, n.d. <https://www.woodstockcommunitytrust.com/>.
- ¹¹⁰ “About Twin Pines Housing.” Twin Pines Housing Trust, n.d. <https://www.tphtrust.org/about/>.
- ¹¹¹ “Housing: Projects.” Woodstock Community Trust, n.d. <https://www.woodstockcommunitytrust.com/projects>.