Subject: housing affordability analysis
Attachments: comprehensive plan affordability analysis.pdf

From: J Adams
Sent: Friday, May 16, 2025 2:29 PM
To: Planning <Planning@a2gov.org>
Subject: housing affordability analysis

Hello,

Attached is my analysis of the affordability of housing in relation to the draft land use plan based on ACS data for your review.

Regards,
Jim Adams
Fifth Ward

Can the new comprehensive land use plan develop more affordable housing for commuters working in Ann Arbor? This note attempts to answer that question. Estimates for total additional housing units, type of housing units, and who can afford these units were calculated using data from the 2023 American Community Survey (ACS) for Ann Arbor, MI. Details of the calculations that generated these estimates are presented after this note.

The city should be planning for a maximum of 26,000 additional housing units in the city over the next 25 years, split between owner-occupied and renter-occupied. 12,000 2 bedroom owner-occupied units are needed. 14,000 rental units are needed, split between 6,300 1 bedroom units and 7,700 2 bedroom units. However, housing affordability, defined as costing ≤ 30% of household income, remains the key issue.

Housing in Ann Arbor is affordable for only 34% of the commuters working in the city (26,000/77,000).

The affordability for owning or renting for different household types is shown in Table 1. Families, with a median income of $132,000, only spend 22% of household income for an owner-occupied unit. Non-family households, with a median income of $50,000, would need to spend almost 60% of household income for an owner-occupied unit. A single person with a bachelor's degree would need to spend > 50% of their income for an owner-occupied unit. Even with a graduate degree, a single person would need to spend 34% of their income for an owner-occupied unit.

Table 1. Housing Affordability in Ann Arbor.

Household Type	Owning affordable?	Renting affordable?
Family	Yes	Yes
Non-family	No	No
Single person		
Associates degree	No	No
Bachelor's degree	No	Yes
Graduate degree	No	Yes

Families could afford to rent even a 3 bedroom apartment, spending 20% of household income. Non-families would need to spend 35% and 42% of household income for a 1 and 2 bedroom apartment, respectively. A single person requires a bachelor's degree or higher to affordably rent a 1 bedroom apartment in Ann Arbor. This means a single person working in an office, sales, restaurant, or medical assistant position cannot afford to live in Ann Arbor.

Many questions remain unanswered and, sadly, unasked. Do we have estimates for what housing costs would make 2, 3 or 4 unit housing development economically viable for developers in Ann Arbor? Are these housing costs affordable for workers in Ann Arbor? Do we have estimates of what incentives might make 2-4 unit housing development economically viable, if needed at all? How have existing incentives for developing affordable housing in the current zoning worked? What other incentives are available? Surely, the knowledge base of professionals on the Planning Commission could answer these questions.

No land use plan or zoning regulation can change the household incomes of workers. No land use plan or zoning regulation can lower housing costs; cost stabilization is the best case scenario. We all hope that the new land use plan and zoning regulations will result in more housing that is affordable, but without more attention to the existing economic realities, that result appears wishful thinking.

Jim Adams

Fifth Ward

Details of Calculations

Before we decide where to go with future land use in the city, we should look at where we are now in terms of housing units, household types, and household incomes. The following data was obtained from the American Community Survey (ACS) for Ann Arbor, MI. Unless noted otherwise, all data are from the 2023 1-year estimates; the codes, e.g., CP04, refer to specific tables compiled from the survey data.

Ann Arbor, MI had approx. 53,500 housing units, of which 49,100 were occupied (CP04). That's a vacancy rate of 8%. The rental vacancy rate was 5%. Of the 49,100 occupied units, 48% were owner-occupied and 52% were renter-occupied. The average household size was 2.3 for owner-occupied units and 2.1 for renter-occupied. 60% of the housing units have 2 or 3 bedrooms, while only 17% have 1 bedroom. The median household income was $133,000 for owner-occupied units, but only $42,000 for renter-occupied units (S2503).

Only 21% of owner-occupied housing pay > 30% of household income for housing. In contrast, 62% of renter-occupied housing pay > 30% of household income for housing (S2503). From S2502, 72% of renters moved into housing units in 2021 or later, compared to only 17% of owner-occupied units.

What type of households live in these housing units? As shown in Table 2, ACS divides household types into family and non-family. Family types are further divided into married-couple or other family. Other family includes male head of households with no spouse and female head of household with no spouse. Non-family types are further divided into living alone and not living alone. Families account for 67% of households in owner-occupied housing. In contrast, 74% of non-families live in renter-occupied housing. 61% of renter-occupied non-families live alone.

Table 2. Housing Characteristics for Ann Arbor, MI for 2023 (CP04).

HOUSEHOLD TYPE (INCLUDING LIVING ALONE)	Percent owner-occupied housing units	Percent renter-occupied housing units	Median Income (S1901)
Family households	67.00%	26.10%	$132,000
Married-couple family	61.40%	15.20%	$152,000
Other family	5.60%	10.80%	
Nonfamily households	33.00%	73.90%	$50,000
Householder living alone	27.80%	44.70%	
Householder not living alone	5.20%	29.20%	

Data for median income based on education level is shown in Table 3 (S2001).

Table 3. Income by Education Level (S2001).

Education	Median Income
Less than high school graduate	23,777
High school graduate (includes equivalency)	33,276
Some college or associate's degree	38,373
Bachelor's degree	57,056
Graduate or professional degree	86,854

What wage is necessary to own or rent a housing unit in Ann Arbor?

First, let's look at owner-occupied housing. The median value of an owner-occupied house is $437,000 (CP04). The median owner-occupied cost with a mortgage is $2450/month,

requiring an income of $98,000/yr. for the housing cost to be affordable, i.e., ≤ 30% of household income. Families, with a median income of $132,000, only spend 22% of household income for an owner-occupied unit. Married couples would spend only 19% of household income. The family median income implies that there are probably two working adults in the family. Non-family households, with a median income of $50,000, would need to spend almost 60% of household income for an owner-occupied unit. A single person with a bachelor's degree would need to spend > 50% of their income for an owner-occupied unit. Even with a graduate degree, a single person would need to spend 34% of their income for an owner-occupied unit.

For renter-occupied housing, the median rents for a 1, 2, or 3 bedroom apartment are shown in Table 4 (B25031). To calculate the household income for affordable renter-occupied housing, 1 and 2 bedroom rent was used since a majority of renters either live alone or have a household size of just over 2. For affordability, 1 bedroom and 2 bedroom apartments require an income of $57,600/yr. and $69,200/yr., respectively. Families can afford to rent even a 3 bedroom apartment, spending 20% of household income. Non-families would need to spend 35% and 42% of household income for a 1 and 2 bedroom apartment, respectively. A single person requires a bachelor's degree or higher to affordably rent a 1 bedroom apartment in Ann Arbor.

Table 4. Median Monthly Rents (B25031)

No. bedrooms	Median Rent	Affordable income	% full-time (S2001)
1	$1,440	$57,600	61-75%
2	$1,730	$69,200	61%
3	$2,150	$86,000	40-55%

To summarize, families can either own or rent, but prefer to own. Non-families are probably income restricted to renting. A single person requires a bachelor's degree to affordably rent in the city. The above data is my attempt to provide a summary of Ann Arbor in terms of housing units, household types, and household incomes. Now let's look at what the draft comprehensive land use plan proposes for the future and see how the proposal is supported by the data.

The goal of the draft plan is to add 1200-1800 homes per year for the next 25 years (p. 46 draft plan), or 30,000-45,000 total housing units. There is no discussion in the plan as to how this range was calculated, the type of housing needed (owner or renter), or the size of housing (1, 2 or 3 bedroom units). In addition, the plan aims to add 140 affordable housing units per year (p. 46 draft plan), but no discussion is presented as to how this number was calculated or which income level the affordable housing will target.

How many housing units do we need over the next 25 years? As stated in the draft Plan, the number of total primary jobs in the city is approx. 94,000; 17,000 jobs are held by people living in the city, while 77,000 jobs are filled by people commuting into the city (from OntheMap, Ann Arbor, MI, 2021; 2021 is the latest available year for MI data). A primary job is the highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers. Of these 77,000 jobs, approximately 40% worked full-time, defined as working ≥ 35 hr./wk. for 50-52 wk./yr. (S2303). That's 31,000 full-time workers and 46,000 part-time workers. Given the housing costs described above, my assumption is that a part-time worker will not be able to own or rent a housing unit in Ann Arbor.

Can a full-time worker commuting into the city afford to live here? For owner-occupied housing, a minimum annual household income of $98,000 is required. However, only 40% of full-time workers have an annual household income ≥ $100,000 (S2001). Therefore, of the 77,000 primary workers

commuting into the city, only about 12,000 (77,000 x 0.4 x0.4) would be able to afford to own a house in Ann Arbor.

What about renting for the remaining 19,000 full-time workers? For a 1 bedroom apartment, the required income is $57,600. From S2001, somewhere between 61-75% of workers earn this amount. Assuming 75%, 14,000 workers could afford a 1 bedroom apartment. For a 2 bedroom apartment, the required income is $69,200; somewhere between 54-61% of workers earn this amount. Assuming 61%, 12,000 workers could afford a 2 bedroom apartment. For simplicity, let's assume that 14,000 workers choose to rent.

If all workers that can afford to own or rent in the city do so, only 34% of full-time commuters could affordably live in the city (26,000/77,000). However, we know that many people choose to live outside cities due to lifestyle preferences, regardless of affordability. Therefore, 26,000 workers should be considered a maximum number.

How many 1 or 2 bedroom housing units are needed? Assume family type households need a minimum 2 bedroom unit while non-family households will need a combination of 1 and 2 bedroom housing units. At a maximum, 12,000 2 bedroom owner-occupied units are needed. The number of 1 bedroom and 2 bedroom rental housing units is 45% and 55%, respectively, equal to 6,300 1 bedroom rental units and 7,700 2 bedroom units.

What are the implications of the above analysis for future land use in the city over the next 25 years? First, the city should be planning for 26,000 additional housing units in the city, or 1,040/yr. My opinion is that the above estimates for the number and type of housing units are maximums because the underlying assumption was that a person or family would live in the city if they could afford it. The city is currently adding on average 750 housing units per year (p. 48 draft plan). So the range of additional new housing units required per year is somewhere between 0 – 300. Put another way, we are already achieving 75% of our maximum additional housing target goal.

On average each year we would need to add 480 2 bedroom owner-occupied units (12,000/25), 310 2 bedroom renter-occupied units (7,700/25), and 250 1 bedroom renter occupied units (6300/25). The total number of housing units added per year is 1,050. Note that the estimated percentage of new units between owner-occupied and renter-occupied is 46% and 54%, respectively, very close to the current split of 48% and 52%. Also, the number of 1 bedroom rentals is 24%, higher than the current 17% of housing units.

Is the above analysis correct? I'm not a demographer or city planner, but planning for the future based on WAGs, as evidenced by the lack of data presented in the draft plan, is wishful thinking. This analysis, which is a SWAG at best, is the only attempt I have seen to actually estimate the number and type of housing required for the future based on income data. I would welcome any review and critique that would help refine these estimates. My hope is that this analysis will foster a more detailed, data-based discussion about the new comprehensive plan that leads to a plan a majority of the city can support.

A final bit of wisdom: "… between hope and result, there lies a line called attention." James Kernov