Beyond Brick and Mortar: Exploring Innovative Housing Solutions in Rural Appalachia

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Disclaimer

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On my honor, I have neither received nor given unauthorized aid on this assignment.

Raegan Larussa

Executive Summary

Rural communities in Appalachia face a myriad of issues as they seek to adapt to the loss of the coal industry. None, however, presents as serious a concern as the lack of housing. Dickenson County, a rural Appalachian county in Southwest Virginia, has not had housing developers work to develop subdivisions, neighborhoods, or build new homes. The County is also projected to lose significant population numbers each decade, a common trend for rural regions (Weldon Cooper Center Demographic Research Group, 2022).

Dickenson County is currently building a drug rehab facility center, which will generate many new jobs for the area. However, the County lacks an adequate housing supply to support these incoming staff members and entice anyone looking to move to the County. This issue is compounded by additional problems, including aging housing stock, lower median income relative to the rest of the nation, and the overall expense of building a home.

This report provides an in-depth review of the potential policy actions that Dickenson County can take to help increase the local housing supply, including a final recommendation and implementation plan. Each policy alternative is measured using cost, number of projected housing units, and administrative feasibility. The first policy alternative explores the use of Accessory Dwelling Units (ADUs), which are small-scale houses, basements, attics, or add-on units owned by the primary property owner. The second option considers using a Community Land Trust (CLT), where public land is held in a trust and leased at a low fee for an extended period to reduce the overall cost of the unit built. The final policy option is zoning and ordinance reform to create a more conducive environment for manufactured homes. This reform is the recommended policy action, based on the use of the aforementioned criteria. The implementation plan provides more detailed suggestions for moving forward with the recommendation successfully, including partnerships with model home developers and mortgage lenders and how to include the public in proposed changes that some may be wary of.

Table of Contents

Acronyms

CLT—Community Land Trust

ADU—Accessory Dwelling Unit

Glossary

Site-built—This is the type of housing most people consider standard. It is a home built entirely from scratch on the site, with no pre-made pieces.

Manufactured Housing—Manufactured housing is prefabricated, meaning it is built and assembled in a factory and then shipped in one piece to a home site. Homes constructed after June 15, 1976, are considered manufactured homes, while those constructed before are known as "mobile homes." Manufactured units must meet strict regulations set by the Department of Housing and Urban Development.

Modular Housing—Similar to manufactured housing, modular homes are constructed within factories, but they are shipped in pieces and assembled on home sites. Modular homes are similar to site-built homes, although they can be built faster because many parts are pre-made before arriving at the site.

By-right—This refers to development projects that meet current zoning restrictions and can, therefore, bypass the government review and permit process.

The Problem

Like many communities across Appalachia, Dickenson County has limited housing options available. The County is also preparing to construct and open The Wildwood Recovery Center to support those battling opioid addiction, which is expected to generate around 30 new jobs (Little & Keeling, 2023). Although a tremendous economic boon to the area, the County's economic development department is concerned about how to attract employees of this Center to move to the County given how little housing supply there is.

The housing crisis is affecting people all over the country; rising prices of materials, sky-high interest rates, and a simple lack of affordable models have impacted Americans' ability to purchase a home. The problem is further compounded by lower income, under-resourced towns, and mountainous terrain for those living in rural Appalachia. The median household income in the U.S. was $70,784 (Semega & Kollar, 2022). In contrast, the estimated 2023 median income for Dickenson County was $40,143 (U.S. Census Bureau, 2022b). Housing is an integral part of the economic growth of any area, but especially rural ones like Dickenson County—population projections for the County are expected to decline in 2030, 2040, and 2050 (Weldon Cooper Center Demographic Research Group, 2022). Despite current projections indicating Dickenson's population decline, the current construction of the rehab facility offers a chance to shift that future. However, considering that housing is needed primarily to serve employees for the rehab center and entice them to live, work, and pay taxes in Dickenson County, it will be important to consider those salaries. There is a projected annual salary of around $50,000 for these staff.

Based on the projected $50,000 salary and assuming a standard 30% of the gross salary housing budget, incoming staff could afford to spend $1,250 on housing. This seems reasonable, given that the County's median rent is $680. However, the lack of options will make obtaining housing difficult, as the County only issued three building permits in 2022 (U.S. Census Bureau, 2022b). In addition, the average cost of building a home in Virginia, not including the cost of land, is $310,100 (Abraham, 2022). Dickenson County's median income is also much lower relative to neighboring counties. Nearby Russell County and Wise County have estimated 2023 median incomes of $44,088 and $47,541, respectively (U.S. Census Bureau, 2022b). Aging housing stock is another issue prevalent in the housing crisis where the County's region is disproportionately affected. In Southwestern Virginia, where Dickenson County is located, 49.5% of renter-occupied and 58.5% of owner-occupied units were built before 1980. Comparatively, other areas of Virginia, like Northern Piedmont and Greater Prince William, have much lower numbers–only 27.1% of rental units in Northern Piedmont were built before 1980 (People, Inc., 2021). Dickenson County's median housing age is 42 years old, which seems to be standard for this region (Cusick, 2020).

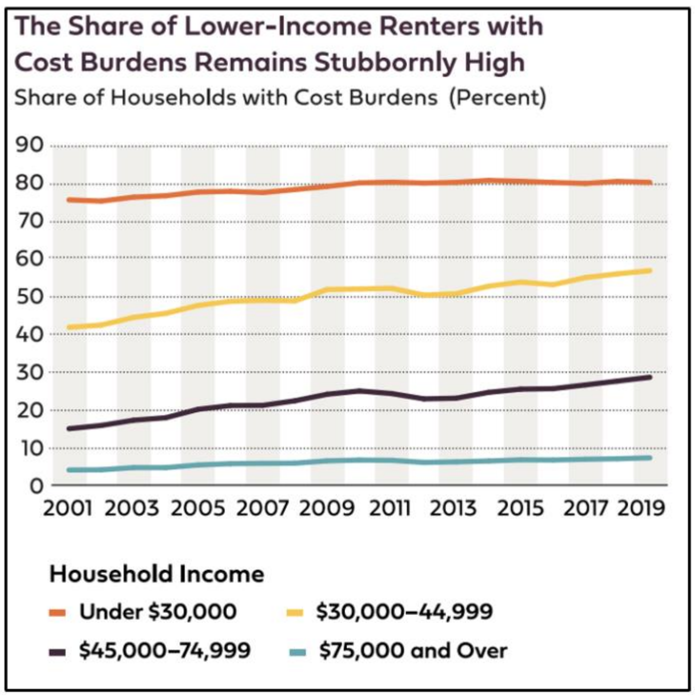
The most recent housing projects done in Dickenson County have been concentrated in an unincorporated community called Trammel. This community was one of the first and biggest "coal camps" in Southwestern Virginia, and many of its current residents are descendants of original miners' families. Due to the decline in the coal industry, Trammel is no longer thriving, and many of its owner-occupied dwellings are severely blighted and unsafe. The community action agency People, Inc. helped Dickenson County to obtain a $1 million Community Development Block Grant from the Commonwealth and begin the first phase of a multi-step plan to rehabilitate and improve living conditions for low-to-moderate-income residents and remove blighted properties to enhance the aesthetics of the area (People, Inc., n.d.). However, the project has faced challenges related to the long-term maintenance and upkeep of the homes. Dickenson County's aging housing stock, low median income, and limited building activity, compounded by overall expenses related to home-building, have negatively impacted the County’s housing supply. As a result, **Dickenson County has too few affordable, sustainable housing options to support projected economic growth.**

Background

The State of Housing

Housing insecurity is an issue that has recently worsened due to increased costs of labor and materials, an aging housing stock, and significant spikes in rental prices. Many of these issues were exacerbated by the COVID-19 pandemic, but housing was a problem even before that. In January 2019, there were only 37 affordable rental homes for every 100 low-income renter households (Aurand et al., 2021). Since the 2008 recession, housing supply in the U.S. has dropped dramatically. The crash of the housing market was, of course, detrimental to the state of housing overall. In the years immediately following the recession–2010 and 2011– construction of multifamily housing was severely low. This was especially problematic given that low-to-moderate-income households utilize multi-family housing the most. As a result, the vacancy rates for rentals and homeownership units dropped. In the second half of 2021, the rental vacancy rate fell to less than 6%, the lowest level since 1984 (Khan et al., 2022). Existing units are aging or in disrepair because the number of new homes constructed after the 2008 recession declined drastically. Roughly 35% of the housing stock in the U.S. is at least 60 years old (Sisson, 2023).

Another noticeable housing trend is the increase in the number of cost-burdened households in the U.S., which spend more than 30% of their income on housing expenses. In 2019, over 20 million renter households were defined as cost-burdened. The populations making up cost-burdened households are also typically low-income renters; since 2001, rental earners making under $30,000 have been roughly 75% of all cost-burdened households (Joint Center for Housing Studies of Harvard University, 2022). While much of the housing crisis pressures lower-income households, middle-income households are also affected. These are typically people with careers as teachers, police officers, janitors, or social workers. Because metropolitan and urban areas tend to have more regulations and restrictions on new development, middle-income families experience housing stress the most in these areas (Ford & Schuetz, 2019).



Source: Joint Center for Housing Studies of Harvard University

Rural Housing Trends

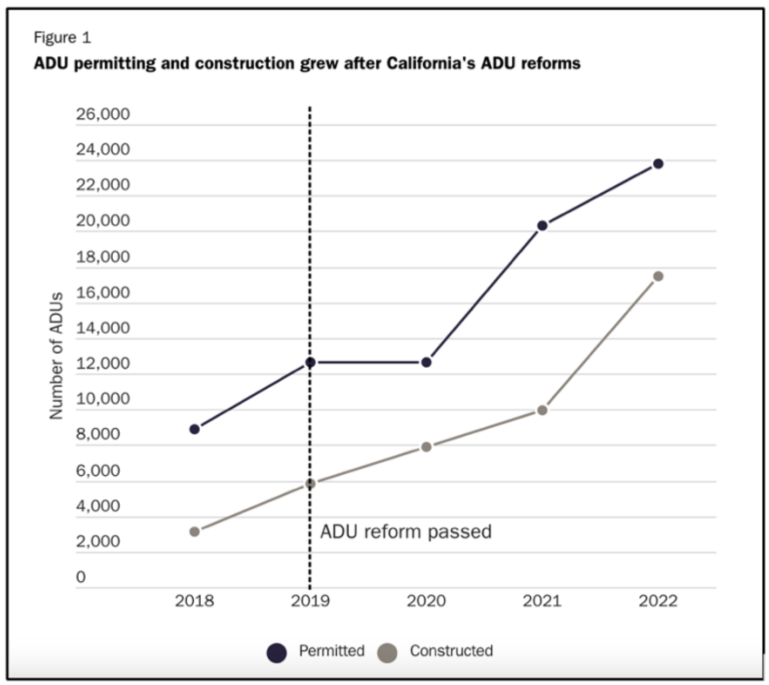
Rural areas face unique challenges that compound these housing issues. First, there is the issue of unmet preservation needs. Homes in rural areas are often older and typically need improvements or repairs to ensure they are safe, livable structures. A 2016 housing assessment from USDA Rural Development found that nearly half a million homes across the rural U.S. need housing preservation (CoreLogic, Inc. & RSM US, 2016). Affordability is also a more significant issue in rural communities. Since 2007, rural median income has consistently remained 20 percent lower than the urban median income (Economic Research Service, 2017). While affordability is already a problem in urban and metropolitan areas, such a stark difference in median income means that being able to rent, let alone purchase a home, is a much more significant financial burden to those living in rural areas. The number of rural cost-burdened households in the Commonwealth of Virginia has increased 32% faster than in urban areas since 2010 (Housing Virginia, 2017). These trends provide some contextual information to understand better how Dickenson County is affected by the housing crisis as a rural county. Manufactured and modular homes are also a common choice for rural areas. The average cost for manufactured homes or modular homes is significantly lower compared to site-built homes. In 2022, Virginia's average manufactured home price was $80,300 (U.S. Census Bureau, 2022a).

Literature Review

Accessory Dwelling Units

A recent, up-and-coming solution to housing shortages and affordability is the development of Accessory Dwelling Units (ADUs) and, more specifically, the use of tax abatements or subsidies to encourage building these units. ADUs are small, secondary units built on the same lot as a single-family home, sometimes called “granny flats,” “backyard homes,” and other names. They can be attached to the primary dwelling, built as stand-alone units, or converted from garages, attics, or basements. Because they are smaller, ADUs are cheaper to build and have lower energy costs. Most importantly, ADUs help cater to the “missing middle,” which refers to housing that is not quite an apartment but not quite a standalone home. ADUs are also great for people who, income-wise, find themselves unable to afford a home but also want to live in something other than multifamily housing (Kruth & Paranandi, 2023).

At a state-wide level, California has seen success in increasing its housing supply by reducing ADU regulations. In 2019, legislation was passed to make ADU construction more feasible, including barring localities from setting minimum lot sizes, eliminating fees, and requiring local municipalities to include ADUs in their housing planning efforts. The reductions paid off–California’s ADU construction increased from 5,852 in 2019 to 17,460 in 2022 (Brown et al., 2023). The City of Austin in Texas has also been among local communities embracing the ADU to address housing. In November 2015, the City Council amended regulations around ADU construction permits. These changes included reducing the minimum lot size required to build an ADU and removing driveway and parking location requirements. As a result, the city’s ADU permits increased from 463 between 2010 and 2015 to over 570 between 2016 and 2017 (Davis, 2018).



ADU Permitting in California
Source: California Department of Housing and Community Development

ADUs also provide benefits to the homeowners and property owners that build them. They can serve as an additional source of income, as homeowners can rent these properties out. This, in turn, creates an opportunity for local governments to increase tax revenue. Communities across New York State have received funding from the New York State Division of Homes and Community Renewal to help incentivize property owners to build ADUs. The City of Kingston, specifically, provided a tax exemption that allows property owners to deduct a portion of the value of their ADUs from their assessments (Most, 2023).

Additionally, some cities have subsidized the building of ADUs; the City of Boston provided interest-free loans for moderate and low-income homeowners to construct ADUs (Local Housing Solutions, n.d.). In 2019, the City of Montpelier in Vermont developed and implemented an ADU pilot program funded by a Community Development Block Grant. This pilot program provided grants of up to $20,000 and loans of up to $10,000 at 0%, given directly to homeowners to cover the costs of designing and building the unit (Vermont State Housing Authority, n.d.). A 2023 annual report from the City of Montpelier noted that four of the seven units required to be built had been constructed, with two more currently under construction and a final unit in the design stage (City of Montpelier, 2023). In 2018, the City of Honolulu provided tax exemptions to anyone wanting to build an ADU on their property. This exemption specified that homeowners receiving ADU building permits were eligible for an annual exemption of $60,000 per tax year for up to 5 years (Youn, 2023). However, ADUs are not necessarily more affordable. A study based in California found that although many cities counted ADUs as units that could be used as low-income housing, these areas failed to maintain the zoning standards that would legally designate them as such (Ramsey-Musolf, 2018). So, while ADUs can undoubtedly contribute to increasing overall housing, it is unclear how useful they are in increasing the number of low-income housing units in an area.

ADUs are a promising option to help boost housing stock, generate additional income for homeowners, and address housing for the missing middle. Moreover, relaxing reductions around them encourages further development. However, it is unclear whether these results could be extrapolated to rural areas, which are more sparsely populated and have limited development options. Most research around ADU regulation reform has been concentrated in urban areas, whereas Dickenson County is a small rural area.

Community Land Trusts

One of the factors contributing to the affordable housing crisis is the sheer cost of purchasing a home. While rising interest rates are certainly to blame for this, land cost also contributes to home value and, therefore, the price of homes (Hermann, 2019). One way to address this is by subtracting land costs from housing costs to create more affordability by creating a Community Land Trust (CLT). This is a model where the land a property is built on is owned by another entity, usually a local government agency or non-profit, while the buildings are owned or leased by residents. This model works by separating the value of the land from the value of the property, making the cost of the home more affordable, whether someone wants to rent it or purchase it outright (Department of Housing and Urban Development Policy

Development and Research, 2019). Although CLTs have been renowned for making homeownership more affordable, they are also helpful in promoting affordable renting. Rent increases are less likely, and indeed not as necessary, when properties are built on land held in a CLT since the property's value is not as high. CLTs can create and maintain housing affordability, mainly since land is leased to developers or builders for long periods, typically 99 years (Kim & Eisenlohr, 2022).

One such example of best practices for using public land to support affordable housing is here in the Commonwealth of Virginia, the first public-private partnership in Arlington County for affordable housing. The project was centered around using county-owned land, which was then built into affordable housing by the Arlington Partnership for Affordable Housing (APAH), a nonprofit development corporation. The County leased the land to APAH for 75 years, allowing the developer to build units without having to purchase the land, reducing the value and, therefore, the rental price of these units. The report points out that using public land to develop affordable housing dramatically reduces the cost of building these units and is a less risky form of financial assistance than other direct forms of assistance, which are often subject to budget cuts or delays. These arrangements also lead to lower infrastructure costs for developers (Hickey & Sturtevant, 2015).

Similarly, in Washington, the City of Chelan and Chelan County work alongside the Chelan Community Land Trust to ensure affordable housing. Both government entities contribute $20,000 annually to fund the Trust’s operations, while the City contributed separate funding to pay for sewer extensions needed for the affordable housing development site. This financing support has allowed the Trust to develop five townhomes and two single-family homes, with plans to construct 42 new units within the next five years (Bridges, 2023).

While many CLT models have been done in urban areas, they have also been used in rural ones. Vermont was among one of the first areas in the country to establish a CLT, doing so in the late 1980s, called the Central Vermont Community Land Trust. Today, it’s called Downstreet and offers a variety of services, including counseling, home-buyer education, and home repair loans. Downstreet also maintains around 159 homes in its portfolio, serving residents of rural counties Orange, Washington, and Lamoille (Dodd, 2023). Additionally, Washington state has the Lopez Community Land Trust, which was established in the late 1980s in response to a sharp increase in housing costs. The Trust holds and acquires land to build affordable and sustainable housing. Today, the Trust has six affordable housing neighborhoods, 3 of which are energy-efficient, 47 cooperatively owned homes, and six rental units (Lopez Community Land Trust, n.d.).

The use of public land is certainly feasible for Dickenson County, which currently owns land that is available for development. The financial benefits of leasing the land from Dickenson to build units, as opposed to purchasing it outright, could ideally motivate a housing developer to come to the County while also allowing them to provide lower-cost units for rent. The use of

CLTs in rural areas also provides reasonable evidence that counties and other local government entities can effectively partner with private sector actors to make progress toward a mutual problem, namely, affordable housing. However, land trusts have typically only been used for new construction and to build homes for purchase, not for rent (Kim & Eisenlohr, 2022). It is unclear whether CLTs would be as effective in providing affordable housing or, indeed, if developers would still be interested in building if units were restricted to rental properties instead of homes for purchase.

Manufactured Housing

Another popular form of housing for rural areas is the use of manufactured homes. Traditionally, manufactured homes have a negative social stigma around them. Manufactured housing units are sometimes called mobile homes, although any units produced after 1976 are considered manufactured. Additionally, manufactured homes built today are significantly improved compared to older models. They are cheaper to build, more energy-efficient, and generally retain or appreciate value over time. This makes manufactured homes ideal for rural areas looking to improve their housing stock, particularly since they can be added at the small scale that rural communities often need. Rural areas also typically tend to be low-income, which is undoubtedly true for Dickenson County. Manufactured homes can help address this issue since they are significantly more affordable than traditional homes; manufactured housing prices average $81,700, while newly constructed homes average $321,500 (Housing Assistance Council, 2020). In 2022, Virginia's average manufactured home price was $80,300 (U.S. Census Bureau, 2022a). Based on the projected average annual salary of $50,000, incoming rehab facility employees who account for the projected population growth would certainly be able to afford a manufactured home in this area.

Manufactured homes are successfully being used in rural communities. In 2010, a Kentucky-based nonprofit partnered with the Ford Foundation and Clayton Homes, the largest builder of manufactured homes, to build a demonstration of manufactured homes in Edgewood, Kentucky. The units they built were Energy Star-rated homes, all built on Federal Housing Authority Title II foundations (built to withstand flooding) and were constructed to include the curb appeal and aesthetic image of site-built

Example home in Edgewood. Source: Next Step Network homes in the area. Over time, the homes appreciated in value and easily blended into the neighborhood (Epperson, n.d.). Despite the benefits of manufactured homes noted thus far, these benefits are reduced for owners who also do not own the land their units are on. Manufactured homeowners have fewer legal protections than "regular" homeowners, and for those in manufactured home communities, sometimes called mobile home parks, there are often management and maintenance issues, and they are subject to excessive rent increases (Housing Assistance Council, 2020). More than half the manufactured housing stock in the country is in rural areas. This is primarily due to convenience and relative affordability, at least in terms of the overall prices of the units. However, these units are usually financed with high-cost loans, meaning they are at higher-than-average interest rates. Loans for manufactured homes are also typically for shorter terms, which increases the average monthly payment (Housing Assistance Council, 2020).

Regarding zoning and ordinance, research indicates that reducing regulatory barriers to manufactured housing can increase the use of these units. A study from the Department of Housing and Urban Development found that burdensome zoning codes significantly negatively impacted the number of manufactured home sales. In contrast, by-right zoning was found to positively impact the likelihood of units being placed, particularly when there is a smaller number of units, typically less than 20 (Dawkins et al., 2011). Moreover, a report from mortgage corporation Freddie Mac found that more than one million people across the country living in areas with restrictive zoning who are mortgage-ready and would otherwise be able to purchase a manufactured housing unit (Aw, Brown, & Yea, n.d.). Many areas have already taken steps to meet this need. The City of Oakland in California recently passed legislation allowing manufactured homes in all residential zoning districts (City of Oakland, 2022). In 2004, Washington passed legislation requiring that manufactured homes built to federal standards be regulated no differently than other housing types (SSG Community Solutions, 2021). Between 2014 and 2019, the state experienced an 87.7% increase in manufactured housing homes–the 15th largest increase in the country (Savransky, 2020).

Proposed Policy Alternatives

1. Implement an Accessory Dwelling Unit Pilot Program

The first is an Accessory Dwelling Unit (ADU) pilot program. This policy alternative would feature a financial incentive in the form of a grant to partially subside the overall costs, incentivizing property owners to build ADUs to be added to the local rental market. These specific covered costs would be city fees and planning and design costs. Funding would be obtained through a Community Development Block Grant (CDBG), which the County would apply for from the Virginia Department of Housing and Community Development. Any interested property owners living in and owning property in Dickenson County would be eligible to participate in the program.

2. Establish a Community Land Trust

The second policy alternative is establishing a Community Land Trust (CLT) using the County's public land. CLTs have been very useful at stimulating affordable housing, especially when implemented through a public-private partnership whereby local government works alongside the governing committee. To implement this, Dickenson would establish a nonprofit board to oversee the CLT development and hire one staff member to manage operational duties. The lease arrangement would allow for a 99-year tenure to assure affordability in perpetuity and help offset the cost of constructing a unit since the builder would only be leasing the land at a much lower price than purchasing.

3. Zoning and Ordinance Reform for Manufactured Housing

The third policy alternative is zoning reform to stimulate manufactured housing use. Manufactured housing units are built according to the code set forth by the U.S. Department of Housing and Urban Development, while similar units, called modular homes, are built according to state, local, or regional codes (U.S. Department of Housing and Urban Development, n.d.). This policy alternative would modify the county-level ordinance to allow by-right housing development and Section 4.4 (C) to allow manufactured housing units to be built outside mobile home parks or subdivisions (Dickenson County Board of Supervisors, 2010). The County's Building Administrator would oversee these reforms, and the County Attorney would handle all legal aspects. Dickenson County would establish a Board of Zoning Appeals comprised of volunteer members, per its current ordinance. Additionally, the County could sell off parcels of land from the available public land to interested parties.

Criteria

This section explains the three criteria used to measure each alternative. For a detailed breakdown of effectiveness projections, please see the Appendix.

Cost

This criterion will determine the cost of each alternative. The cost will be calculated for each alternative's first year of implementation. This will be done by estimating the administrative/personnel costs needed to implement and any direct costs, including materials or resources. Dickenson County is a small locality with limited financial resources and actively seeks to keep taxes low. Cost is important when determining a policy action, particularly if taxpayers will bear that cost.

Effectiveness

The effectiveness of an alternative will be related to its impact on the housing shortage in Dickenson County. This criterion will examine how many housing units the alternative will produce compared to the status quo. Effectiveness will be measured by calculating how many housing units each alternative is estimated to produce. Previous implementation of each alternative in other localities and information about the number of acres available for development in Dickenson will inform exact calculations.

Administrative Feasibility

This criterion will determine how easy it will be to implement the alternative. Dickenson County's administrative capacity is also somewhat limited; Dana Cronkhite is the Economic Development Director within the County's Industrial Development Authority and would be responsible for most housing-related programs. As a result, alternatives will be evaluated based on the limited capacity of this department. Each alternative will then be assigned a **Low, Medium**, or **High rating**. A **Low** rating indicates that the alternative would require a significant increase in workload for the current staffing capacity or hiring additional staff. **Medium suggest**s that the alternative will require some work from current staff but not enough to hire additional staff. A rating of **High** indicates that the alternative would require little to no extra work for current staff.

Evaluation of Alternatives

1. ADU Pilot Program

This policy alternative would create an Accessory Dwelling Unit (ADU) pilot program for Dickenson County. The analysis using the three criteria is as follows:

Cost

To address some of the cost barriers associated with ADU development, Dickenson County will subsidize city fees and planning and design costs. The County could apply for a Community Development Block Grant from the Virginia Department of Housing and Community Development to cover these costs.

These calculations are broken down as follows:

- Design and planning costs can be between $6,000 and $14,000, making the average cost $10,000.
- City fees average $3,000 to $11,000, making average fees around $7,000 (Levi Design Build, 2023).
- Additionally, the County would incur costs if it hired a grant writer to write the Community Development Block Grant proposal. The average hourly rate for a grant writer in Virginia is $29 per hour (ZipRecruiter, 2024), and short government grants can take between 20 and 30 hours (Professional Grant Writers, 2022), so hiring a grant writer at $29/hour for an average of 25 hours would cost $725.

Assuming the ADU Pilot Program could produce three units, the subsidized costs would be $17,000 per unit plus $725 for a grant writer. Based on these calculations, the total cost of an ADU Pilot Program would be $51,725.

Effectiveness

ADUs have successfully produced housing units through various measures, including reducing zoning regulations and providing financial incentives. Because Dickenson County does not have zoning ordinances or regulations around ADU development, effectiveness will be measured using financial incentives. One of the significant costs associated with ADU development is the design and planning of the unit. The City of Raleigh implemented a program to reduce this financial burden by providing pre-approved ADU designs at deeply discounted prices. Since the program's implementation in 2020, the number of ADUs constructed increased from 2 to 93 in 2023, an increase of over 4,000% (City of Raleigh, n.d.). Given that Dickenson County's population is roughly 3% of Raleigh's, a conservative estimate finds that Dickenson could reasonably produce 3% of the number of ADUs Raleigh did, which is 2.74 units, rounded up to three units.

Administrative Feasibility

This alternative would require Dickenson County to apply for a Community Development Block Grant, which would require either hiring a grant writer or adding this task to the workload of current staff. As noted above, this proposal would likely take between 20 and 30 hours of work. Additionally, a staff member would need to administer the pilot program. This project could likely be added to the workload of a current staff member, as it likely would not be time-consuming enough to warrant hiring more personnel. Based on that, the administrative feasibility rating is **Low**.

2. Community Land Trust

This policy alternative would be Dickenson County establishing a Community Land Trust (CLT) to hold public land and lease it to developers or potential private homeowners. The analysis of this alternative using my proposed criteria is as follows:

Cost

The operating board for the CLT would be made up of volunteer members so that no salary would be needed. However, one full-time employee must be hired to manage day-to-day operations. The average salary of a community and social services specialist in Southwest Virginia is $51,510 (Bureau of Labor Statistics, 2022). I inflate this cost by 30% to cover benefits and payroll taxes, bringing the final salary to $66,963. This is likely the type of position that would oversee CLT work, and thus, it is the only cost for this alternative.

Effectiveness

The median CLT contains around 50 housing units (Greenberg, 2019). Projected housing units can be calculated by looking at the average acreage lot size per home in Virginia and applying it to Dickenson County. Although there is no literature about the average number of acres per housing unit in a CLT, the average lot size in Virginia is 21,344 sq feet or roughly half an acre (Ang, 2022). Based on this average lot size and the median number of housing units in a CLT, it is reasonable to assume that an average CLT in Virginia could include about twenty-five acres or two units per acre. Given that Dickenson County has roughly four acres of public land available for development, a CLT could manage and produce about eight housing units. However, this is likely an overinflated number. Although land cost is indeed an issue affecting the housing landscape in Dickenson County, there are other barriers affecting it. As mentioned earlier in this report, site-built homes are still a significant expense even without land cost (roughly $300,000), especially relative to the current median salary and expected average salary of incoming rehab facility staff. Considering this significant cost barrier, a more reasonable number is around four housing units.

Administrative Feasibility

Establishing a CLT would require Dickenson County to establish a board to oversee development. A full-time staff member also must be hired to manage operational work. Although this does not add to the workload of current staff, this alternative would require the County to recruit, hire, and train a new staff member to manage this program. In addition, this alternative is likely not politically feasible Community Land Trusts, which are inherently collective property, may receive pushback from conservative communities that value property rights and limited government interference in matters such as housing. Given that Dickenson County is a primarily Republican-voting area, it is likely that most residents would be opposed to this measure (Virginia Department of Elections, 2022). As a result, this alternative is rated as having **Low** administrative feasibility.

3. Zoning and Ordinance Reform for Manufactured Housing

This policy alternative would modify the County-level ordinance to allow by-right housing development, which allows development projects to bypass the permit and review process if they comply with current standards, thereby streamlining the overall development of a housing unit. This analysis of this alternative using my proposed criteria is as follows:

Cost

The County attorney would be needed to handle the writing changes for the current ordinance. In taking a conservative approach to the timeline for this, it is assumed that these tasks would take one day or 8 hours of work. At a current rate of $150 per hour, legal fees would cost $1,200. Although the County Building Administrator is responsible for interpreting the ordinance and working with the Board of Zoning Appeals, handling zoning and related issues is already a part of this individual’s job description and current employment. Because this would not be an additional cost and is already a part of Dickenson’s current budget, the County Building Administrator’s salary is not included in these cost calculations.

Effectiveness

In 1980, the City of Oakland, California, adopted an ordinance to allow the placement of manufactured homes on permanent foundations. California also passed a law mandating that cities and counties will enable the installation of manufactured housing units on lots zoned for conventional single-family dwellings. Reducing these regulatory burdens led to increased units; from 1990 to 2000, Oakland gained 178 new manufactured housing units (Dawkins et al., 2011). Given that Oakland's population was 372,242 in 1990, and Dickenson County's population is 14,125 (3.79% of Oakland's), it is reasonable to assume that this policy alternative could produce 3.79% of 178 units–6.75 units, which could be rounded up to 7 units.

Administrative Feasibility

Zoning reform and handling zoning appeals are already a part of the County Building Administrator's job. As a result, that position is prepared to handle the workload, which would be minimal. Once the ordinance has been modified, the Building Administrator's work would only require responding to appeals and enforcement issues alongside the Board of Zoning Appeals. Appeals and enforcement work would only occur after the ordinance has been reformed, so it would not add consistent tasks to the workload of the County Building Administrator or the Zoning Board. As a result, administrative feasibility is rated as **High.**

Outcomes Matrix

	ADU Pilot Program	**Create a Community Land Trust**	**Zoning for Manufactured Housing**
Cost	$51,725	$66,963	$1,200
Efficiency	3 units	4 units	7 units
Administrative Feasibility	Low	Low	High

Recommendation

Based on my analysis and application of criteria, it is recommended that Dickenson County implement zoning reform for manufactured housing. This alternative has the lowest cost and the highest likelihood for administrative feasibility. Most notably, the alternative solves the primary problem statement highlighted in this report: stimulating housing development at a reasonable price tag. Most of the work done to implement zoning reform would be a limited burden for government staff, requiring only that the County ordinance be updated and occasional work on the part of the County Attorney to enforce the ordinance. The ADU pilot program and Community Land Trust would also require more oversight and involvement from the County government, even requiring additional staff to be hired for some aspects of these alternatives.

Zoning reform is also substantially cheaper to implement, requiring only that the County cover attorney fees for legal work to reform the ordinance and address enforcement issues. In contrast, the ADU Pilot Program would cost close to $700,000–over 500 times the cost of zoning reform. The Community Land Trust would also require significantly more funding than zoning reform. Since that alternative's cost comes from a salary, it would likely be even more expensive, as $51,510 would be an annual cost.

One of the more important criteria for examining these alternatives is whether they would increase available housing units. Although the Community Land Trust is projected to produce around eight housing units, zoning reform's projected seven units is not a significantly lower number. Implementing zoning reform instead and accepting a slightly lower number of projected units would save Dickenson nearly $50,000 yearly, a reasonable tradeoff. Additionally, the ADU Pilot Program produces the lowest number of housing units, only around half of what zoning reform is projected to produce at a much higher cost. Because zoning reform would be a limited administrative burden, have the lowest associated cost, and is projected to create one of the highest numbers of housing units, it is the clear preferred choice.

Implementation Plan

Implementing this policy alternative will be a reasonably simple task. The County Building Administrator will work with the County Attorney to allow by-right zoning in Dickenson County's ordinance and reform the section prohibiting manufactured housing units in areas other than mobile home parks or specific subdivisions. These regulatory changes will create a more hospitable environment for an affordable and sustainable housing option while helping to replace the aging housing stock.

However, there are a few key stakeholder groups whose perspectives must be considered, and additional steps must be taken to respond to stakeholder reactions proactively. Three distinct groups of stakeholders are involved in and affected by the implementation of this recommendation: the residents of Dickenson County, the staff members of the rehab facility who could potentially become Dickenson County residents, and the local government staff responsible for implementation.

Residents who already live in or own property in Dickenson can make public comments about these proposed zoning changes. Although it is unclear what the public attitude to these regulatory changes will be, there may be some pushback. Manufactured housing units are sometimes seen as aesthetically unpleasing and may be considered socially undesirable. The potential negative backlash from the public may partly be fueled by the "Not in My Backyard" movement. This growing public mindset views affordable housing, shelters, and other non-traditional housing as undesirable. This perception can be based on many things but is often predicated on the belief that low-income housing (which includes manufactured housing in some cases) results in increased crime, litter, or a reduction in property value (Homeless Hub, 2019). Because of this, some residents may not be happy about the possibility of a manufactured unit near their property.

To address that potential issue, Dickenson County should partner with a local manufactured housing developer to install a model unit. This model home could help dissuade negative perceptions of manufactured housing, particularly since people may think these units are too similar to older mobile home models. Model homes are typically seen as an essential tool in marketing available units (Lita Dirks & Co., 2020). Possible partners include Clayton Homes, which builds manufactured, modular, and other off-site homes, or Cavco Industries, a manufactured housing developer that recently announced the first HUD-approved manufactured duplex home (Manufactured Housing Institute, 2023). The unit could be placed on the public land the County already has available for development.

In addition, Dickenson County should take steps to include the public in the changes. Community engagement will be essential here. Arlington County followed exactly this strategy when pursuing zoning changes. The County recently passed a missing middle zoning ordinance, which would allow for multi-family housing development in areas that were previously zoned for single-family housing. Arlington County took several steps to ensure community feedback and public participation were included as they considered this policy change. These action steps included sharing research online for public consumption and hosting webinars, forums, and meetings for community members to share their feedback and understand the impetus behind the proposed zoning change (Buss, 2023). Manufactured housing developers, particularly the model home partner, should be invited to attend and participate in any town halls or public forums that Dickenson County hosts to encourage public discussion around these changes. Similarly to how the model home will demonstrate the aesthetic appeal of a manufactured or modular home, representatives from the developers can discuss the value of these units and assuage any concerns about how they may fit into the community.

Although the public reaction may be less favorable, government staff would likely support these regulatory changes. Removing the permit requirement and allowing by-right zoning reduces the workload for staff overseeing this work. Additionally, the Wildwood Recovery Center staff members would likely support this move. Staff not living in Dickenson County will likely commute to work, so reducing the zoning burden to make homeownership and housing more accessible would undoubtedly appeal to Wildwood employees looking to live and work within the County. In addition to considering reactions from key stakeholders and preemptively addressing any adverse reactions to this proposed policy alternative, it would also be prudent to consider action steps if the zoning reform does not stimulate new housing. It is possible that even with the zoning reform and ordinance change to relax restrictions around manufactured housing, there will not be an increase in consumers purchasing or building units. Moreover, societal stigma around manufactured housing may keep potential residents from considering this type of housing.

To better execute this alternative, a partnership with community action agency People, Inc. would be advisable. Dickenson County has previously worked with People, Inc. to secure funding to improve the unincorporated community of Trammel. People, Inc. administers a variety of housing-related programs, including first-time home buyer loans with the support of Virginia Housing. As noted earlier, although manufactured homes are affordable, loans for these units may have higher interest rates or shorter loan terms, making monthly payments higher. People Inc. can help homebuyers obtain reasonable interest rates and loan terms to make manufactured housing more accessible. Zoning and ordinance reform for Dickenson County has the potential to be meaningful regulatory change to help stimulate the county's housing supply. Although there may be some public pushback, Dickenson County can prepare for this by taking proactive steps to include the public in the reform process and demonstrate the importance of zoning reform in addressing housing shortages.

Conclusion

Making the regulatory environment more conducive to housing development by making manufactured housing more accessible will help to increase the housing supply in Dickenson County. Manufactured housing units are also more affordable for current residents of the County and those employed by the rehab center and interested in living in Dickenson. By implementing zoning and ordinance reform, Dickenson County can stimulate the development of affordable, sustainable housing units for its community.

Appendix

A. ADU Projections

2020 City of Raleigh Population	**467,665**
2020 Dickenson County Population	**14,124**
Percent of Raleigh Population	**0.03**
Number of total units produced since 2020	**91**
Projected Units (3% of 91)	**2.75**

B. Community Land Trust Projections

Median CLT Number of Units	**50**
Average housing lot size in Virginia	**0.5**
Assumed number of units per CLT in Virginia	**25**
Assumed number of units per acre per CLT in Virginia	**2**
Number of acres Dickenson has available	**4**
Projected Number of units per acre	**8**

C. Zoning and Ordinance Reform for Manufactured Housing

1990 Oakland Population	**372,242**
Dickenson County 2020 Population	**14,124**
Percent of Oakland's Population	**0.04**
Number of units Oakland produced	**178**
Projected units	**6.75**

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