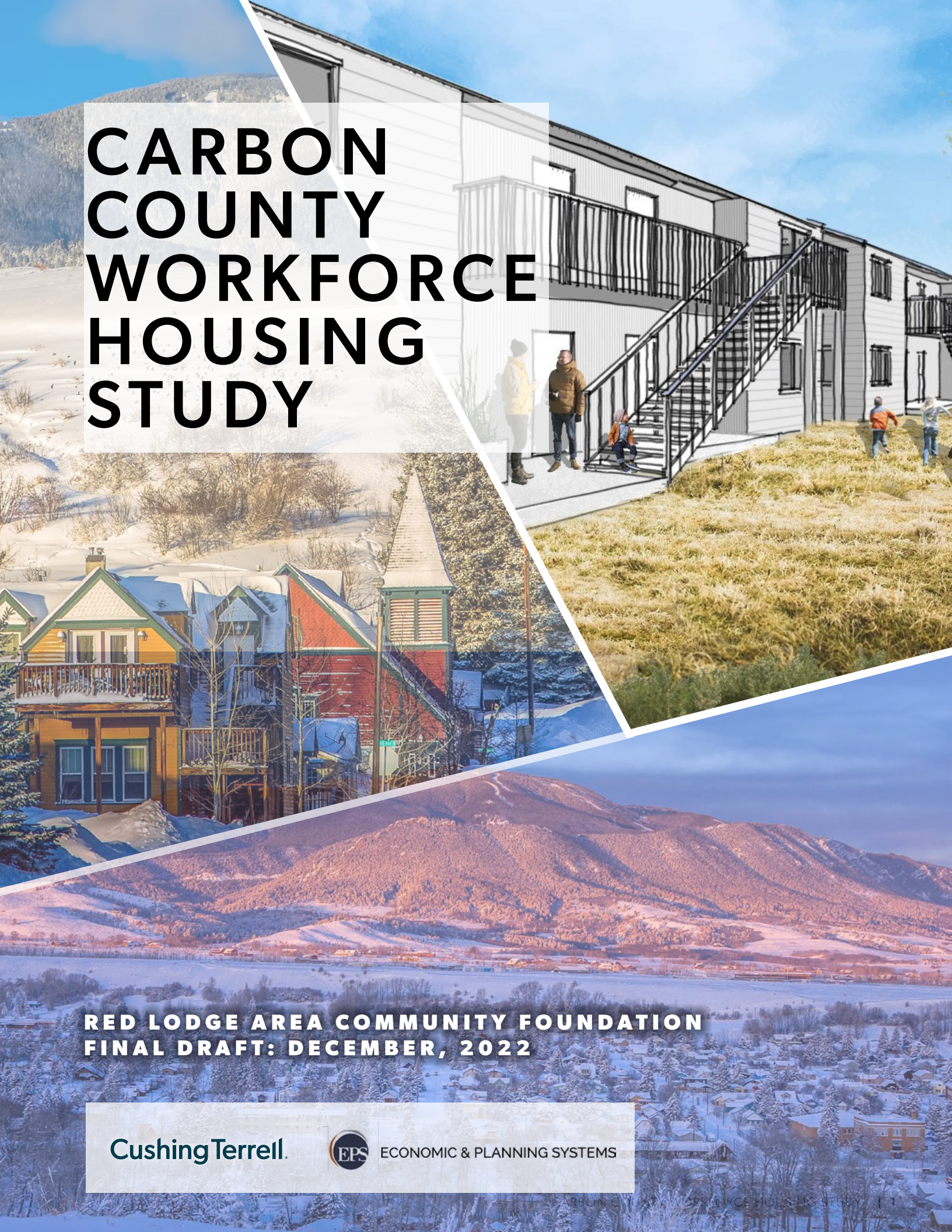

# CARBON COUNTY WORKFORCE HOUSING STUDY

**RED LODGE AREA COMMUNITY FOUNDATION**
**FINAL DRAFT: DECEMBER, 2022**

Cushing Terrell. | EPS ECONOMIC & PLANNING SYSTEMS

# Acknowledgements


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# Contents

# Executive Summary

## PURPOSE & NEED

Carbon County, not unlike many desirable mountain communities in Montana, is in a housing crisis. The lack of available units across all housing types is well documented and the impacts on livability are tangible. Despite the needs and constraints, great opportunities exist to envision a future where the Carbon County/ Red Lodge workforce is supported through new housing development that remains true to its character and heritage. The purpose of this study is to build upon the Beartooth RC&D Regional Housing Study by selecting two sites to study the feasibility of workforce housing development.

Housing prices have risen quickly, with a large volume of sales only affordable to high-income households. A significant share of households below 80% of the area median income are cost-burdened. Most service sectors do not have a high enough income to afford a median-priced home in. Employer focused housing should aim towards healthcare, schools, public administration, accommodations, food service, and Red Lodge Mountain. Carbon County will need to build 60 units per year for the next decade to meet demand. Most of these units should target the 30-60% AMI range and above the 120% AMI range.

## SITE SELECTION PROCESS

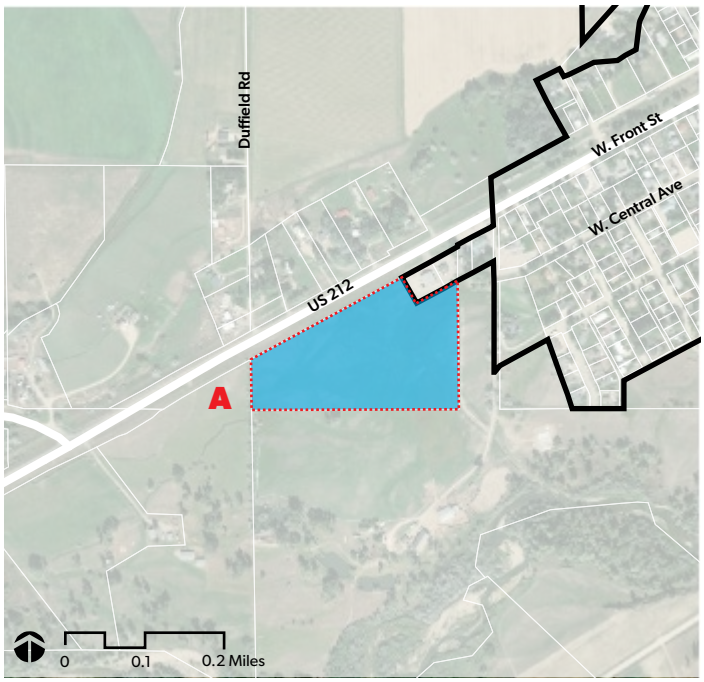
The project team conducted an analysis on eleven sites identified in the BRCD Land Suitability Analysis, or identified by local experts as having potential for workforce housing development. This analysis included the following criteria:

- Proximity to workforce housing needs in Red Lodge
- Parcel size (a parcel 0.5 acres or larger is needed to accommodate a project with 8-15 units)
- Existing land use
- Existing zoning/regulatory requirements for housing development
- Parcel ownership
- Site conditions (including location of infrastructure, access, existing structure(s), floodplain, and slope.
- Multi-modal connectivity

After the analysis, the project team contacted property owners to understand their interest in including their parcel(s) in the Study. Based on the analysis and the property owners' interest, four sites were selected to bring to the community: Site A, Site B, Site C and Site D.

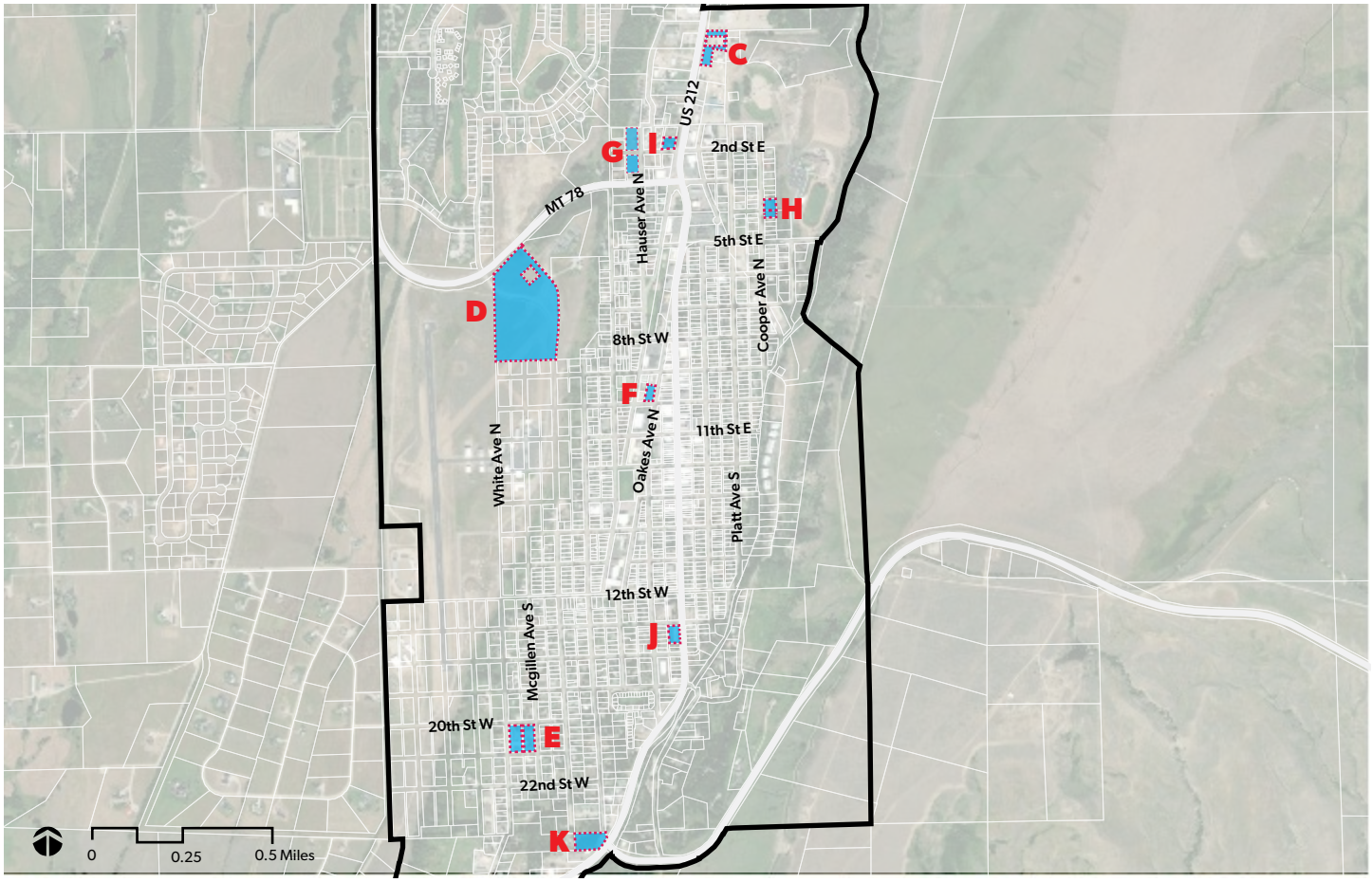
## COMMUNITY INPUT

Three public open houses were held to get community feedback on the four sites selected from the site analysis. Following these community meetings, the Community Foundation decided to move forward with Site B (Roberts) and Site D (Brewery Hill).




*Site A in Joliet*


*Site B in Roberts*




*Sites C through K in Red Lodge*

# ROBERTS SITE

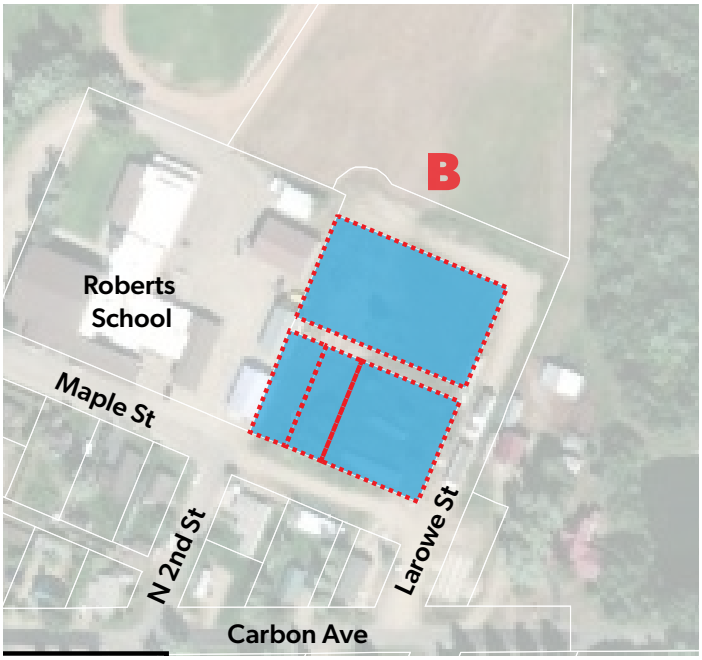
## DESCRIPTION

The Roberts Site is located on the northwest corner of Maple Street and Larowe Street in Roberts, Montana. It is 1.6 acres and is currently vacant with no existing structures. Water and sewer infrastructure exist on Maple Street that the project can tie into.

The parcel is in the process of subdivision, and the lots are privately owned and would need to be purchased at or near market value. Although Site B is located 12 miles from workforce housing needs in Red Lodge, the Roberts School Superintendent informed the project team that 13 of the 16 teachers at the school commute from outside of Roberts due to the lack of housing availability. At the Open House in Roberts on October 12, the community felt strongly about this site being developed for workforce housing.

## SITE CONSIDERATIONS:

- Minimal regulatory requirements (under Carbon County's regulations) for housing development
- Requires purchase of the property at or near market value
- Adjacency to the school is a significant opportunity
- Road infrastructure needs improvement
- Opportunity to improve Safe Routes to Schools
- Site was approved for development by the State DEQ prior to the June 2022 floods, will require re-permitting.




*Site B in Roberts*

## PROPOSED WORKFORCE PROJECT:

The proposed project is modeled to be 12 units distributed between three 2-story buildings with a density of 15 dwelling units per acre. The 12 unit composition is fully comprised of 2-bedroom units. The site is shown in multiple phases, with the inclusion of a community garden and playground in a future phase.

## COST ESTIMATES:

Total project costs were estimated at $376 per square foot and $272,895 per housing unit. Five units are set at market rate and 7 units are set as affordable to households at 60% of the area median income. The proposed project has a financial feasibility gap, meaning additional financial support will be needed.

# ROBERTS SITE DESIGN CONCEPT


1 PLAYGROUND

2 COMMUNITY GARDEN

3 STORMWATER

4 TURN AROUND

5 EXISTING ASPEN GROVE

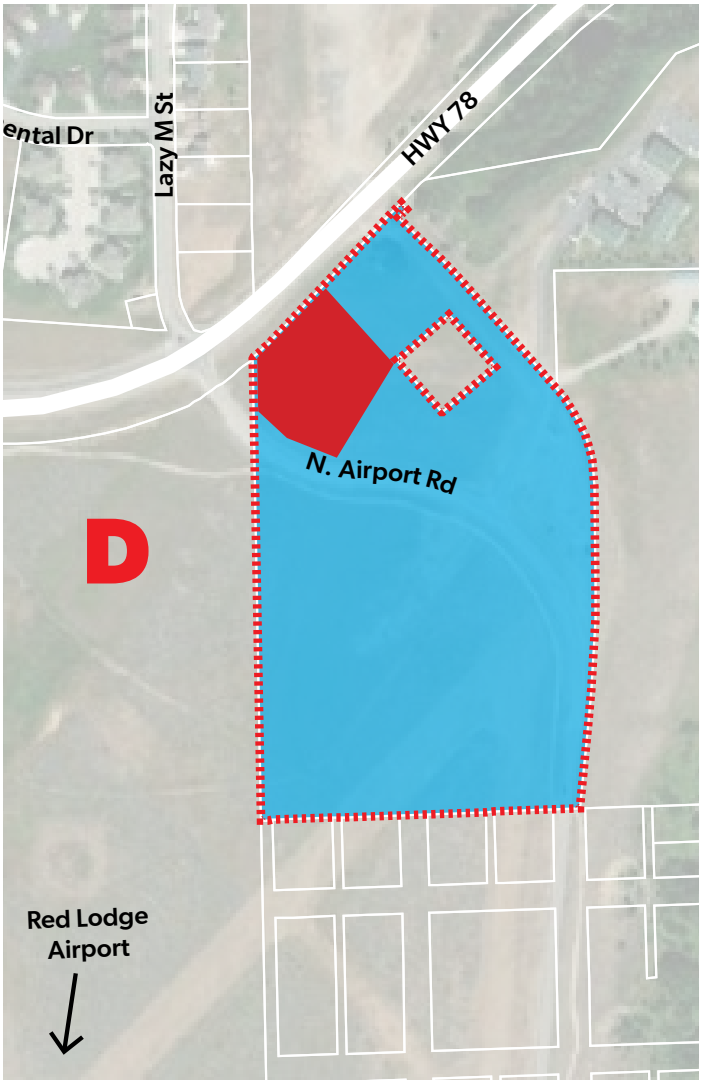
**PHASING SUMMARY**

| | |
|---|---|
| PHASE ONE: | 12 UNITS |
| PHASE FUTURE: | 16 UNITS |
| **TOTAL:** | **28 UNITS** |

# BREWERY HILL SITE

## DESCRIPTION

The Brewery Hill site is located in the City of Red Lodge off of Highway 78. It is 17.8 acres and is currently vacant with no existing structures. The large parcel wholly encompasses a small, half acre, island parcel that is privately owned. There are apartments adjacent to the site to the east. Water and sewer infrastructure do not exist on site, but do exist under Highway 78 that the development can tie into. Due to its large size, only 1.2 acres of the site will be needed, and the remainder of the site could be preserved for future phases of housing development.




*Brewery Hill site in Red Lodge*

## SITE CONSIDERATIONS:

- Publicly-owned, land acquisition will require a process of disposition of City land, a rezoning process, and financial acquisition costs should be assumed at market rate
- Conveniently located near downtown Red Lodge
- Connected to Red Lodge via an existing trail
- Island parcel would need to be purchase or acquired through a land swap
- Could accommodate more housing in the future

## PROPOSED WORKFORCE PROJECT:

The proposed project is modeled to be 16 units distributed between two 2-story buildings with a density of 13 dwelling units per acre. The unit composition is a 50-50 mixture of 1- and 2-bedroom units. The site is shown in multiple phases, with the inclusion of a playground in Phase 1 and a community garden in a future phase.

## COST ESTIMATES:

Total project costs were estimated at $551 per square foot and $315,168 per unit. Seven units are set at market rate and 9 are set as affordable to households at 60% of the area median income. The proposed project has a financial feasibility gap, meaning additional financial support will be needed.

# BREWERY HILL SITE DESIGN CONCEPT


1 PLAYGROUND

2 COMMUNITY GARDEN

3 STORMWATER

4 PHASE ONE TURN AROUN

5 EXISTING TRAIL

**PHASING SUMMARY**

| | |
|---|---|
| PHASE ONE: | 16 UNITS |
| PHASE FUTURE: | 8 UNITS |
| **TOTAL:** | **24 UNITS** |

# 1 | Introduction

## PURPOSE & NEED

### PLANNING AREA

There is no understating the urgent need for workforce housing in Red Lodge. The lack of available units across all housing types is well documented and the impacts on livability are tangible. The community's role as a tourism center with a service-based economy is complemented by its historical roots in mining and industrial activities which are still evident in the built environment. Despite the needs and constraints, great opportunities exist to envision a future where the Red Lodge workforce is supported through new housing development that remains true to its character and heritage.

Carbon County's history of growth has resulted in an older housing stock, with new units reflecting a marketplace bearing higher-end, single family homes mostly in unincorporated areas. Slow multifamily growth in existing communities has exacerbated the housing shortage for middle-income people who are getting priced out, while a growing number of Billings commuters, newcomers and secondary-home owners are buying up inventory once affordable for renters.

### HOUSING NEED

Housing development patterns and needs in Carbon County reflect the diversity of the economy, perhaps more noticeably than its neighbors in the BRCD region. Moving away from an agriculture-based economy and toward a tourism and serviced-based one in the last several decades, the County has seen a shift in population from the Clarks Fork Valley to the City of Red Lodge, and to a lesser extent, smaller and more affordable communities closer to Billings.

While there is no one solution for increasing workforce housing supply in the County, assisting employers to build units for their workers through subsidies or other financial assistance may boost the number of available units. As Red Lodge continues to add housing, the unit types, sizes and tenancy models must shift to meet workforce needs. In Red Lodge, where local support for housing assistance is strong and where organizations like the Red Lodge Area Community Foundation (RLACF) have put frameworks in place, creative tools and funding sources may help redirect resources for this purpose.

Although land and housing costs are not as cheap as they used to be, the stage is set for partnerships between local jurisdictions, housing providers, community groups and employers that can help these active markets regain balance.

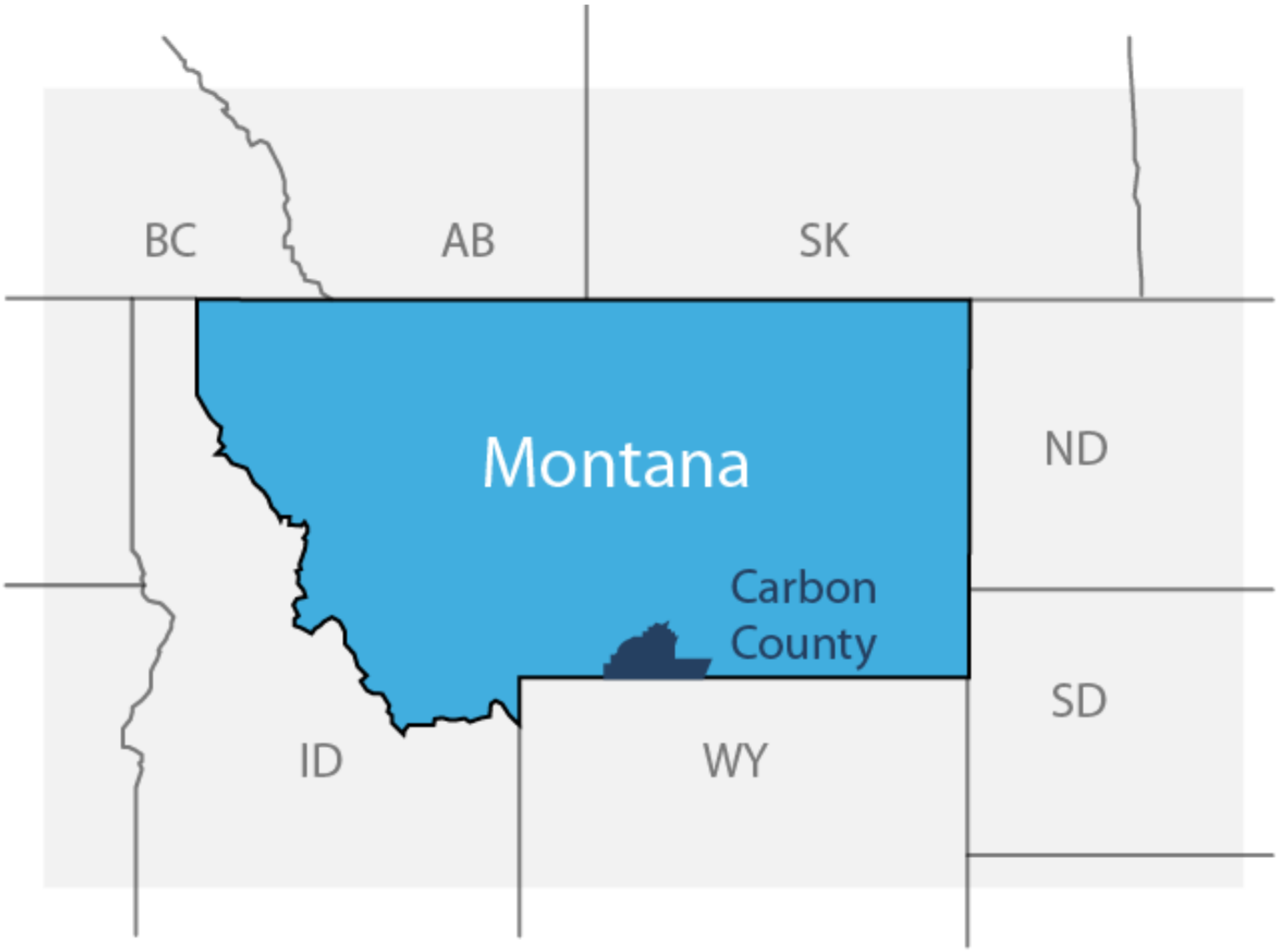



*Figure 1: Carbon County Context*

## HOUSING GROWTH OVERVIEW

Until recently, the county had an abundance of vacant and somewhat inexpensive residential land. Parcels both on municipal services and on platted and unbuilt lots between the Rock Creek benches all the way to the Yellowstone County line have been slowly built out. Escalating land prices are the result of this inventory going away. With few new subdivisions, buildable parcels are limited. As of mid-2021, only a few dozen vacant serviced lots existed in and around Red Lodge, down from about 240 a few years before.

Interviews indicated an overall housing boom since 2019, however geographically, no one single area has been a major target of housing growth. Rather, houses have been built on the abundance of lots created prior to the 2008 recession which were spread across the landscape. Subdivisions like Dot Calm Ranches, Rio Vista or Remington Ranch have been receiving areas, with Dot Calm Ranches adding about 36 houses since 2019.

The smaller communities of Roberts, Belfry, Bridger and Fromberg are serviced by special districts. By late 2021 most vacant lots in older subdivisions were occupied by single family homes.

The interior of the county, a desirable area for second or third homes, has seen an increase in high-priced home construction. In summary, the recent housing boom has certainly increased unit numbers, impacting Carbon County's services and landscapes. But housing options for those serving the local economy continue to be more and more out of reach.

## RED LODGE HOUSING NEEDS ASSESSMENT

A 2020 Housing Needs Assessment was performed by the RLACF which used a survey to better understand the landscape of housing conditions throughout the community in order to make future recommendations that help meet city affordable housing needs. Applicable findings from the assessment include:

- Younger generations typically leave Red Lodge to seek better housing and economic opportunities, while younger families and retirees are continuing to move to town.
- A predominant decline in population occurred in those earning $25,000 to $75,000 annually
- Lower and higher incomes were more dramatically polarized compared to the State.
- The percentage of home values over $1,000,000 had increased for the first time in recent years.
- Condominium ownership was strongly needed based on income ranges, however, there is a growing decrease in this housing choice
- Affordable housing options are very limited and supply had almost completely dried up.

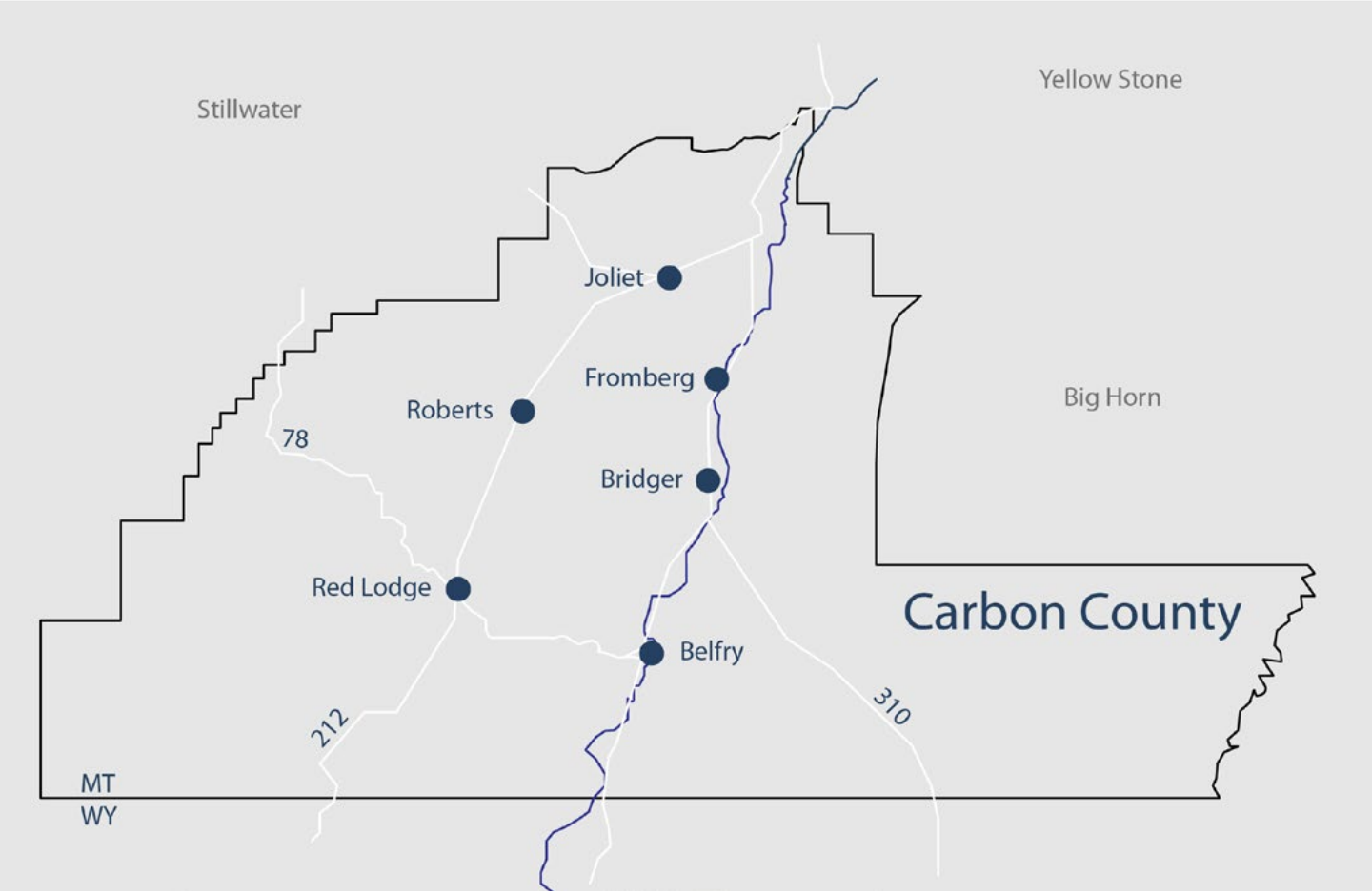
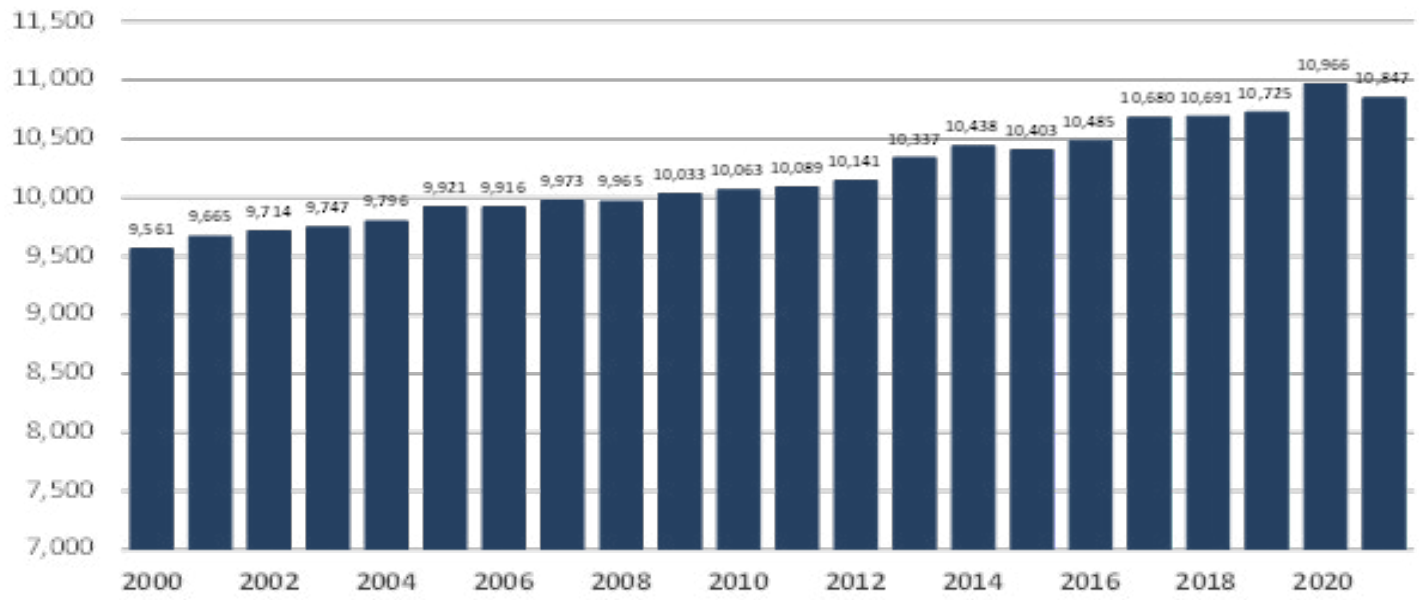



*Figure 2: Carbon County*

*Figure 3: Population, Carbon County, 2000-2021*




Source: U.S. Census; Economic & Planning Systems

# CARBON COUNTY MARKET PROFILE

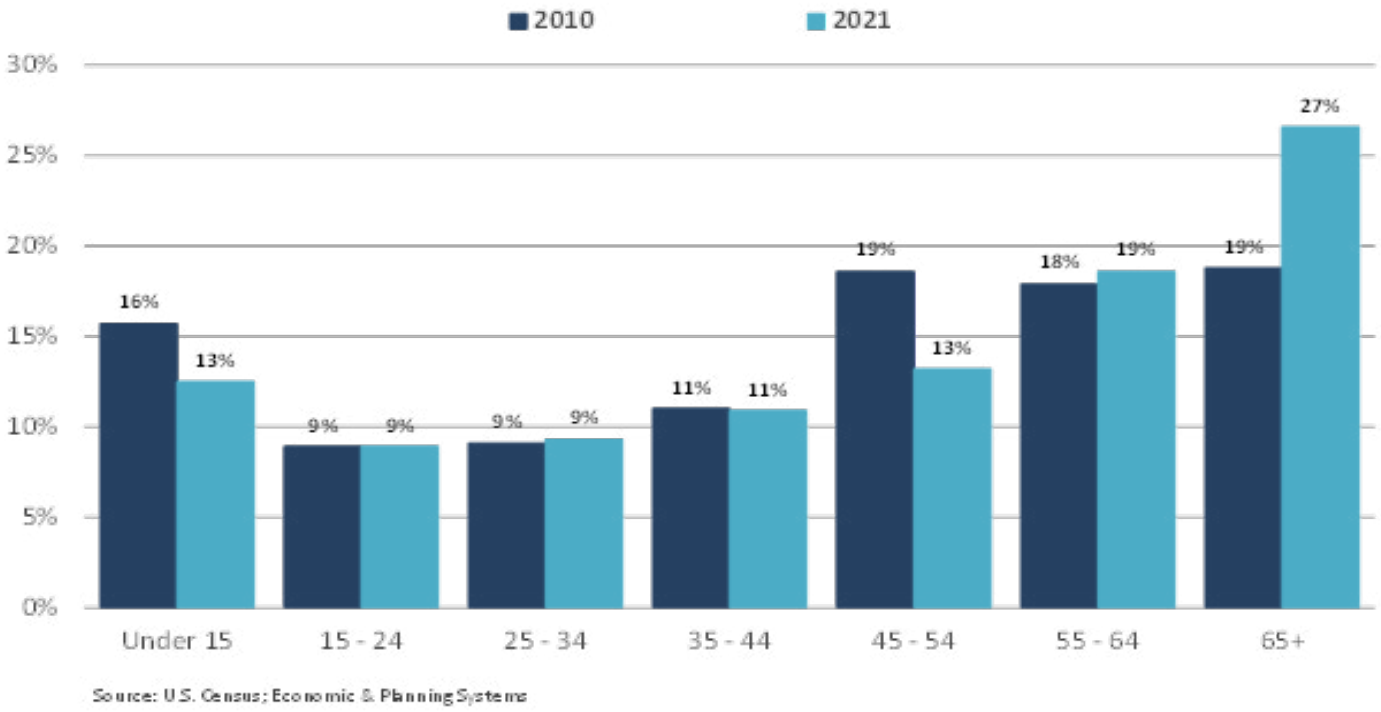
## POPULATION

As of 2021, Carbon County had a total population of 10,847. Over the past two decades, Carbon County has experienced modest population growth. From 2000 to 2021, the population grew by approximately 1,300, or by a total of 13 percent. From 2010 to 2021, Carbon County added approximately 800 residents, an overall growth in population of 8 percent.

## GROWTH IN POPULATION UNINCORPORATED COUNTY

Red Lodge is the largest municipality in the county with 2,190 residents, comprising 20 percent of the county's overall population. Joliet, Bridger, Fromberg, and Roberts are the other municipalities with a sizeable share of the population, each with between 3 and 6 percent of the County's total population. While some population growth has occurred in Red Lodge, most of the population growth in Carbon County over the past decade has occurred outside of the municipalities in the unincorporated areas of the County.

*Figure 4: Population by Age Group, Carbon County, 2010-2021*

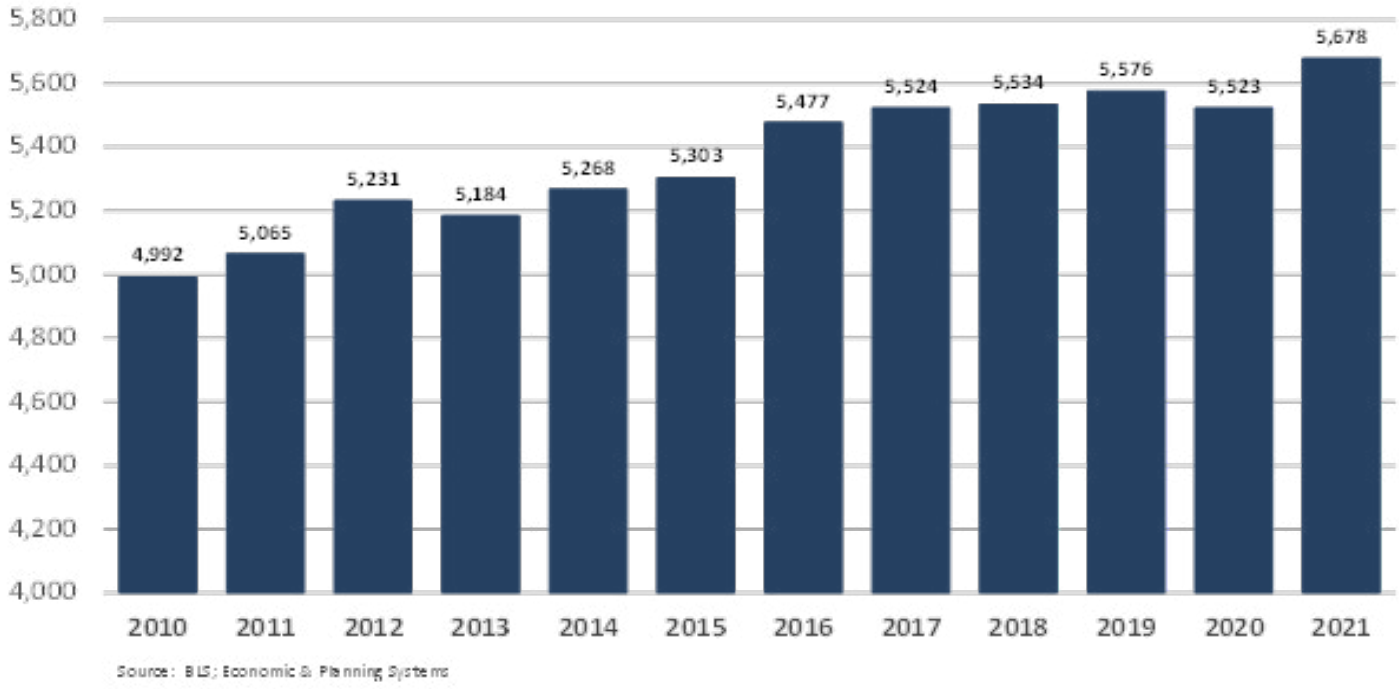



Source: U.S. Census; Economic & Planning Systems

## AGING POPULATION

The population of Carbon County is aging. Between 2010 and 2021, the median age increased from 48.2 to 50.9, while the age cohort that grew the most was the cohort 65 and over, increasing from 19 percent to 27 percent of the total population, as shown in Figure 4. Over the same period, the age cohorts below 15 and between 45 and 54 fell as a share of the total population. In 2022, the Nursing home in Red Lodge closed. This correlates with the national trend of seniors being cared for in their home or that of a family member. In terms of demand, an aging population could create additional need for senior housing options.

*Figure 5: Total Employment (Wage and Salary plus Proprietors), Carbon County, 2010-2021*



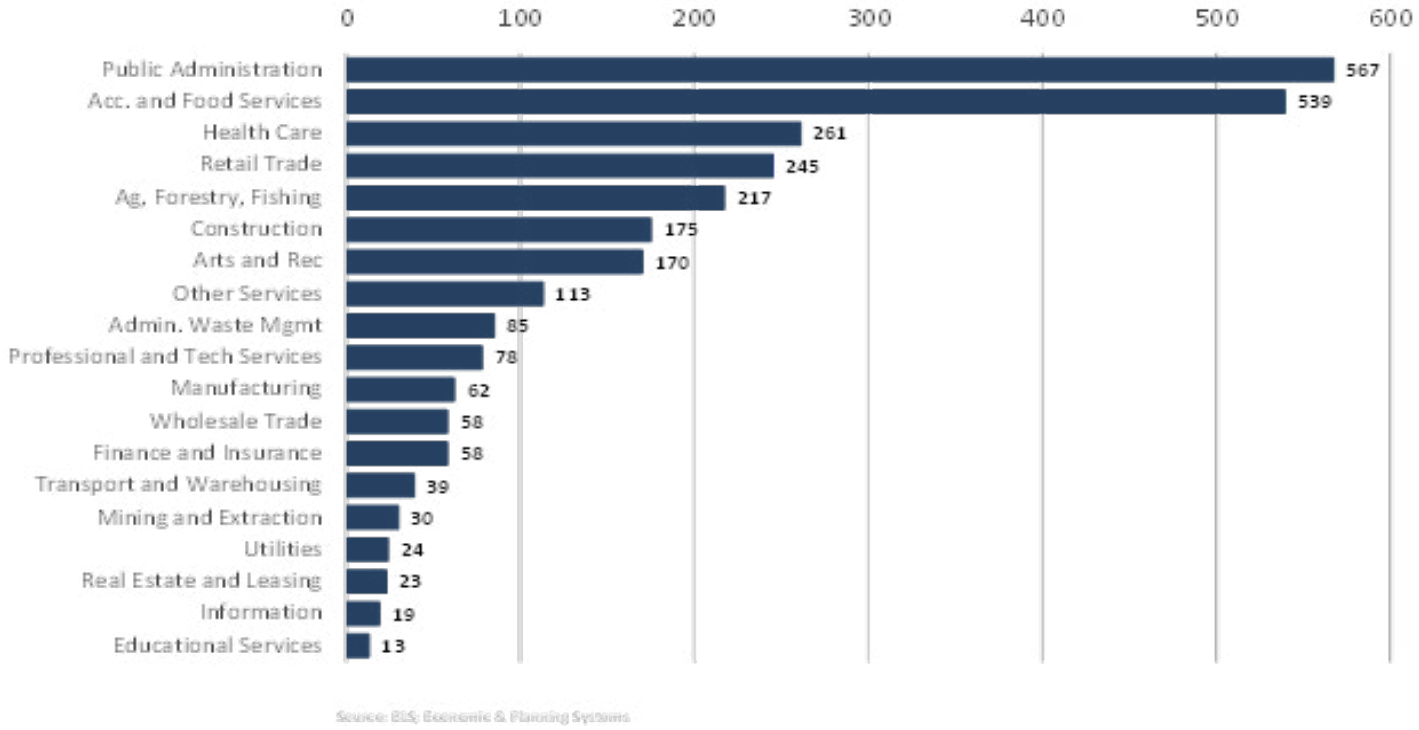

## EMPLOYMENT

Between 2010 and 2021, total employment in Carbon County grew by 686, or at a rate of 1.2 percent annually. After a small contraction in 2020 due to the COVID-19 pandemic, employment recovered in 2021 to be higher than its pre-pandemic level. As shown in Figure 6, the largest sector in Carbon County is Public Administration, with 20% of total employment, followed by Accommodations and Food Services (19%), Health Care (9%), Retail Trade (8%), and Agriculture, Forestry, and Fishing (8%). The sectors with the most growth from 2010 to 2021 include and Agriculture, Forestry, and Fishing and Arts and Recreation.

## EXISTING HOUSING STOCK

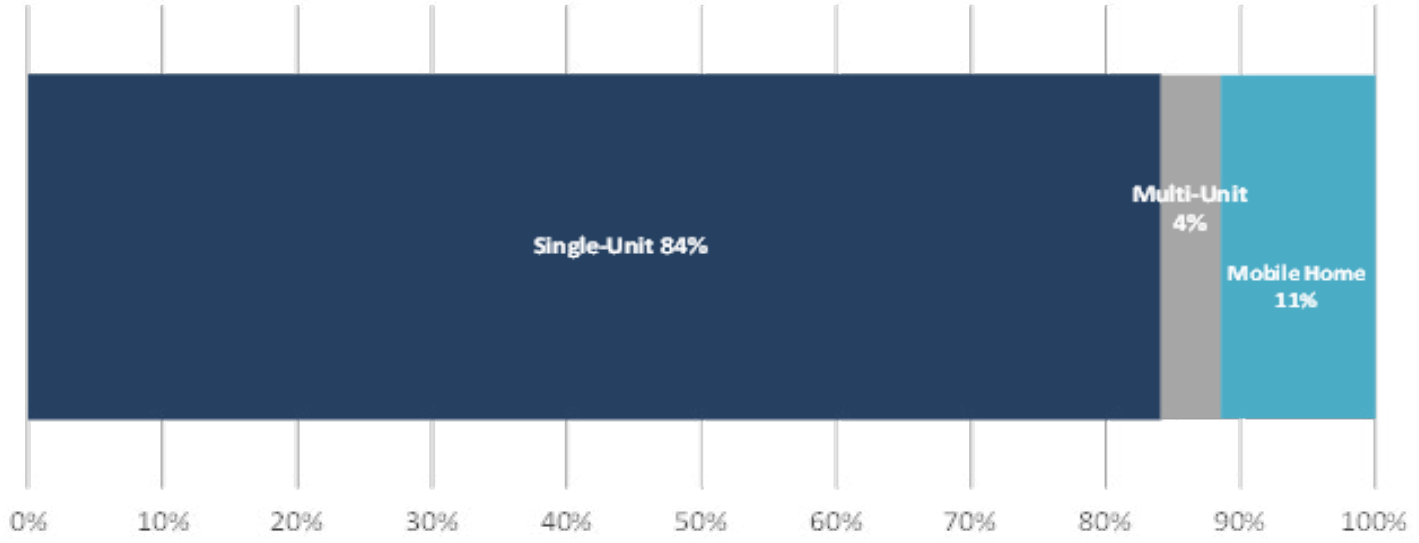
Overall, Carbon County has approximately 6,600 housing units. The vast majority of these units are single-unit homes, which comprise 84% of the housing stock. By comparison, multi-unit housing comprises 4% of the housing stock and mobile homes comprise 11%, indicating a lack of diversity in housing types (see Figure 7). In terms of tenure, 75% of homes are owner-occupied and 25% are renter-occupied. Approximately 30% of homes are considered vacant, the majority of which are second homes primarily for seasonal use.

*Figure 6: Employment by Sector, Carbon County, 2010-2021*



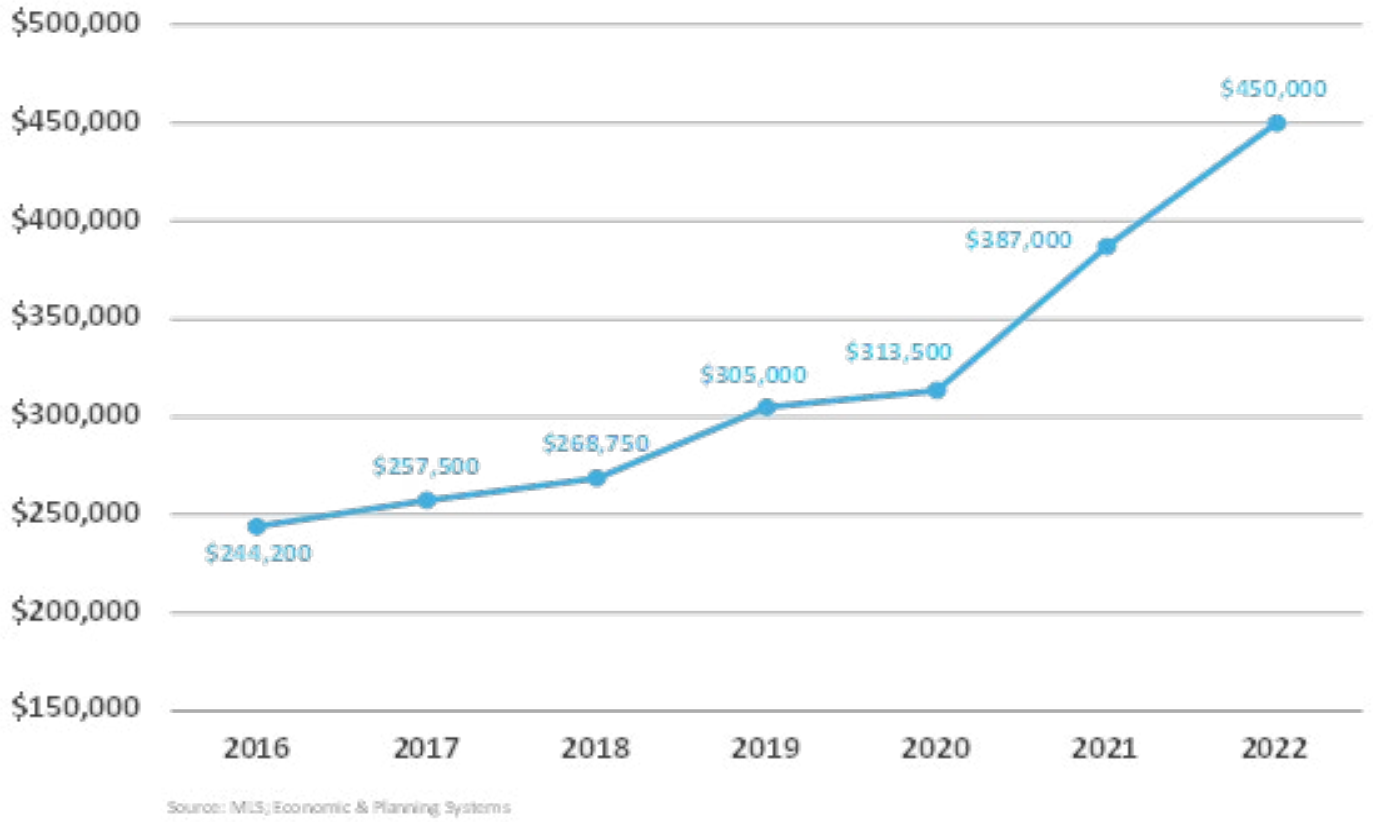

Source: BLS; Economic & Planning Systems

*Figure 7: Units by Type, Carbon County, 2021*




Source: U.S. Census; Economic & Planning Systems

*Figure 8: Median Sale Price, Carbon County, 2016-2022*




## HOME PRICES

Home sale prices in Carbon County have risen rapidly over the past six years. The median sale price has increased from $244,000 in 2016 to $450,000 in late 2022, which is an overall increase of $206,000 and annual average increase of 10.7%. The growth in home price has been particularly acute since 2020, with the median sale price rising by $136,000 within two years. Such an increase is indicative of high demand for homes in Carbon County, with buyers paying a premium, and a relatively limited stock of new homes.

Incomes of local households have not kept pace with housing prices. As shown in Figure 8, the median sale price has risen to a substantially higher level than the affordable purchase price for a household making the median income for the County, known as the 'affordability gap.' In 2022, the affordability gap in Carbon County was $114,700, compared to an affordability gap of $11,700 in 2019.

Another key indicator of housing affordability is the ability of the local workforce to afford housing. In 2021, households working in most top employment sectors in Carbon County, including Health Care, Public Administration, Construction, and Arts and Recreation, did not have incomes high enough to afford the median-priced home in Carbon County, as shown in Figure 10. Moreover, this has diverged over the past several years, as the income needed to afford a median-priced home has risen much faster than incomes for household working in those top sectors.

*Figure 9: Affordability Gap, Carbon County, 2016-2021*

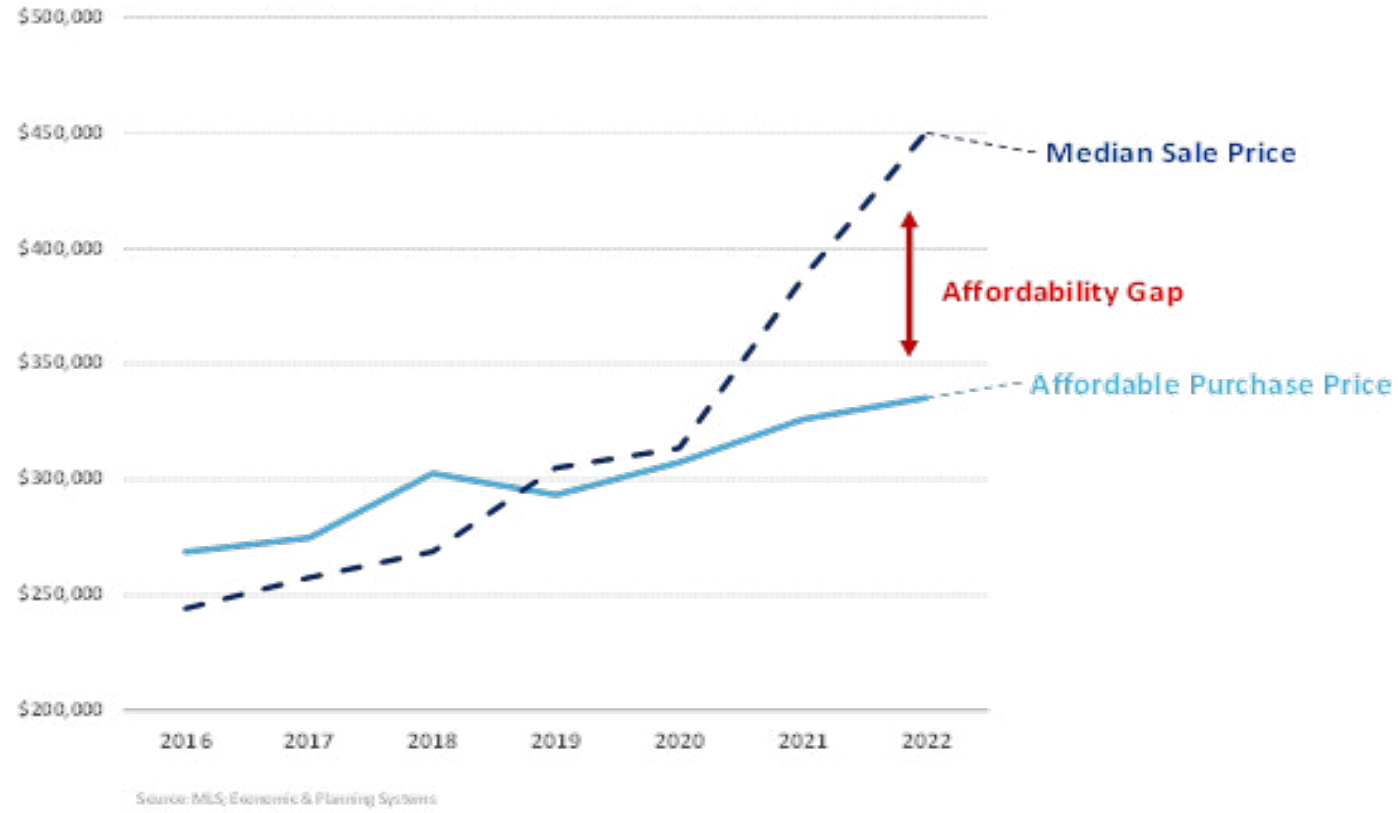



*Figure 10: Income Needed to afford a median-priced home and Incomes of Key Sectors*

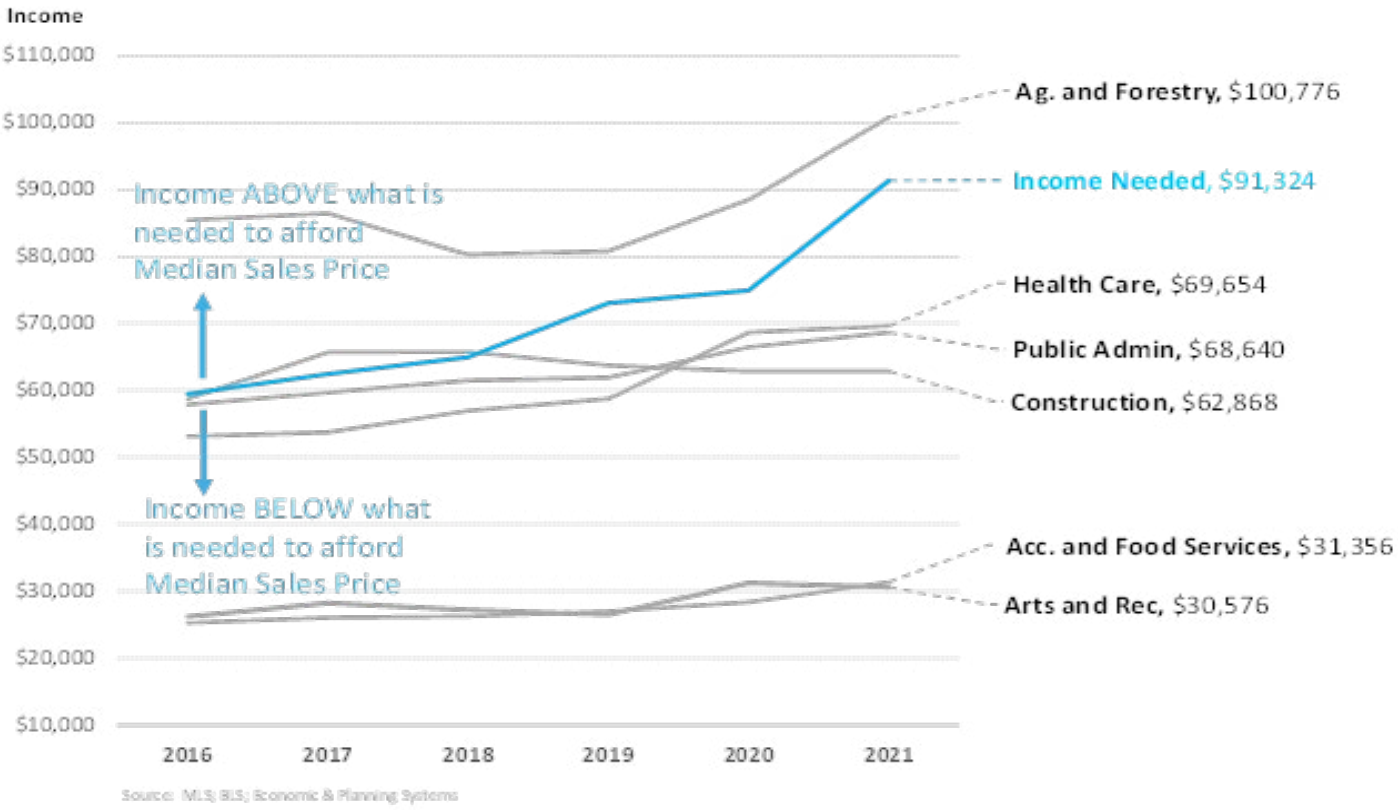
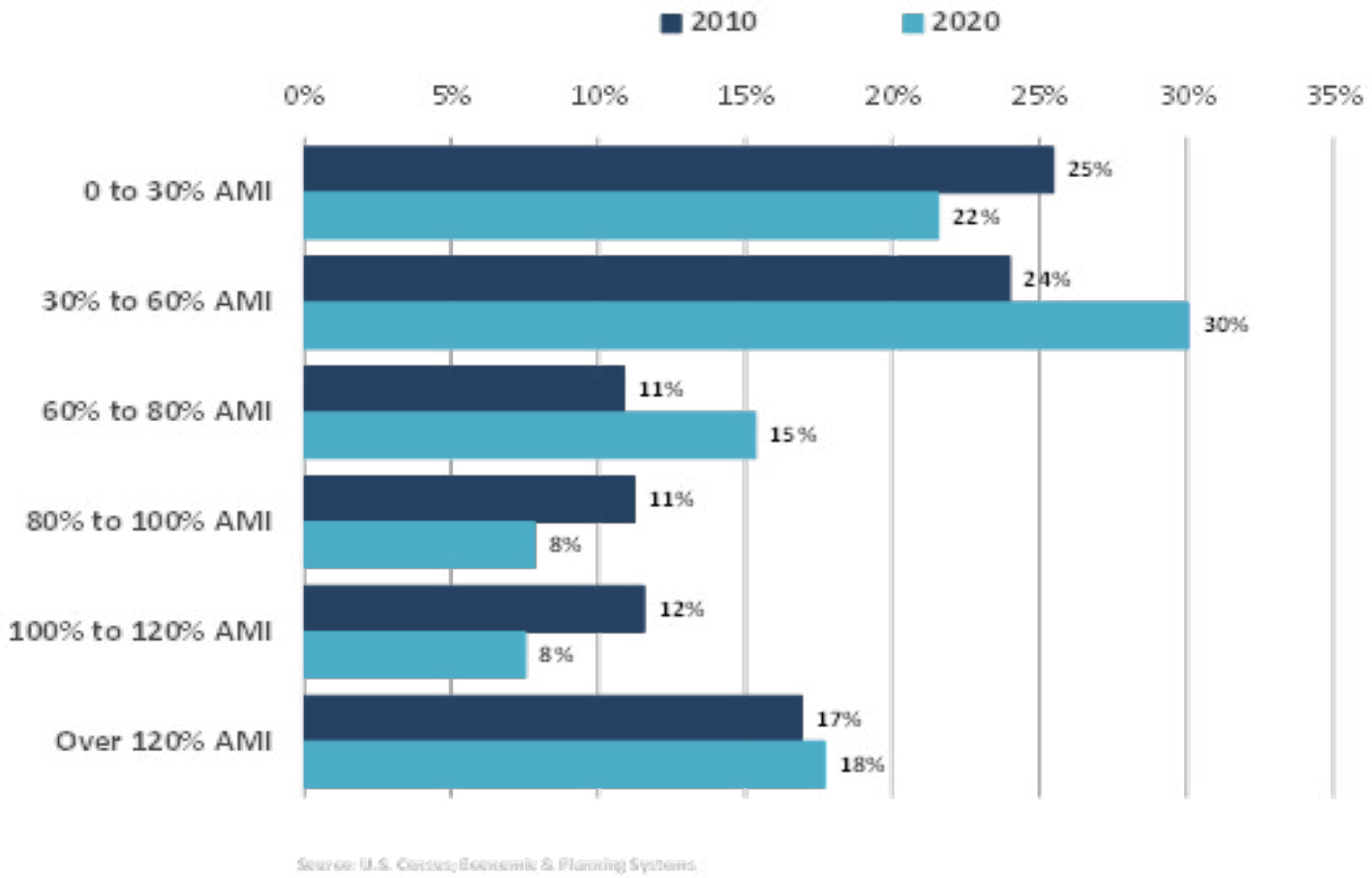


*Figure 11: Renter Households by Income, Carbon County, 2010-2020*

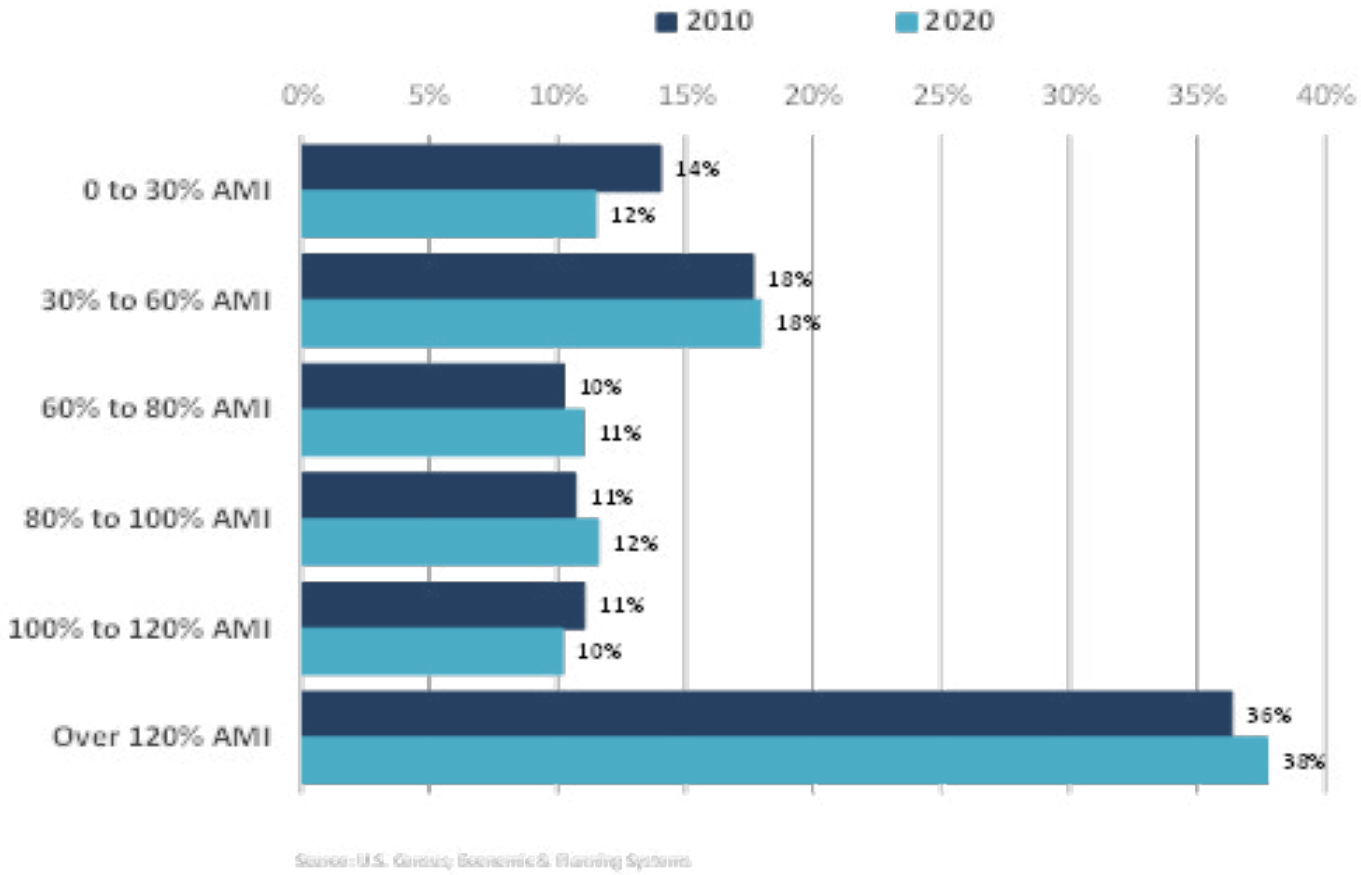



Source: U.S. Census; Economic & Planning Systems

## HOUSEHOLDS

Overall household composition in Carbon County changed slightly between 2010 and 2020. Among renter households, which comprise 25 percent of all households countywide, the share of households between 30% of area median income and 80% of area median income increased, as shown in Figure 11. Among owner households, which comprise 75% of all households countywide, the share of households above 120% of area median income increased slightly, while other income categories remained stable.

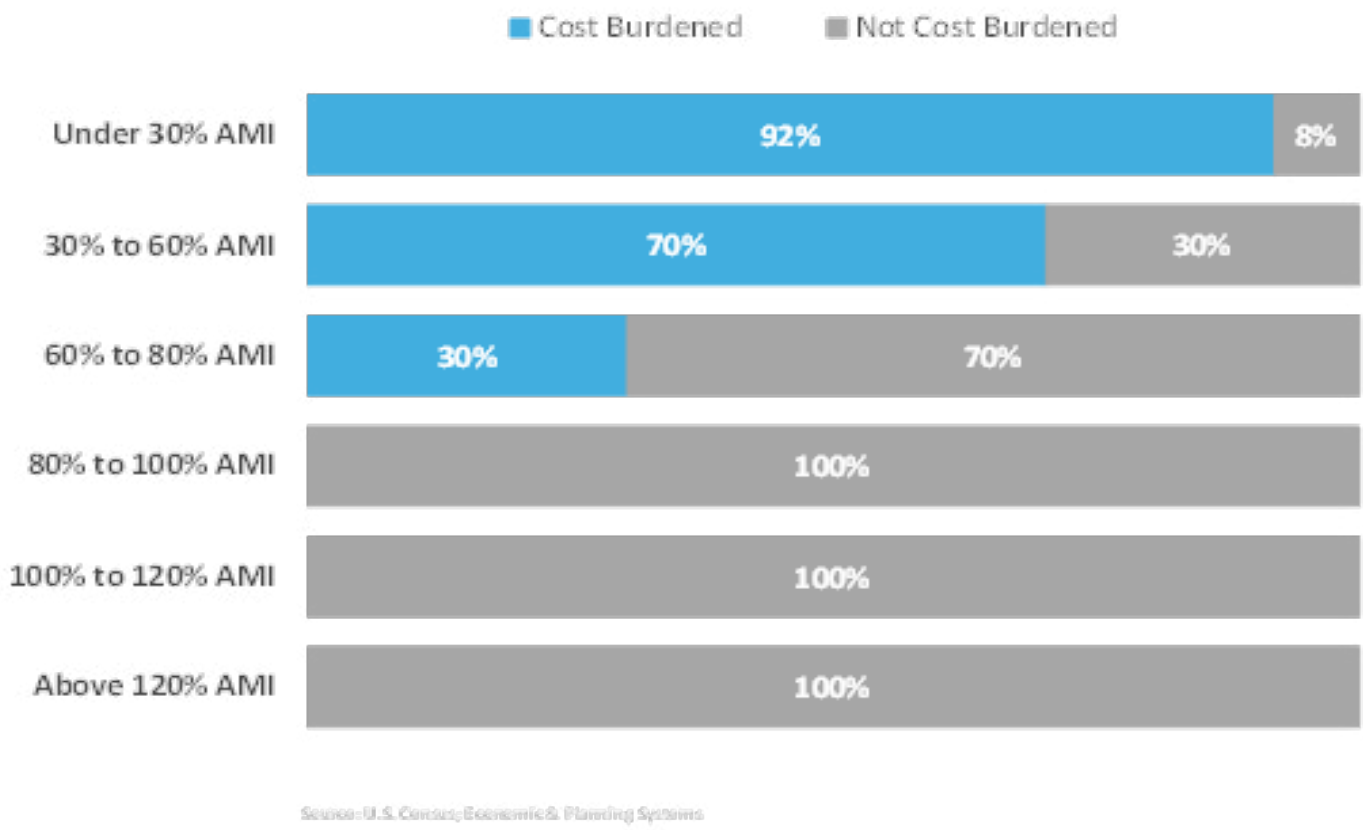
*Figure 12: Owner Households by Income, Carbon County, 2010-2020*




## COST BURDEN

A key measure of housing affordability is cost burden, which means that a household spends more than 30% of its gross income on housing costs. If households are cost-burdened, it typically means that they are in a relatively unaffordable living situation and are vulnerable to being priced out of their unit. Among renters in Carbon County, 417 households, or 46% of all renters in the County, are considered cost burdened. This is significantly more concentrated among lower-income households, as 92% of households under 30% of area median income are cost-burdened, along with 70% of households between 30% and 60% of area median income, as shown in Figure 13 on page 22. Among owner households, 679, or 22% of all households are cost burdened. Approximately 70% of owner households under 30% of area median income and 33% between 30% and 60% of area median income are cost burdened, as shown in Figure 14 on page 23.

*Figure 13: Renter Cost-Burdened Households by Income, Carbon County*




Source: U.S. Census; Economic & Planning Systems

## HOUSING DEMAND

EPS estimated housing demand in Carbon County over the next five and ten years based on two factors – projected employment growth in the County, and a goal to reduce the current share the workforce that commutes in from outside of the County from 35% to 25%. This estimate accounts for both future housing demand and the need to catch up with a portion of existing demand. Carbon County needs 303 total units over the next five years and 618 total units over the next ten years to meet housing demand. This translates into 62 units per year over the next 10 years.

*Figure 14: Owner Cost-Burdened Households by Income. Carbon County*

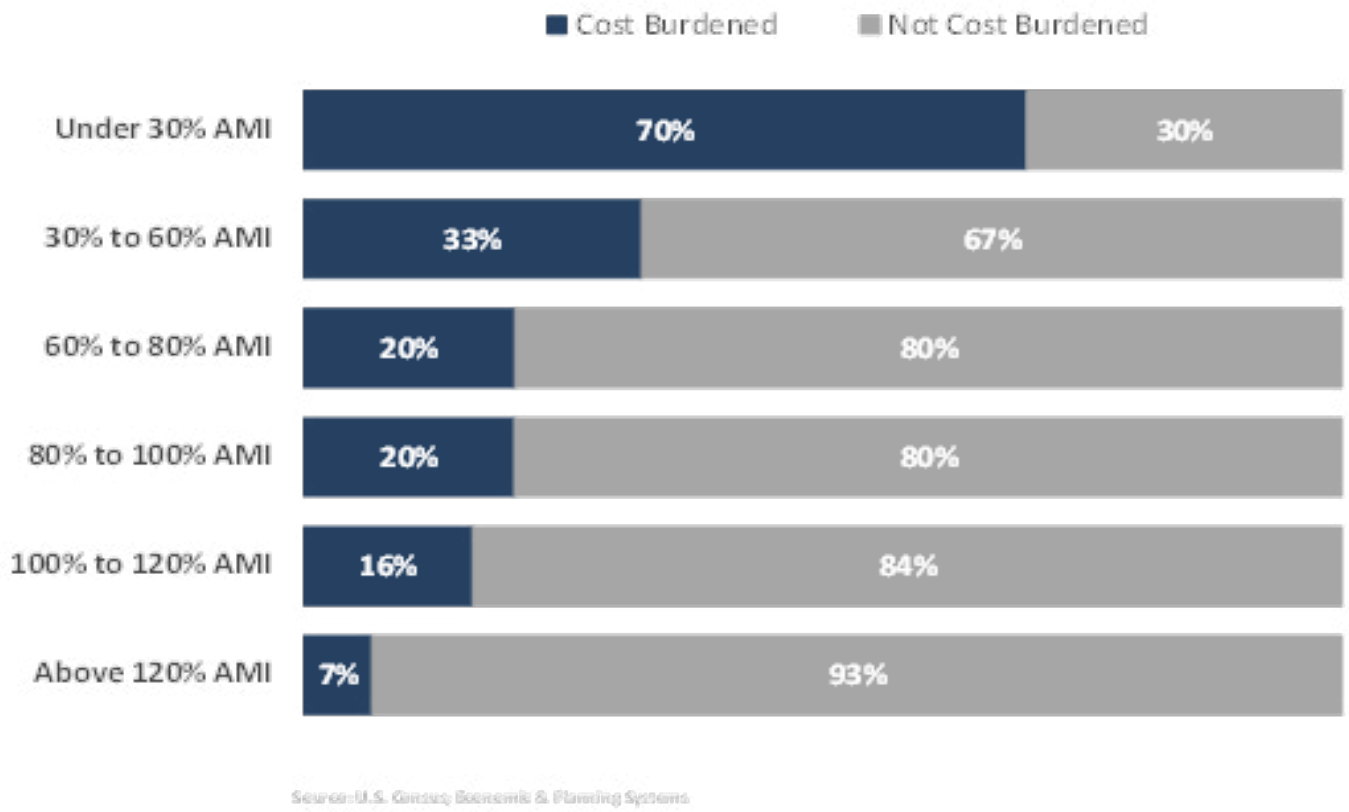
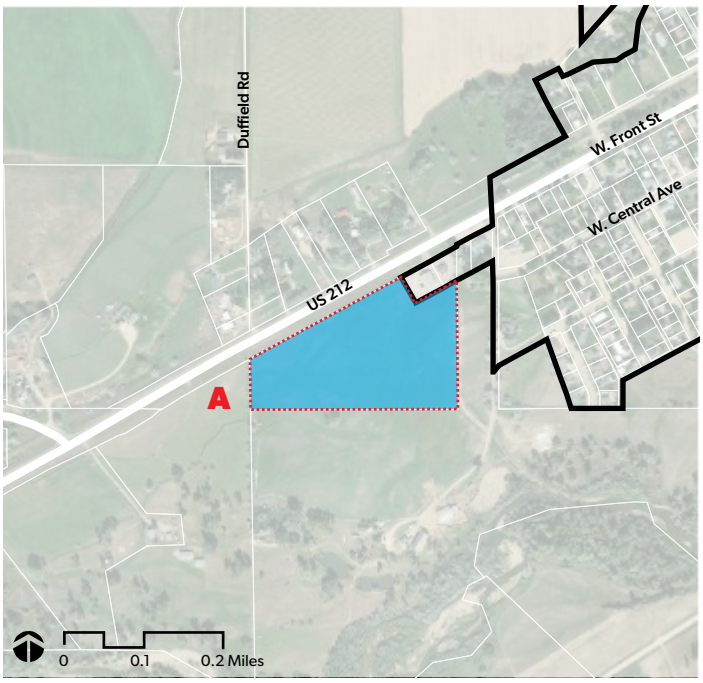



*Figure 15: Future Housing Demand, Carbon County*

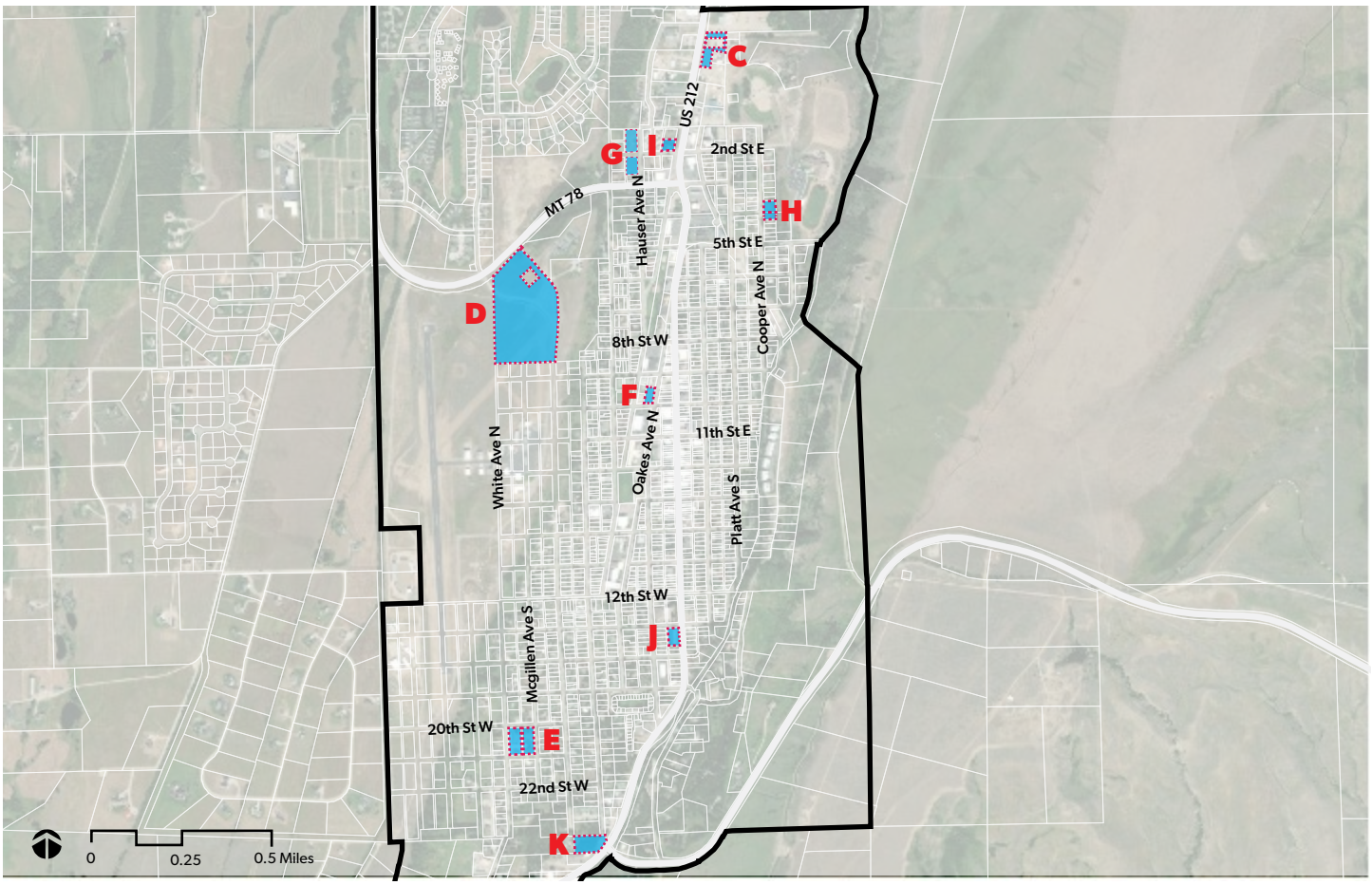
| Description | 5-Year Period | 10-Year Period |
|---|---|---|
| **Total Unit Demand** | **303** | **618** |
| ***Annual Avg.*** | ***61*** | ***62*** |
| | | |
| **Unit Demand by AMI** | | |
| Under 30% AMI | 36 | 74 |
| 30% to 60% AMI | 101 | 206 |
| 60% to 80% AMI | 37 | 75 |
| 80% to 100% AMI | 9 | 18 |
| 100% to 120% AMI | 2 | 4 |
| Over 120% AMI | 118 | 241 |
| **Total** | **303** | **618** |

Source: BLS; Economic & Planning Systems




*Site A in Joliet*


*Site B in Roberts*




*Sites C through K in Red Lodge*

## SITE SELECTION PROCESS

The project team conducted an analysis on eleven sites identified in the BRCD Land Suitability Analysis, or identified by local experts as having potential for workforce housing development. This analysis included the following criteria:

- Proximity to workforce housing needs in Red Lodge
- Parcel size (a parcel 0.5 acres or larger is needed to accommodate a project with 8-15 units)
- Existing land use
- Existing zoning/regulatory requirements for housing development
- Parcel ownership
- Site conditions (including location of infrastructure, access, existing structure(s), floodplain, and slope.
- Multi-modal connectivity

After the analysis, the project team contacted property owners to understand their interest in including their parcel(s) in the Study. Based on the analysis and the property owners' interest, four sites were selected to bring to the community: Site A, Site B, Site C and Site D.

- Site A: Joliet, 14 acres
- Site B: Roberts, 1.6 acres
- Site C: Red Lodge, 1 acre
- Site D: Red Lodge, 18 acres

The following site selection criteria will be used to select the final sites for workforce housing development:

- Regulatory compliance and permitting
- Land acquisition issues
- Construction site concerns
- Site development cost estimates
- Environmental considerations (UNIAP)

## COMMUNITY ENGAGEMENT

Three public open houses were held to get community feedback on the four sites selected from the site analysis. One was held at the Roberts Public School on October 12, one was virtual over Zoom on October 13, and the third was held at the Roosevelt Center in Red Lodge. All meetings were well-attended, and the project team received the following (summarized) input:

- The Joliet site (Site A) should not be further pursued for workforce housing because it would likely benefit Billings rather than Carbon County/Red Lodge.
- The Roberts community was very interested in workforce housing adjacent to the school (Site B), as the majority of teachers at the school commute from outside of Roberts
- Site C would be ideal for workforce housing because it sits in the newly formed Tax Increment Financing (TIF) district, which is specifically designed to assist with affordable housing. However, a land swap would need to occur on the island parcel, and based on the context of the surrounding area, this site may be more suitable for commercial use.
- Site D has great potential due to its size, which offers an opportunity for multiple phased housing projects that can be built over time as funding is available.

Following these community meetings, the Community Foundation decided to move forward with Site B (Roberts) and Site D (Brewery Hill).

Others consulted throughout the process:

- Carbon County Commissioners
- Mayor of Red Lodge
- Airport Planning Commission
- FAA Engineer of Record for Red Lodge Airport
- Landowners of potential development opportunity sites

# SITE SELECTION PROCESS

| Site | Location | Acres | Existing Land Use | Existing Zoning/Regulatory Requirements | Owner Type |
|---|---|---|---|---|---|
| A | Joliet | 13.8 | Vacant rural land | Unzoned, County Regulations | Public (Carbon County) |
| B | Roberts | 1.6 | Vacant | Unzoned, County Regulations | Private |
| C | Red Lodge | 1.1 | Vacant commercial lot | Public Use (P-1), would require rezoning | Public (City of Red Lodge) |
| D | Red Lodge | 17.8 | Vacant | Airport (P-1-A), would require rezoning. | Public (City of Red Lodge) |
| E | Red Lodge | 1.8 | Underutilized healthcare clinic | High Density Residential (R-4) | Private |
| F | Red Lodge | 0.41 | Surface parking lot | Public Use (P-1), would require rezoning | Private |
| G | Red Lodge | 1.75 | Vacant | Low Density Urban Residential (R-2), would require rezoning | Private |
| H | Red Lodge | 0.4 | Vacant residential lot | High Density Residential (R-4) | Private |
| I | Red Lodge | 0.4 | Vacant | Community Entrance North (C-3-N) | Private |
| J | Red Lodge | 1.46 | Vacant - previously a Zoo | Community Entrance South (C-3-S), may require rezoning | Private |
| K | Red Lodge | 0.57 | Vacant motel | Central Business Transition (C-1), would require rezoning | Private |

| Site | Site Conditions | Notes |
|---|---|---|
| A | Site has sewer and water connections adjacent, with access off of Hwy 212. Large site suitable for larger multifamily project, only portion of site needed. Existing creek/ditch on site. | Development of housing on this site might benefit Yellowstone more than Carbon County. As there are few jobs in Joliet, potential residents would need to commute to Red Lodge. |
| B | Site has sewer and water connections adjacent, with access off of Maple Street and Larowe Street. Located directly behind the Roberts School. Site has a 15' grade change. | Site is 12 miles from workforce housing need in Red Lodge, but there is a need for housing for the Roberts School faculty. Lot has been subdivided already. Community supports housing development on the site. |
| C | Site has water and sewer infrastructure, with access off of Highway 212. Lot encompasses an island parcel that would need to be purchased/swapped. Located on a multi-use path connecting to Downtown Red Lodge. May qualify as a brownfield site. | Parcel is part of the newly formed Tax Increment Finance (TIF) District, which is designed to assist with affordable housing. Land swap would be required with AY Supply. Site may be better suited for commercial use. |
| D | Large parcel north of the airport that encompasses a small island parcel. No water or sewer infrastructure exists onsite, utilities likely present along Highway 78 but has not been confirmed to date. Access off of Hwy 78. Existing swale along the south side of Hwy 78 could assist with stormwater management. Portions of the site contain moderate topographic change. Strong views to the west. Large site suitable for larger multi-family development. Only a portion of the site is needed. | Apartments exist adjacent to the site, which means multi-family development on the site would not be out of character. A trail exists connecting to Downtown Red Lodge that could be further developed. Has the potential to serve the immediate housing need with room for growth in the future. |
| E | Former healthcare clinic, potential adaptive reuse, connected to water and sewer infrastructure with access off of W. 21st St & S. White Avenue. Centrally located in Downtown Red Lodge. | Site has been planned for reuse as housing in past but failed. Potential to re-use the building is questionable due to environmental conditions. |
| F | Water & sewer infrastructure exists, access off of W. 10th St. & N. Oakes Ave | Size of parcel would likely require a 3rd level to meet housing need. |
| G | 2 parcels off of N. Hauser & Highway 78. Sewer line exists on Highway 78 up to N. Word Ave. | Landowner not interested in including the sites in the study. |
| H | Water and sewer infrastructure exist, adequate access off of N. Cooper. Adjacent to High School. Applicable for small multifamily project for nearby workforce. | Parcel is part of the newly formed Tax Increment Finance (TIF) District, which is designed to assist with affordable housing. Lot directly south could be added. |
| I | Water and sewer infrastructure exist, access off of 2nd Street. | Size of parcel would likely require a 3rd level to meet housing need. Located on a busy highway - site might be better suited for commercial use. |
| J | Existing building on the site that does not have water or sewer. Site is in the floodplain. | Landowner is not interested in including the site in the study. |
| K | Water and sewer infrastructure exist on-site, access off of 17th & Highway 212, not currently in the floodplain but adjacent. | Motel recently flooded. Listed on National Register of Historic Places. Landowner is not interested in including the site in the study. |

# 2 | Recommended Sites

## ROBERTS

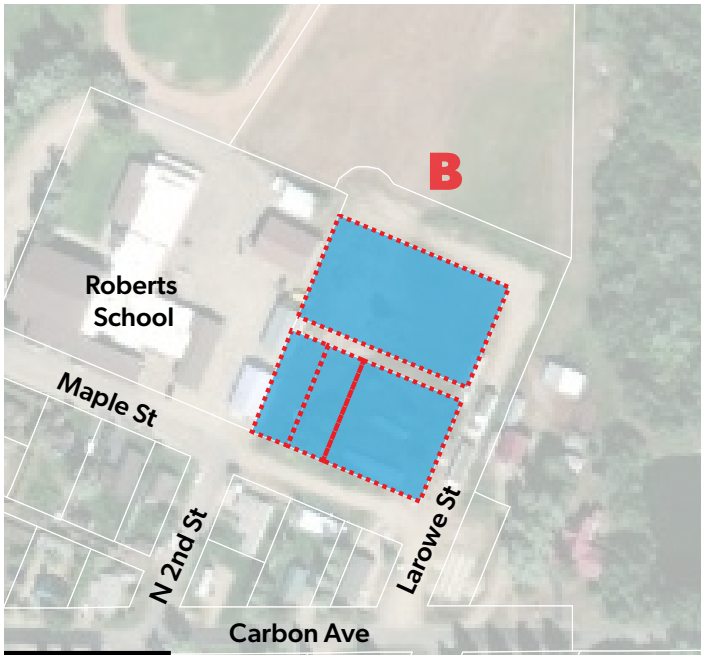
### SITE DESCRIPTION

The Roberts Site is located on the northwest corner of Maple Street and Larowe Street in Roberts, Montana. It is 1.6 acres and is currently vacant with no existing structures. The site has a 15 foot grade change from southwest to northeast. Water and sewer infrastructure exist on Maple Street that the project can tie into.

The parcel is in the process of subdivision, and the lots are privately owned and would need to be purchased at or near market value. Although the site is located 12 miles from workforce housing needs in Red Lodge, the Roberts School Superintendent informed the project team that 13 of the 16 teachers at the school commute from outside of Roberts due to the lack of housing availability. At the Open House in Roberts on October 12, the community felt strongly about this site being developed for workforce housing.

### REGULATORY COMPLIANCE & PERMITS

While these parcels do not have zoning, the Carbon County Development Regulations dictate setbacks, which are 10 feet from the side lot line, 20 feet from the rear lot line, and 30 feet from the front lot line or street right-of-way. Since Roberts is not an incorporated municipality, there would be minimal regulatory requirements (like annexation, for example).




*Site B in Roberts*

### LAND ACQUISITION

The property is privately owned, and the owner is interested in selling it for the development of workforce housing. The land will need to be purchased at a fair market rate.

## CONSTRUCTION CONSIDERATIONS

The adjacency to the school is a significant opportunity. School storage buildings sit immediately on the northwest lot line with no windows onto the site. This large blank wall should be factored into the site design. The road infrastructure adjacent to the site needs improvement. Extension of Maple Street to the property corner should be looked at as a safe route to school with clear delineation of street, curb, and sidewalk. The site should be looked as a place for kids to play safely. Building usage and water table heights recommend no basements be designed. A desire for a community garden and play space was expressed. The current owner expressed interest in working to preserve the small aspen grove on the south side of the property along Maple Street. A 20' easement on the western property line is requested for irrigation water to supply the school and private land north of the property.

## ENVIRONMENTAL CONSIDERATIONS

No flood water of the June 2022 floods sat upon the site. The site was approved for development by the state DEQ prior to the June 2022 floods. Since that flooding event the State has rescinded the permitting of all projects within the proximity of Rock Creek currently in design.

A Universal Environmental Checklist for the Roberts site is provided with this report.

## ROBERTS SITE DESIGN CONCEPT NARRATIVE

This prototype is a 12-unit multifamily project located in Roberts. This prototype is modeled to be 12 units, distributed between three 2-story buildings with a density of 15 dwelling units per acre. The parking is surface parking and at a ratio of 1.08 spaces per unit. The 12 unit composition is comprised fully of 2-bedroom units. The average unit size is 630 square feet. The rentable building area is 7,560 square feet, and the gross building area is 8,700 square feet. The design concept on the right shows the project in multiple phases, with additional housing, a community garden, and a playground shown in a future phase.

*Figure 16: Roberts Site - Playground Perspective*

# ROBERTS SITE DESIGN CONCEPT


1 PLAYGROUND

2 COMMUNITY GARDEN

3 STORMWATER

4 TURN AROUND

5 EXISTING ASPEN GROVE

**PHASING SUMMARY**

| | |
|---|---|
| PHASE ONE: | 12 UNITS |
| PHASE FUTURE: | 16 UNITS |
| **TOTAL:** | **28 UNITS** |

*Figure 17: Roberts Site - Aerial Perspective with study of alternative community garden location*

*Figure 18: Roberts Site - Community Garden Perspective*

*Figure 19: Roberts Site - Aspen Grove Perspective*

## ROBERTS SITE COST ESTIMATES

**Costs:** Vertical construction costs were set at $260 per square foot, based on information gathered from local developers. Land acquisition costs were set at $4 per square foot, which based on recent comparable land sales in the area. Costs for site work were set at $13 per square foot of land, which includes parking. Soft costs, which include design, engineering, and contingency were estimated at $552,382. Total costs were estimated at $376 per square foot and $272,895 per unit. Operating costs were estimated at 25 percent of gross operating income.

**Units and Revenues:** This project has a mixture of market-rate and affordable units, with a majority of affordable units. 5 units are set at market rate and 7 units are set as affordable to households at 60 percent of the area median income. Rental rates for market-rate units were estimated based on current market rents in Carbon County and adjusted to reflect that this project would be the newest housing in the county. 2-bedroom rent was set at $2.00 per square foot. Rents for affordable units were set based on the area median income for Carbon County as determined by the Department of Housing and Urban Development. For project sale, the capitalization rate was set at 4.5 percent and disposition is assumed to occur in Year 10.

**Gaps:** Assessing the financial feasibility of a project involves estimating metrics of return. This project assessed two metrics: yield on cost and internal rate of return. Yield on cost shows the net annual income that a project generates in a particular year relative to its total cost to build. Internal rate of return shows the annual return rate of a project over time. For both metrics, the return a project generates is compared to a hurdle rate, or the rate of return that a project would need to generate in order to be financially feasible to develop. If the rate of return of the project is lower than the hurdle rate, than the project has a financial feasibility gap.

This project has a yield on cost of 3.91 percent. With a 6.00 percent yield on cost hurdle rate, the project has an overall feasibility gap of -$1.14 million and a per unit feasibility gap of -$94,985.

This project has an internal rate of return of 3.65 percent. With an 8.00 percent internal rate of return hurdle rate, the project has an overall feasibility gap of -$900,109 thousand and a per unit feasibility gap of -$75,009.

Under these assumptions, the proposed project at the Roberts Site has a financial feasibility gap. This means that, for the development of the project to be feasible, additional financial support would be needed. This highlights the financial challenges associated with developing new housing in Carbon County, especially housing with a significant component of affordability.

*Figure 20: Roberts Site Proforma*

| Description | Model Input |
|---|---|

**KEY ASSUMPTIONS**

**Program Assumptions**

| | |
|---|---|
| Units | 12 |
| Avg Unit Size (sq. ft) | 630 |
| RBA (sq. ft) | 7,560 |
| Efficiency Factor | 87% |
| GBA (sq. ft) | 8,700 |
| DU/Acre | 15 |
| Land Area (sq. ft) | 33,785 |
| Parking Ratio | 1.08 |
| Parking Spaces | 13 |

**Revenue Assumptions**

| | | |
|---|---|---|
| | | *Per Unit* |
| 2-bedroom rent per sf | $2.00 | *$1,260* |
| **Avg. Rental Rate per SF** | **$2.00** | |

**Multifamily Cost Assumptions**

| | |
|---|---|
| Land Costs (per sf) | $4.00 |
| Hard Costs (per GSF) | $260 |
| Site Costs (per sf) | $13 |
| Contingency (% project cost) | 10% |

| | |
|---|---|
| ***Hard Costs (per Unit)*** | ***$188,493*** |
| ***Soft Costs (per Unit)*** | ***$46,032*** |
| ***Site Costs (per Unit)*** | ***$27,109*** |
| ***Land Costs (per Unit)*** | ***$11,262*** |
| **Total Cost (per GSF)** | **$376** |
| **Total Cost (per Unit)** | **$272,895** |

**Operational Assumptions**

| | |
|---|---|
| Operating Expenses (% of EGI) | 25% |
| Vacancy (%) | 3.0% |

**Bedroom Size Assumptions (sq. ft.)**

| | |
|---|---|
| 2-Bedroom | 630 |

**HH Size Assumptions**

| | |
|---|---|
| 2-Bedroom | 2.0 |

| | |
|---|---|
| **Project Disposition** | Year 10 |

**Return Assumptions**

| | |
|---|---|
| IRR Hurdle Rate | 8.00% |
| Terminal Cap Rate | 4.50% |
| YOC Hurdle Rate | 6.00% |

**Bedroom Types**

| | | |
|---|---|---|
| 1-Bedroom | 0% | *0 Units* |
| 2-Bedroom | 100% | *12 Units* |
| 3-Bedroom | 0% | *0 Units* |

**Affordability Assumptions**

| | | |
|---|---|---|
| 30% AMI Units | 0% | *0 Units* |
| 50% AMI Units | 0% | *0 Units* |
| 60% AMI Units | 58% | *7 Units* |
| 80% AMI Units | 0% | *0 Units* |
| 100% AMI Units | 0% | *0 Units* |
| Market Rate Units | 42% | *5 Units* |
| *Total Check* | *100%* | *12 Units* |
| ***Percent affordable*** | **58%** | ***7 Units*** |

**PROJECT GAP**

| **Static Returns** | **Amount** |
|---|---|
| **YOC Without Subsidy** | **3.91%** |
| **YOC Hurdle Rate** | **6.00%** |
| **Project Return** | **-$1,139,823** |
| **Per Unit Return** | **-$94,985** |

| **Time Series Returns (Unleveraged)** | **Amount** |
|---|---|
| **IRR Without Subsidy** | **3.65%** |
| **IRR Hurdle Rate** | **8.00%** |
| **Project Return** | **-$900,109** |
| **Per Unit Return** | **-$75,009** |

| | |
|---|---|
| **Average of Two Methodologies** | **-$1,019,966** |
| **Per Unit Avg.** | **-$84,997** |

Source: Economic & Planning Systems

*Figure 21: Roberts Site Phase One Cost Estimate*

# Afforable Housing Study - Roberts Half Site

## Red Lodge Area Community Foundation

Cushing Terrell

| Conceptual Project Budget | | | | | Total Cost |
|---|---|---|---|---|---|
| Description: Site Development and Construction of (3) 4-plex units on half of the Roberts site | | | | | |
| **A. Land Costs** | | | | | |
| 1 Land Purchase | 33,785 | @ | $4.00 | = | $135,140 |
| 2 Site Development costs (parking + Landscaping) | 25,024 | @ | $13.00 | = | $325,312 |
| **B. Construction** | | | | | |
| 1 New Residential Wood Frame Construction (4 units) | 2,900 | @ | $260.00 | = | $754,000 |
| 2 New Residential Wood Frame Construction (4 units) | 2,900 | @ | $260.00 | = | $754,000 |
| 3 New Residential Wood Frame Construction (4 units) | 2,900 | @ | $260.00 | = | $754,000 |
| | **Total Land Development & Construction Cost =** | | | | **$2,722,452** |
| **C. Architect & Engineer Fees and Expenses** | | | | | |
| 1 Basic Services Fees (as percentage of site dev and construction costs) | | @ | 7% | = | $213,343 |
| 2 Printing & Expenses (allowance) | | | | = | $10,000 |
| | | | **Total Design Fees =** | | **$223,343** |
| **D. Equipment & Furnishings (Allowances)** | | | | | |
| 1 Furniture, Art & Accessories | | | | = | Supplied by Owner |
| 2 Telephone and Internet | | | | = | Supplied by Owner |
| **E. Miscellaneous Expenses** | | | | | |
| 1 Construction Testing Allowance (concrete/compaction) | | | | = | $5,000 |
| 2 Site Survey | | | | = | $5,000 |
| 3 Soils Investigation & Report Allowance | | | | = | $5,000 |
| 4 Legal Fees | | | | = | Not Included |
| 5 Moving Costs | | | | = | Not Included |
| 6 Plan Review & Building Permit Allowance | | | | = | $16,335 |
| 7 Signage Budget | | | | = | Not Included |
| | Sub Total Project Cost | | | | **$2,977,130** |
| **F. Project Contingency** | | @ | 10% | = | $297,713 |
| | **Total Project Cost** | | | | **$3,274,843** |

*Figure 22: Roberts Site Full Project Cost Estimate*

# Afforable Housing Study - Roberts Full Site

## Red Lodge Area Community Foundation

Cushing Terrell

| Conceptual Project Budget | | | | Total Cost |
|---|---|---|---|---|
| Description: Site Development and Construction of (7) 4-plex units on the Roberts Site | | | | |
| **A. Land Costs** | | | | |
| 1 Land Purchase | 67,450 @ | $4.00 | = | $269,800 |
| 2 Site Development costs (parking + Landscaping) | 47,150 @ | $13.00 | = | $612,950 |
| **B. Construction** | | | | |
| 1 New Residential Wood Frame Construction (4 units) | 2,900 @ | $260.00 | = | $754,000 |
| 2 New Residential Wood Frame Construction (4 units) | 2,900 @ | $260.00 | = | $754,000 |
| 3 New Residential Wood Frame Construction (4 units) | 2,900 @ | $260.00 | = | $754,000 |
| 4 New Residential Wood Frame Construction (4 units) | 2,900 @ | $260.00 | = | $754,000 |
| 5 New Residential Wood Frame Construction (4 units) | 2,900 @ | $260.00 | = | $754,000 |
| 6 New Residential Wood Frame Construction (4 units) | 2,900 @ | $260.00 | = | $754,000 |
| 7 New Residential Wood Frame Construction (4 units) | 2,900 @ | $260.00 | = | $754,000 |
| | **Total Land Development & Construction Cost =** | | | **$6,160,750** |
| **C. Architect & Engineer Fees and Expenses** | | | | |
| 1 Basic Services Fees (as percentage of construction cost (Site Dev and Construction) | @ | 7% | = | $474,159 |
| 2 Printing & Expenses (allowance) | | | = | $10,000 |
| | | **Total Design Fees =** | | **$484,159** |
| **D. Equipment & Furnishings (Allowances)** | | | | |
| 1 Furniture, Art & Accessories | | | = | Supplied by Owner |
| 2 Telephone and Internet | | | = | Supplied by Owner |
| **E. Miscellaneous Expenses** | | | | |
| 1 Construction Testing Allowance (concrete/compaction) | | | = | $5,000 |
| 2 Site Survey | | | = | $5,000 |
| 3 Soils Investigation & Report Allowance | | | = | $5,000 |
| 4 Legal Fees | | | = | Not Included |
| 5 Moving Costs | | | = | Not Included |
| 6 Plan Review & Building Permit Allowance | | | = | $36,965 |
| 7 Signage Budget | | | = | Not Included |
| | Sub Total Project Cost | | | **$6,696,874** |
| **F. Project Contingency** | @ | 10% | = | $669,687 |
| | **Total Project Cost** | | | **$7,366,561** |

# BREWERY HILL

## SITE DESCRIPTION

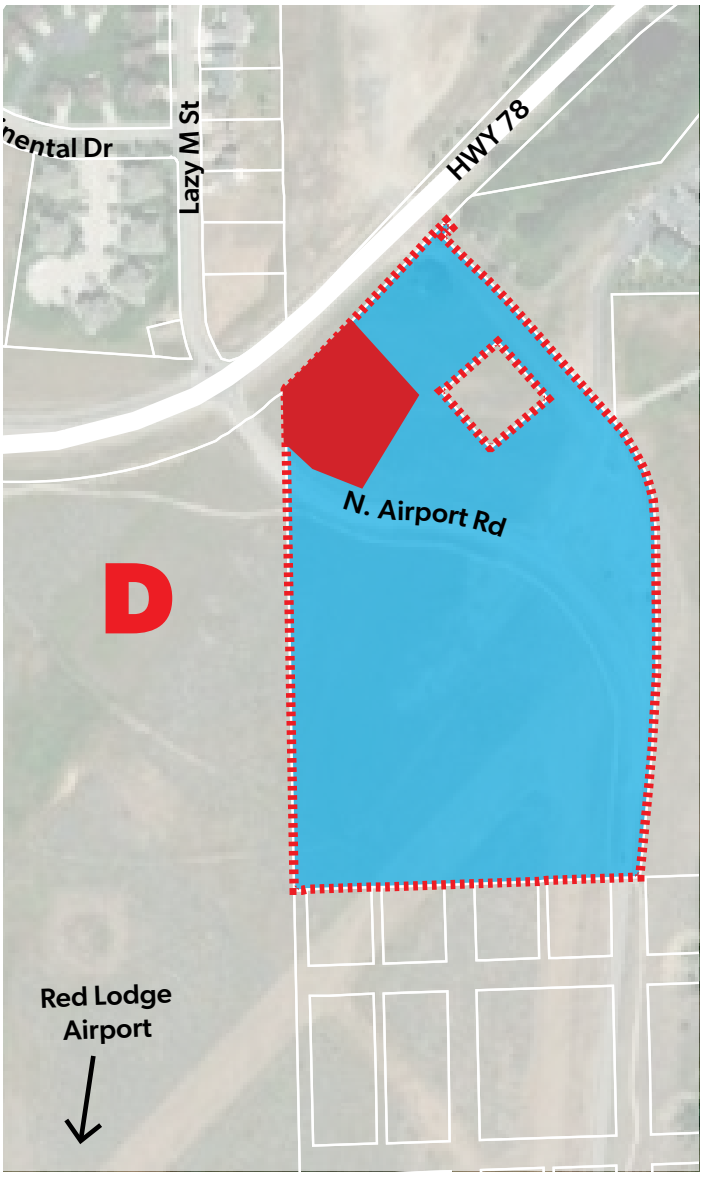
The Brewery Hill site is located in the City of Red Lodge off of Highway 78. It is 17.8 acres and is currently vacant with no existing structures. The large parcel wholly encompasses a small, half acre, island parcel that is privately owned, which would need to be purchased or acquired through a land swap. There are apartments adjacent to the site to the east. Water and sewer infrastructure do not exist on site, but do exist under Highway 78 that the development can tie into. Due to its large size, only a portion of the site will be needed, and the remainder of the site could be preserved for future phases of housing development.

A trail exists connecting to Downtown Red Lodge that could be further developed. At the Virtual Open House and the Open House in Red Lodge on October 13, the community supported the development of workforce housing on the Brewery Hill site.

## REGULATORY COMPLIANCE & PERMITS

The parcel is zoned Airport (P-1-A) which will require a rezoning to High Density Residential (R-4). Reduced parking for the development should be considered if multi-modal connectivity exists.

As additional growth occurs north of hwy 78 and with the potential development of this site, a traffic study should be conducted to understand any potential impact on Highway 78 and Airport Rd.




*Brewery Hill site in Red Lodge*

## LAND ACQUISITION

The property is owned by the City of Red Lodge and will need to be acquired. The island parcel is privately owned, and will need to be purchased or acquired through a land swap. The publicly-owned land acquisition will require a process of disposition of City land and financial acquisition costs should be assumed at market rate

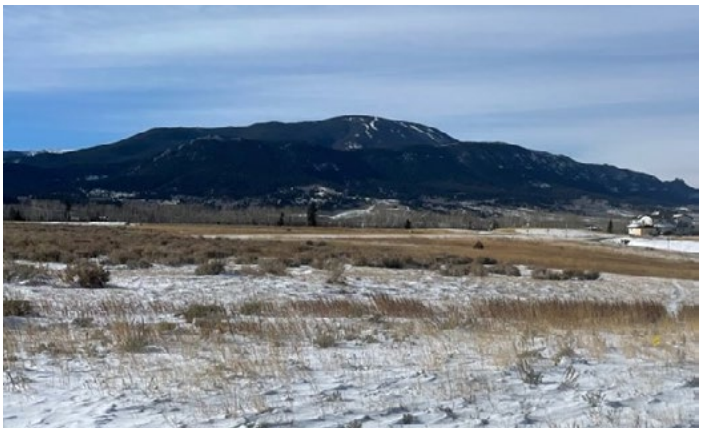
## CONSTRUCTION CONSIDERATIONS

The adjacency to the Airport is significant for this site. The Red Lodge Airport runway can only handle propeller planes. Airplane hangars are not serviced by water or sewer. The approximate average usage of the airport is 8-12 planes a day. The FAA does not recommend structures taller than 30'. The site does not sit within the potential crash zone of the runway.

The site slopes to the northeast at a grade that requires thoughtful automobile layout to address proper safe circulation and fire access. The site angle will require cut and fill earthwork. The building foundation structure should study potential walkout basement / downhill units into consideration. Occupant views should prioritize towards Rock Creek and Red Lodge Mountain ski area.

## ENVIRONMENTAL CONSIDERATIONS

The site sits considerably outside of flood zones. HWY 78 stormwater sits on the north side of the site. Airport site considerations are discussed on the following page.



## BREWERY HILL AIRPORT CONCERNS

Through this process much has been asked about the Red Lodge Airport and its impact on adjacent building sites. We reached out to Robert Pecca Associates, the engineer of record for the airport to provide existing drawings to communicate these impacts to help better inform the community.

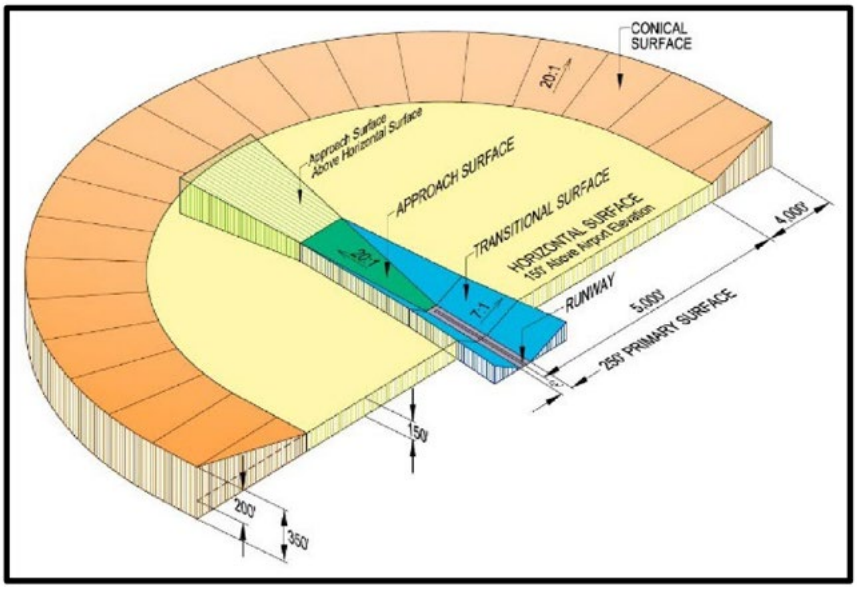



*Figure 23: Existing Airport Airspace Overlay (curtesy of Robert Pecca Associates)*

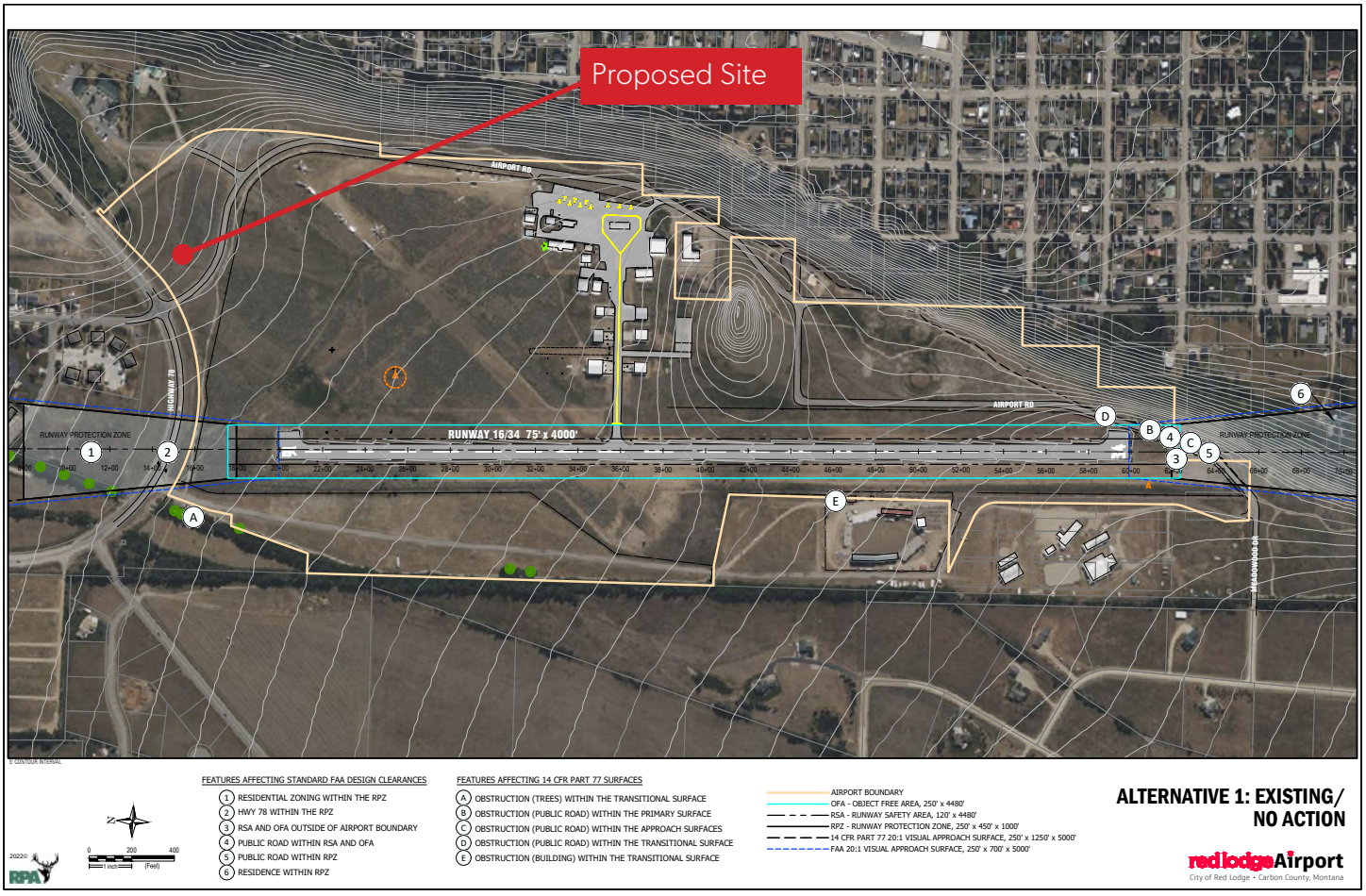



*Figure 24: Existing Airport Overlay (curtesy of Robert Pecca Associates)*

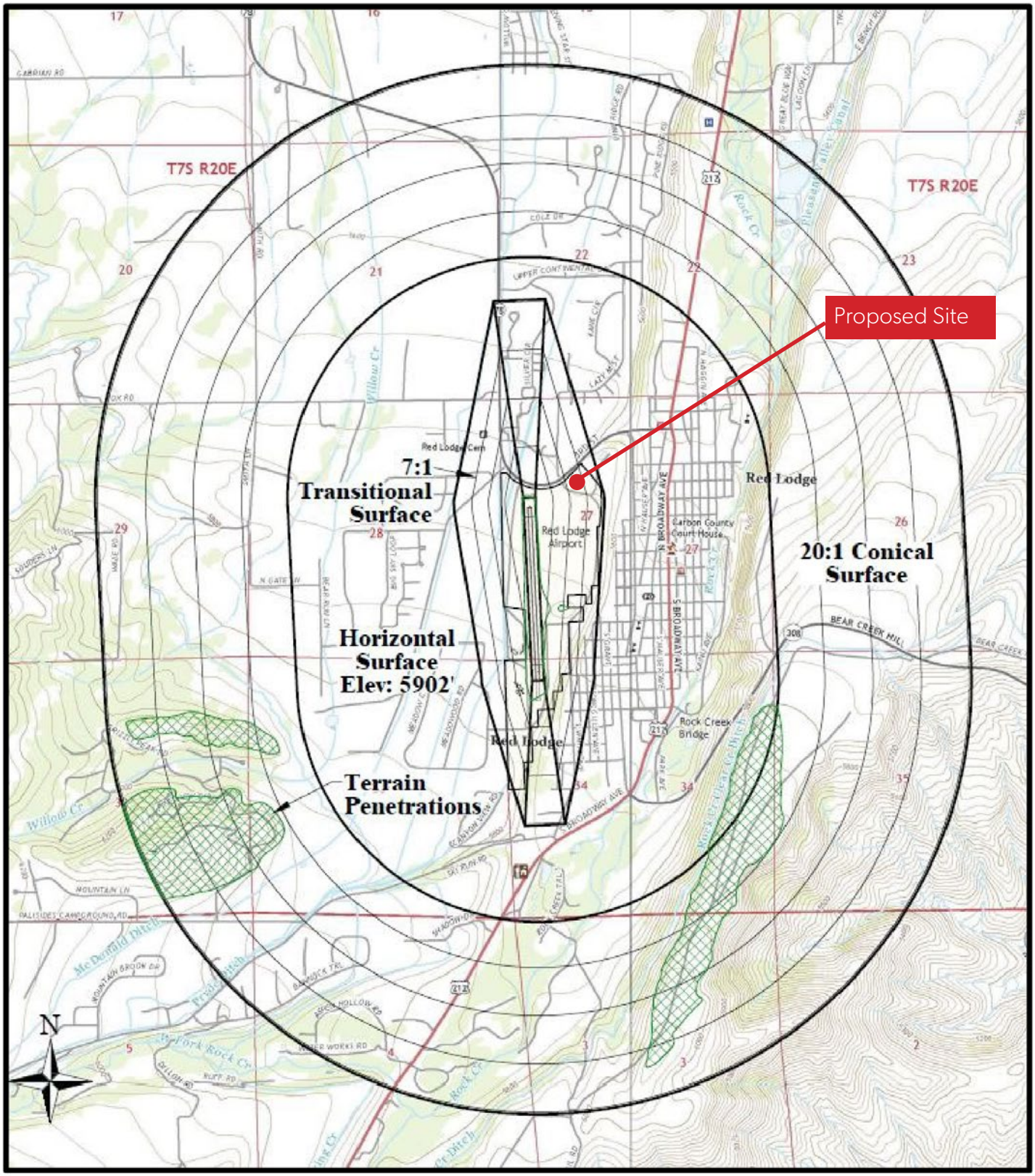



*Figure 25: Existing Airport Airspace Overlay (curtesy of Robert Pecca Associates)*

## BREWERY HILL SITE DESIGN CONCEPT NARRATIVE

This prototype is a 16-unit multifamily project located in Red Lodge. This prototype is modeled to be 16 units, distributed between two 2-story buildings with a density of 13 dwelling units per acre. The parking is surface parking and at a ratio of 1.50 spaces per unit, and we would recommend dropping that to less if permittable by the city. The 16 unit composition is a 50-50 mixture of 1- and 2-bedroom units. The average unit size is 503 square feet. The rentable building area is 8,050 square feet, and the gross building area is 9,156 square feet. In the design concept on the right, the project is shown in multiple phases, with a playground shown in Phase 1 and a community garden and a third residential building shown in a future phase.

***Figure 26: Brewery Hill parking lot view***

# BREWERY HILL SITE DESIGN CONCEPT


1 PLAYGROUND

2 COMMUNITY GARDEN

3 STORMWATER

4 PHASE ONE TURN AROUN

5 EXISTING TRAIL

**PHASING SUMMARY**

| | |
|---|---|
| PHASE ONE: | 16 UNITS |
| PHASE FUTURE: | 8 UNITS |
| **TOTAL:** | **24 UNITS** |

## BREWERY HILL COST ESTIMATES

**Costs:** Vertical construction costs were set at $260 per square foot, based on information gathered from local developers. Land acquisition costs were set at $17.50 per square feet, based on comparable sales. Costs for site work were set at $20 per square foot, which includes parking. Total costs were estimated at $551 per square foot and $315,168 per unit. Operating costs were estimated at 25 percent of gross operating income.

**Units and Revenues:** This project has a mixture of market-rate and affordable units, with a majority of affordable units. 7 units are set at market rate and 9 units are set as affordable to households at 60 percent of the area median income. Rental rates for market-rate units were estimated based on current market rents in Carbon County and adjusted to reflect that this project would be the newest housing in the county. 1-bedroom rent was set at $2.45 per square foot, and 2-bedroom rent at $2.10 per square foot. Rents for affordable units were set based on the area median income for Carbon County as determined by the Department of Housing and Urban Development. For project sale, the capitalization rate was set at 4.5 percent and disposition is assumed to occur in Year 10.

**Gaps:** Assessing the financial feasibility of a project involves estimating metrics of return. This project assessed two metrics: yield on cost and internal rate of return. Yield on cost shows the net annual income that a project generates in a particular year relative to its total cost to build. Internal rate of return shows the annual return rate of a project over time. For both metrics, the return a project generates is compared to a hurdle rate, or the rate of return that a project would need to generate in order to be financially feasible to develop. If the rate of return of the project is lower than the hurdle rate, than the project has a financial feasibility gap.

This project has a yield on cost of 3.61 percent. With a 6.00 percent yield on cost hurdle rate, the project has an overall feasibility gap of -$2.01 million and a per unit feasibility gap of -$125,800.

This project has an internal rate of return of 2.59 percent. With an 8.00 percent internal rate of return hurdle rate, the project has an overall feasibility gap of -$1.71 million and a per unit feasibility gap of -$107,200.

Under these assumptions, the proposed project at the Brewery Hill Site has a financial feasibility gap. This means that, for the development of the project to be feasible, additional financial support would be needed. This highlights the financial challenges associated with developing new housing in Carbon County, especially housing with a significant component of affordability.

*Figure 27: Brewery Hill Proforma*

| Description | Model Input | | | | |
|---|---|---|---|---|---|
| **KEY ASSUMPTIONS** | | | | | |
| **Program Assumptions** | | | **Project Disposition** | | Year 10 |
| Units | 16 | | | | |
| Avg Unit Size (sq. ft) | 503 | | **Return Assumptions** | | |
| RBA (sq. ft) | 8,048 | | IRR Hurdle Rate | | 8.00% |
| Efficiency Factor | 88% | | Terminal Cap Rate | | 4.50% |
| GBA (sq. ft) | 9,156 | | YOC Hurdle Rate | | 6.00% |
| DU/Acre | 13 | | | | |
| Land Area (sq. ft) | 52,878 | | **Bedroom Types** | | |
| Parking Ratio | 1.50 | | 1-Bedroom | 50% | *8 Units* |
| Parking Spaces | 24 | | 2-Bedroom | 50% | *8 Units* |
| **Revenue Assumptions** | | *Per Unit* | | | |
| 1-Bedroom rent per sf | $2.45 | *$980* | | | |
| 2-bedroom rent per sf | $2.10 | *$1,273* | | | |
| **Avg. Rental Rate per SF** | $2.24 | | **Affordability Assumptions** | | |
| | | | 30% AMI Units | 0% | *0 Units* |
| **Multifamily Cost Assumptions** | | | 50% AMI Units | 0% | *0 Units* |
| Land Costs (per sf) | $17.50 | | 60% AMI Units | 56% | *9 Units* |
| Hard Costs (per GSF) | $260 | | 80% AMI Units | 0% | *0 Units* |
| Site Costs (per sf) | $20 | | 100% AMI Units | 0% | *0 Units* |
| Contingency (% project cost) | 10% | | Market Rate Units | 44% | *7 Units* |
| | | | *Total Check* | *100%* | *16 Units* |
| ***Hard Costs (per Unit)*** | ***$148,783*** | | ***Percent affordable*** | **56%** | *9 Units* |
| ***Soft Costs (per Unit)*** | ***$53,892*** | | | | |
| ***Site Costs (per Unit)*** | ***$54,658*** | | **PROJECT GAP** | | |
| ***Land Costs (per Unit)*** | ***$57,835*** | | | | |
| **Total Cost (per GSF)** | **$551** | | **Static Returns** | | **Amount** |
| **Total Cost (per Unit)** | **$315,168** | | **YOC Without Subsidy** | | **3.61%** |
| | | | **YOC Hurdle Rate** | | **6.00%** |
| **Operational Assumptions** | | | **Project Return** | | **-$2,012,516** |
| Operating Expenses (% of EGI) | 25% | | **Per Unit Return** | | **-$125,782** |
| Vacancy (%) | 3.0% | | | | |
| | | | **Time Series Returns (Unleveraged)** | | **Amount** |
| **Bedroom Size Assumptions** | | | **IRR Without Subsidy** | | **2.59%** |
| 1-Bedroom | 400 | | **IRR Hurdle Rate** | | **8.00%** |
| 2-Bedroom | 606 | | **Project Return** | | **-$1,714,909** |
| **Average** | **503** | | **Per Unit Return** | | **-$107,182** |
| | | | **Average of Two Methodologies** | | **-$1,863,712** |
| **HH Size Assumptions** | | | **Per Unit Avg.** | | **-$116,482** |
| 1-Bedroom | 1.0 | | | | |
| 2-Bedroom | 2.0 | | | | |

Source: Economic & Planning Systems

# Afforable Housing Study - Brewery Hill

## Red Lodge Area Community Foundation

Cushing Terrell

| Conceptual Project Budget | | | | | Total Cost |
|---|---|---|---|---|---|
| Description: Site Development and Construction of (2) 8-plex units on the Brewery Hill site | | | | | |
| **A. Land Costs** | | | | | |
| 1 Land Purchase | 52,878 | @ | $17.50 | = | $925,365 |
| 2 Site Development costs (parking + Landscaping) | 43,726 | @ | $20.00 | = | $874,520 |
| **B. Construction** | | | | | |
| 1 New Residential Wood Frame Construction (8 units) | 4,576 | @ | $260.00 | = | $1,189,760 |
| 2 New Residential Wood Frame Construction (8 units) | 4,576 | @ | $260.00 | = | $1,189,760 |
| | **Total Land Development & Construction Cost =** | | | | **$4,179,405** |
| **C. Architect & Engineer Fees and Expenses** | | | | | |
| 1 Basic Services Fees (as percentage of site dev and construction costs) | | @ | 7% | = | $353,775 |
| 2 Printing & Expenses (allowance) | | | | = | $10,000 |
| | | | **Total Design Fees =** | | **$363,775** |
| **D. Equipment & Furnishings (Allowances)** | | | | | |
| 1 Furniture, Art & Accessories | | | | = | Supplied by Owner |
| 2 Telephone and Internet | | | | = | Supplied by Owner |
| **E. Miscellaneous Expenses** | | | | | |
| 1 Construction Testing Allowance (concrete/compaction) | | | | = | $5,000 |
| 2 Site Survey | | | | = | $5,000 |
| 3 Soils Investigation & Report Allowance | | | | = | $5,000 |
| 4 Legal Fees | | | | = | Not Included |
| 5 Moving Costs | | | | = | Not Included |
| 6 Plan Review & Building Permit Allowance | | | | = | $25,076 |
| 7 Signage Budget | | | | = | Not Included |
| | Sub Total Project Cost | | | | **$4,583,256** |
| **F. Project Contingency** | | @ | 10% | = | $458,326 |
| | **Total Project Cost** | | | | **$5,041,582** |

*Figure 28: Brewery Hill - Project Cost Estimate*

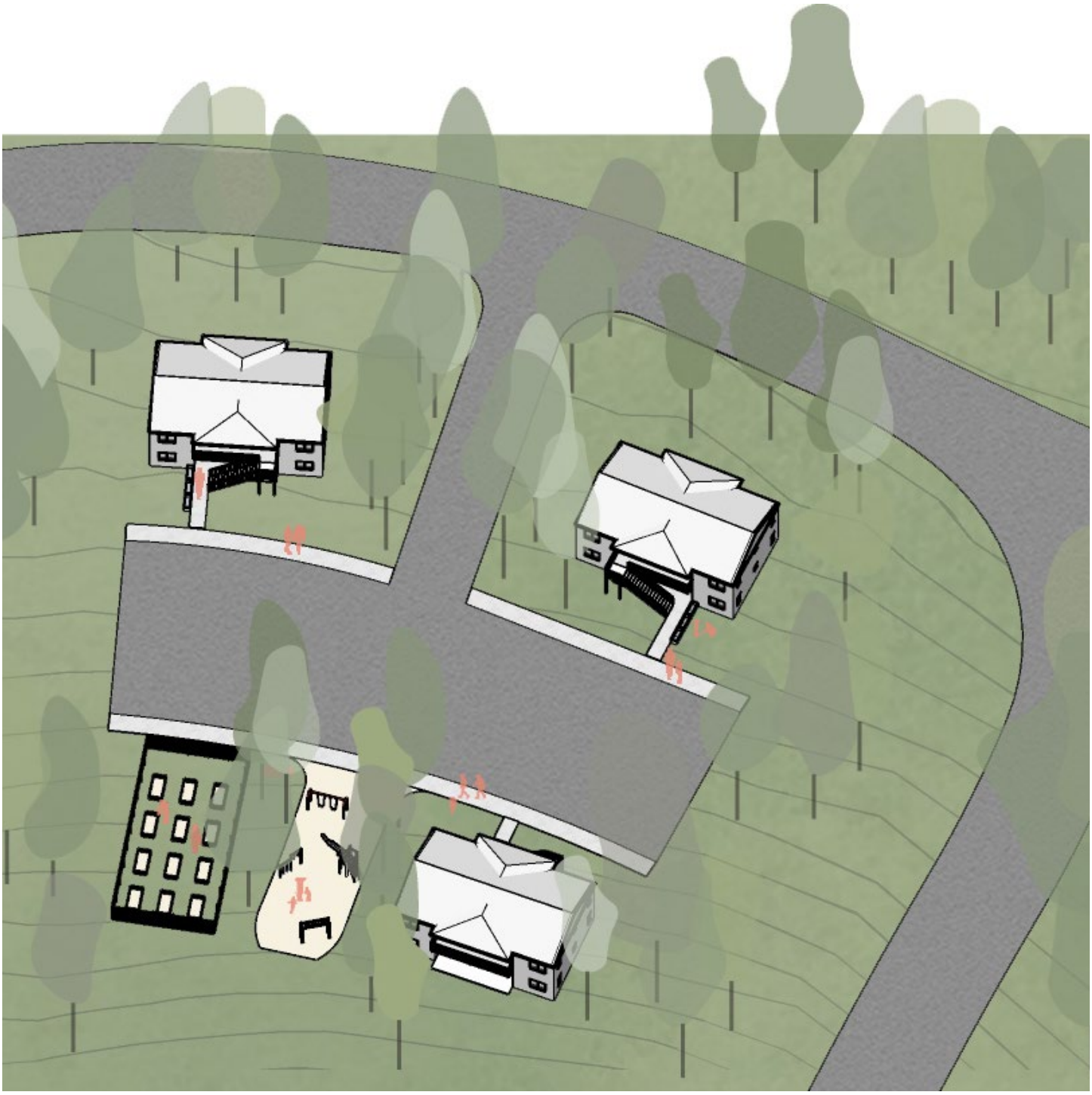


*Figure 29: Brewery Hill - Aerial Perspective*

# 3 | Unit Test Fitting (Two Story)

IPMC, also known as the International Property Maintenance Code, includes a set of specific occupancy rules. These rules are used whenever state and local laws do not give enough regulation to occupancy or when the state and local rules do not apply because of the Fair Housing Act.

By setting up specific size limitations into the building and property code, buildings that have more than the appropriate number of occupants based on the size can be classified as unlawful structures. This would require them to be changed immediately.

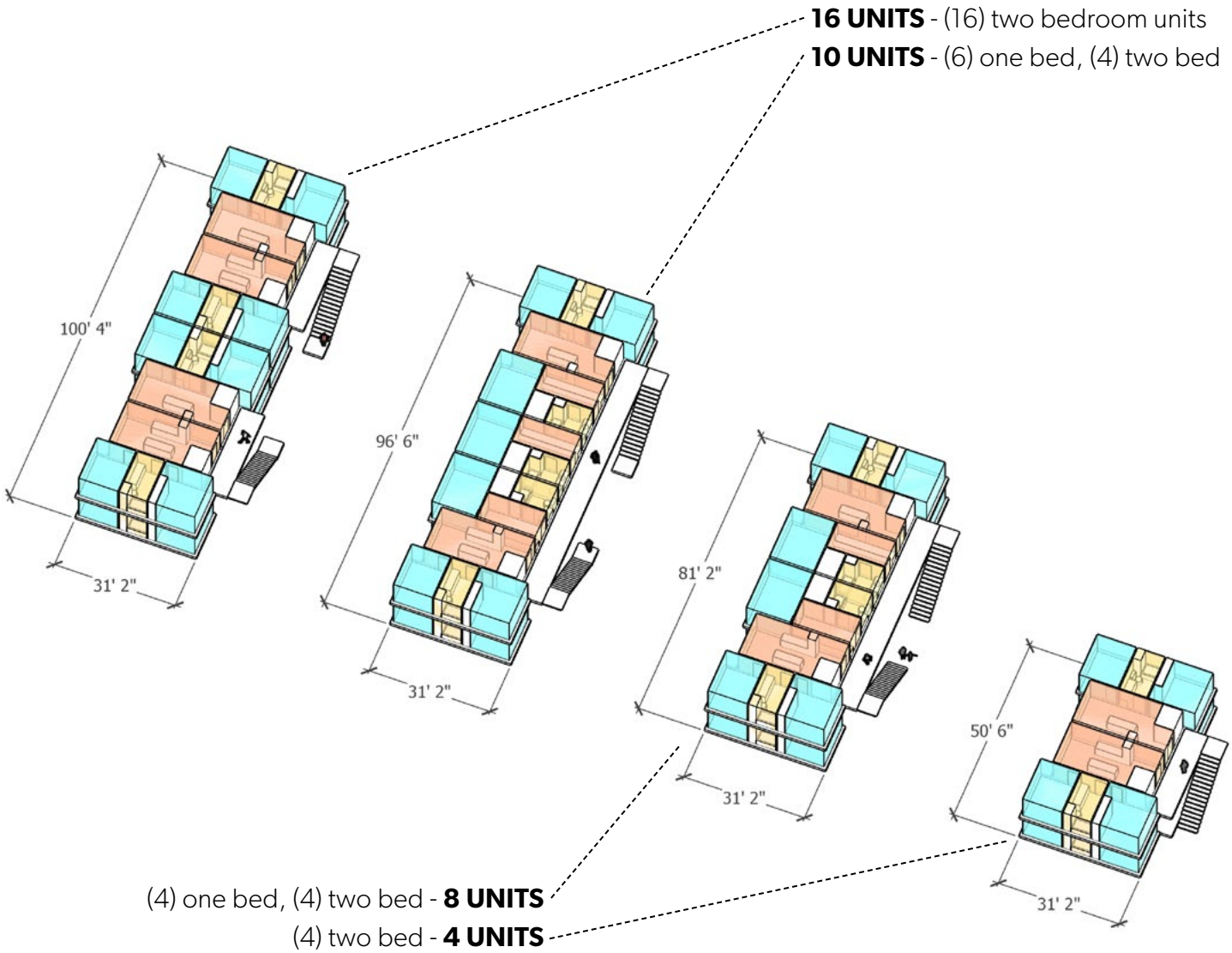



***Figure 30: Unit Test Fitting***

**The rules set out by IPMC are more specific than many other regulations:**

- All bedrooms with one person should have at least 70 square feet.
- Shared bedrooms must have at least 50 square feet per person.
- Kitchens and other non-habitable rooms cannot be used as a bedroom.
- Every unit should have an overall occupant limitation based on its overall size:
- 1-2 occupants: must have at least 120 square feet living room
- 3-5 occupants: must have at least 120 square feet living room and 80 square feet dining room
- 6 or more occupants: must have at least 150 square feet living room and 100 square feet dining room

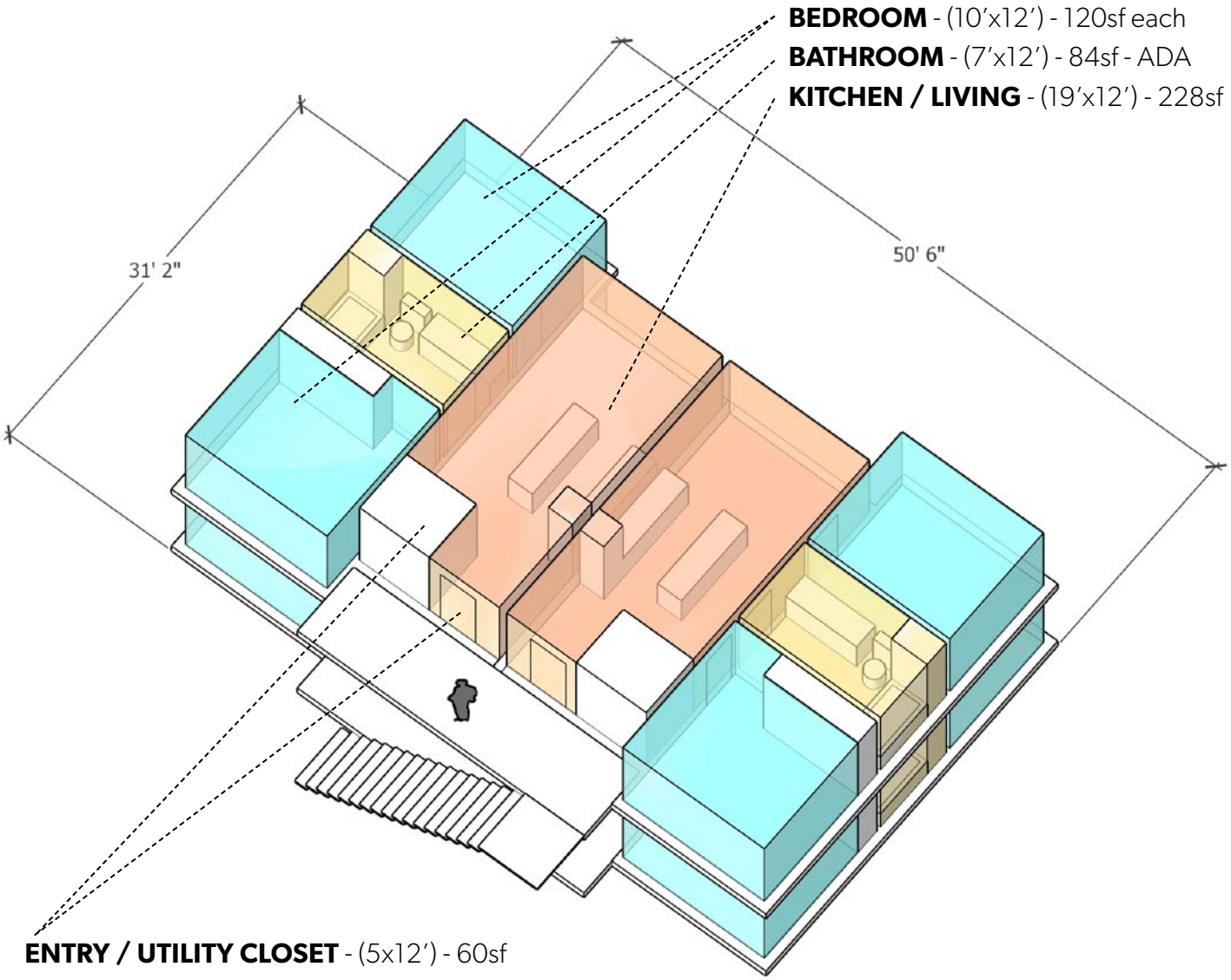



*Figure 31: Unit Test Fitting*

# 4 | Resilience & Sustainability

### DESIGN FOR INTEGRATION

Design a building to lift the spirits and delight the senses. What is the big idea behind this project—and how did the approach towards sustainability inform the design concept?

### DESIGN FOR COMMUNITY

Sustainability is inextricably tied to the wellness of communities. Consider specifically how community members, inside and outside the building, benefit from the project. How does this project contribute to creating a walkable, human-scaled community inside and outside the property lines? CO2 emissions associated with how a building's occupants travel to and from the building are frequently comparable to the CO2 emissions associated with operating the building. How does the project, by its siting and operations, help reduce transportation-related emissions?

### DESIGN FOR ECOLOGY

Sustainable design protects and benefits natural ecosystems and habitat in the presence of human development. Consider the larger or regional ecosystem (climate, soils, plant and animal systems) in which the project is sited. In what ways does the design respond to the ecology of this place? How does the design help users become more aware of or connected with place and regional ecosystems? How does the design minimize negative impacts on birds and other animals (e.g., design to prevent bird collisions, dark-sky compliant lighting)? How does the project contribute to biodiversity and the preservation or restoration of habitats and ecosystem services?

### DESIGN FOR WATER

How does the project use water wisely and handle rainfall responsibly? Sustainable design conserves and improves the quality of water as a precious resource. Consider strategies to reduce reliance on municipal water sources. How can the project recapture or re-use water? Climate change will affect water resources differently in different regions. Some regions are expected to get wetter, some regions are expected to get drier. How will these changes affect the water use of the project?

### DESIGN FOR ECONOMY

Providing abundance while living within our means is a fundamental challenge of sustainability. How does the project provide "more with less"? Possibilities include the "rightsizing" of the program, cost-effective design decisions, economic performance analysis, economic equity strategies, notable return-on-investment outcomes, contributions to local and disadvantaged economies, etc. Evaluate first-cost investments and how they are anticipated to improve life cycle costs and longer-term economic performance.

## DESIGN FOR ENERGY

How much energy does the project use, is any of that energy generated on-site from renewable sources, and what's the net carbon impact? The burning of fossil fuels to provide energy for buildings is a major component of global GHG emissions, driving climate change. Sustainable design conserves energy while improving building performance, function, comfort, and enjoyment. Consider how local climate can inform the design. Be aware of energy challenges associated with the building type, intensity of use, or hours of operation, and how the design might respond to these challenges.

## DESIGN FOR WELLNESS

Sustainable design supports comfort, health, and wellness for the people who inhabit or visit buildings. Consider strategies for optimizing daylight, indoor air quality, connections to the outdoors, and thermal, visual, and acoustical comfort for occupants and others inside and outside the building.

## DESIGN FOR RESOURCES

Sustainable design includes the informed selection of materials and products to reduce product-cycle environmental impacts while enhancing building performance. First-generation sustainable metrics sought to reduce waste, favor regional materials, and reduce VOCs. Second-generation goals add the dimensions of reducing embodied carbon, providing transparency about material ingredients, and avoiding chemicals of concern. Make informed material selections based on criteria that considers durability, maintenance, human health impacts, and reducing the environmental impacts of extraction, manufacturing, and transportation.

## DESIGN FOR CHANGE

Reuse, adaptability, and resilience are essential to sustainable design, which seeks to maintain and enhance usability, functionality, and value over time. Consider ways in which an existing building can be repurposed or current designs can facilitate future adaptations. Address the following questions during the design process: What other uses could the building easily accommodate in 50-100 years? In what ways will the design take into account climate change over the life of the building? How does the design anticipate restoring or adapting function in the face of stress or shock, such as natural disasters, blackouts, etc.? How does the project address passive survivability (providing habitable conditions in case of loss of utility power)?

## DESIGN FOR DISCOVERY

Design for Discovery is all about what the designer and users can learn from the finished product. Every completed building contains a textbook's worth of lessons, mistakes, strokes of genius, and strategies for improvement. Designers need to stay engaged with each building over the long term to extract its secrets. Sustainable design strategies and best practices evolve over time through documented performance and shared knowledge of lessons learned.

# Resilience & Sustainability

**Cushing Terrell | Sustainable Design Initiative | Red Lodge Area Community Foundation**

| Measure 1 - Design for Integration | | | Y | M | N |
|---|---|---|---|---|---|
| Central Design Concept | 1.1 | Vision Statement | | | |
| | 1.2 | Big Picture Design Concept | | | |
| Integrated Process | 1.3 | Design Process / PM Roadmap | | | |
| **Measure 2 - Design for Community** | | | **Y** | **M** | **N** |
| Human Scale<br>Walkability<br>Alternative Transportation | 2.1 | Design for Alternative Transportation | | | |
| | 2.2 | Minimize Visible Impact of Parking | | | |
| | 2.3 | Design for Bicycle Access | | | |
| | 2.4 | Lighting for Safety | | | |
| Social Equity | 2.5 | Design for Wheels to Improve Access | | | |
| | 2.6 | Mother's Room | | | |
| **Measure 3 - Design for Ecology** | | | **Y** | **M** | **N** |
| Landscaping<br>Habitat<br>Biodiversity | 3.1 | Landscape to Preserve or Create Habitat | | | |
| | 3.2 | Native Plantings Not Decorative Turf Grass | | | |
| | 3.3 | Design for Local Environment | | | |
| Heat Island Effect | 3.4 | Landscape to Minimize Heat Island Effect | | | |
| | 3.5 | Meet Solar Reflective Index (SRI) Targets | | | |
| Dark Skies | 3.6 | Design Site Lighting to Preserve Dark Skies | | | |
| | 3.7 | Schedule Site Lighting | | | |
| Bird-friendly Design | 3.8 | Bird-Safe Glazing | | | |
| Site Acoustics | 3.9 | Mitigate Sound Transfer Beyond Property Lines | | | |
| **Measure 4 - Design for Water** | | | **Y** | **M** | **N** |
| Indoor Water Efficiency | 4.1 | Benchmark Indoor Water Use | | | |
| | 4.2 | Specify Low-Flow Fixtures | | | |
| | 4.3 | Select Water Efficient Equipment | | | |
| Outdoor Water Efficiency | 4.4 | Irrigation Reduction or Elimination | | | |
| Process Water Reduction | 4.5 | Air Condition Condensate Recovery | | | |
| Recapture/Reuse of Greywater | 4.6 | Explore Opportunities for Greywater Reuse | | | |
| Rainwater / Stormwater Use and Management | 4.7 | Rainwater Reuse for Irrigation | | | |
| | 4.8 | Manage Stormwater Runoff | | | |
| **Measure 5 - Design for Economy** | | | **Y** | **M** | **N** |
| Material Selection | 5.1 | Choose Materials That Improve the Building's Economy | | | |
| | 5.2 | Choose Materials and Plantings That Improve the Site's Economy | | | |
| Financing and Incentives | 5.3 | Seek Incentives for Long-Term Performance Investments | | | |

| Measure 6 - Design for Energy | | | Y | M | N |
|---|---|---|---|---|---|
| **Benchmark** | 6.1 | Set Whole Building Energy Use Intensity (EUI) Goal | | | |
| | 6.2 | Comply With Most Current IECC | | | |
| **Energy Modeling** | 6.3 | Perform an Energy Model | | | |
| | 6.4 | Document Predicted Performance in AIA 2030 DDx | | | |
| **On-Site Renewable Power Generation** | 6.5 | Evaluate and Design On-Site Power Generation Technologies | | | |
| | 6.6 | Design to Accommodate Future PV Installation | | | |
| **Utility Incentives** | 6.7 | Evaluate Local Utility Rebate Programs | | | |
| **Commissioning** | 6.8 | Provide Commissioning Services for Building Systems | | | |
| **EVSE** | 6.9 | Provide electric vehicle service equipment (EVSE) | | | |

| Measure 8 - Design for Resources | | | Y | M | N |
|---|---|---|---|---|---|
| **Embodied Carbon** | 8.1 | Specify Products that have Adopted the 2030 Challenge for Products | | | |
| **Product Environmental Impacts** | 8.2 | Specify Products with and Environmental Product Declaration (EPD) | | | |
| **Material Sourcing** | 8.3 | Specify Products that have been Sourced or Extracted in a Responsible Manner | | | |
| **Product Health Impacts** | 8.4 | Specify Products that Reduce Negative Impacts on Human Health | | | |
| **Construction Waste Management** | 8.5 | Establish Construction Waste Management Requirements | | | |
| **Measure 9 - Design for Change** | | | **Y** | **M** | **N** |
| **Reuse** | 9.1 | Consider the Embodied Value of Existing Structures and Opportunities for Reuse | | | |
| **Flexibility and Future Adaptability** | 9.2 | Place Structural Elements for Maximum Flexibility | | | |
| | 9.3 | Plan for Future Disassembly and Flexibility | | | |
| | 9.4 | Explore Opportunities for Adaptable HVAC Systems | | | |
| | 9.5 | Plan for Changes in Technology | | | |
| **Resiliency** | 9.6 | Confirm Clients Performance Goals During Disaster Events | | | |
| | 9.7 | Prepare For and Mitigate Major Risks | | | |
| | 9.8 | Base Design and Performance Analysis on Predictive Climate Modeling | | | |
| | 9.9 | Anticipate and Design for Power Outages | | | |
| | 9.10 | Explore Opportunities to Promote Passive Survivability | | | |
| **Measure 10 - Design for Discovery** | | | **Y** | **M** | **N** |
| **Occupant and Operator Relationships** | 10.1 | Give Maintenance Personnel and Building Operators Opportunities for Input | | | |
| | 10.2 | Explore Need for a Building User's Guide (BUG) for the Operator | | | |
| **Training** | 10.3 | Support Efforts to Develop a Building Orientation for All Occupants | | | |
| **Knowledge Sharing and Lessons Learned** | 10.4 | Utilize CTA's Lessons Learned Platform on the HIVE to Share Findings | | | |
| **Discovery that Influences Behavior** | 10.5 | Design Elements to Teach Occupants About Building Systems and Sustainability | | | |
| **Post Occupancy Engagement** | 10.7 | Perform Post-Occupancy Evaluation | | | |

# 5 | Conclusions & Recommendations

## RECOMMENDATIONS

**How can Carbon County improve through affordable housing?**

Every one of our frontline workers deserves a healthy and affordable place to live. What can workforce housing look like when the priorities are driven by the people who live there? And what are those priorities?

Carbon County residents should be concerned with the quality of services provided within the community. Healthcare and education services directly impact the quality of life, while frontline workers in city administration, retail, restaurant, hotel, and recreational services directly impact the economic viability of the community.

**Employer Focused Housing**

Workforce housing should aim towards key employment sectors like healthcare, schools, public administration, accommodations, food service, and Red Lodge Mountain. Carbon County will need to build 60 units per year for the next decade to meet demand. Most of these units should target the 30-60% AMI range.

The gap is very clearly defined by looking at Red Lodge Mountain offering housing for 34 employees at the beginning of the 2022-23 season and charging employees $500 for housing that costs the Mountain $900.  Gaps like these are unsustainable for local businesses over a long period of time.

**Continued Partnerships and Incentives with Private Development**

The Red Lodge Area Community Foundation's work towards improving the quality of services in the County by improving the housing quality available to the workforce is a noble effort, especially since many other communities have their own housing authorities that deliver housing.  It is our expectation that the state will continue to have little to offer in terms of finacial incentives for workforce housing.

Private development will continue to have an impact on housing affordability within the county and we would recommend the RLACF working with those developers to help incentivize any percentage of units be allocated to affordable housing.

The RLACF cannot solve this problem alone.  If this project is pursued, we recommend partnering with development, construction, and property management businesses.

**Connection, Community, Culture, Climate,**

Workforce housing projects should continue to look to maintain and develop simple and effective connections from housing to employment and community life, ideally walkable within 15 minutes.

Projects should use design to reflect the community and culture through building form, materials, details, signage, and landscaping.

Projects should also look to reduce their environmental impact through efficient and resilient design choices in plan, materials, and building systems. Alternative energy sources like solar or geothermal should be studied as rates of return on such systems are becoming within reason of 12 years or less.

**Need For Transitionary Rentals**

We see affordable housing as an individual's process towards establishment in the Carbon County community through the narrative of 1-3 year rentals.

This study exposed and elevates the need for long term rentals based on local incomes, but there has been little rental or condo development at scale in Carbon County until now. Any project of this typology would benefit housing affordability in the County. Condos or other multi-family developments could fit within the scale and density of Red Lodge, specifically within the downtown core where much of the workforce is employed.

Private development is currently active in downtown Red Lodge, including a 60-unit development north of Hwy 78, and many others off of Main Street. These projects will be competing for labor resources, and efforts will need to be made to ensure a project of this type receives proper attention from developers and construction teams.

**Beyond Red Lodge**

In looking outside of the Red Lodge area, the community of Roberts stood out due to its proximity to workforce needs, its relative density, and its school. Development in this location is advantageous due to its relatively low land acquisition costs, as well as its location being 10 miles closer to the economic hub of Billings.

Respect should be given to the RLACF and team for keeping an open mind and allowing the study process to find a potentially workable solution outside the city of Red Lodge.