

Beech Mountain, North Carolina

Commercial District Master Planning Project

Master Plan Report

Oct. 14, 2025



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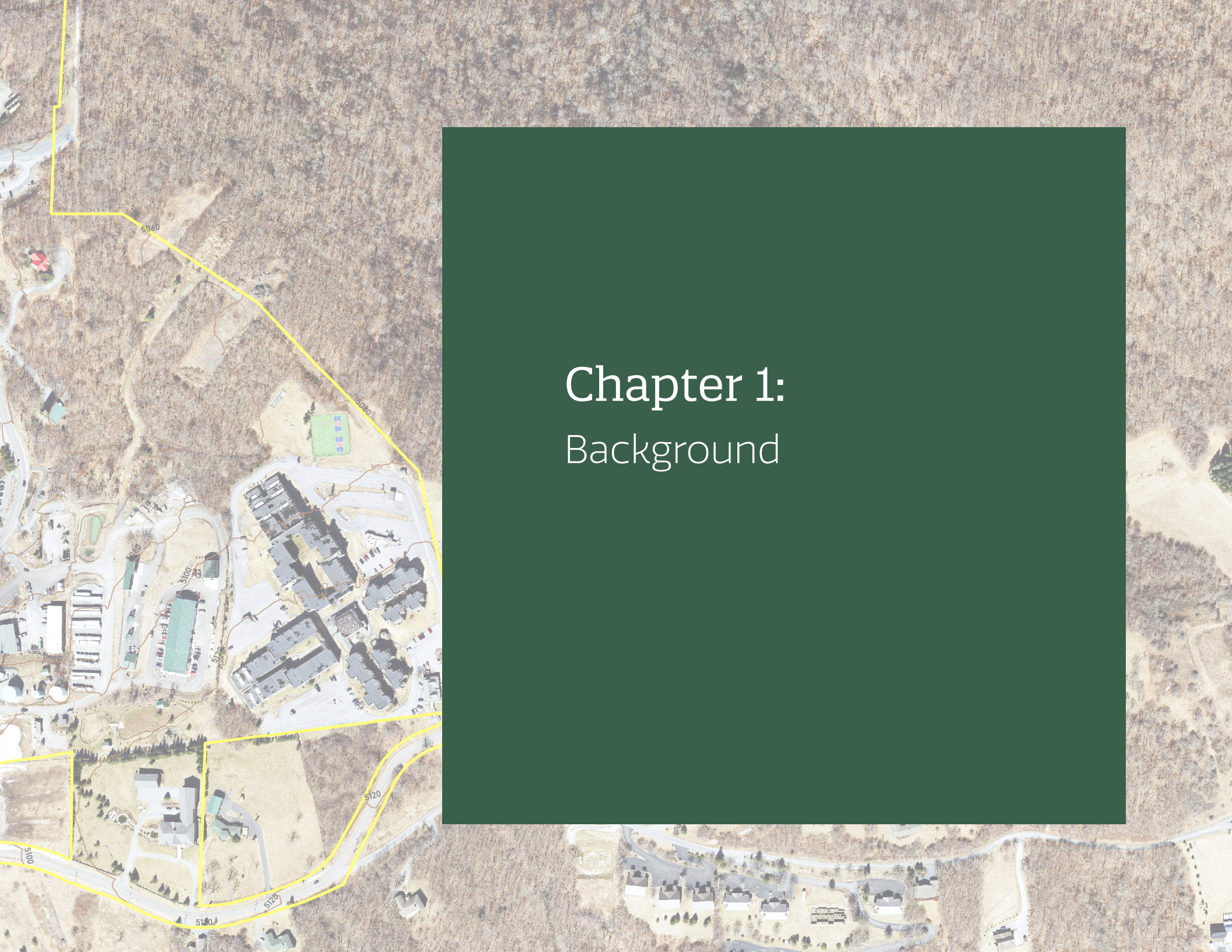


Chapter 1:
Background

1.1 History

The Town of Beech Mountain is the highest incorporated town in the eastern United States. Its boundaries encompass most of its eponymous mountain, straddling Avery and Watauga counties in North Carolina about one mile east of the Tennessee state line. At over 5,500 feet above sea level, it is nearly 300 feet higher than Denver, Colorado, and the closest incorporated town that exceeds its height is over 1200 miles away in New Mexico. Despite the town's superlative height, Beech Mountain is not the highest peak in North Carolina.

Beech Mountain has been inhabited for thousands of years. The Cherokee called the area Klonteska and extensively hunted on its slopes. It was likely a stop along important pre-Columbian trade routes, helping to link local communities with other civilizations. An antique knotted tree near the summit is believed to have been a marker for this trail. The first European settlers arrived around 1774, when settler Samuel Bright arrived at the base of the mountain. He made a business of helping other settlers cross the rugged mountains, helping to expedite development in far western North Carolina and eastern Tennessee. As a result, economic activity intensified throughout the 19th century, as milling, stilling, and timbering operations began springing up on the mountain. By 1877, over two thousand stills were in operation, manufacturing moonshine.

At the turn of the 20th century, change was afoot on Beech Mountain. In 1900, Lees-McRae College opened its doors for students in Banner Elk, establishing an important school and employer for nearby residents. Additionally, the Tri-County Lumber Company (later Whiting Lumber Company) started industrial logging operations on the northern slopes of the mountain during this same period. A railroad was built connecting the timberlands with the mill in nearby Butler, TN. Worker camps were centered around what is now Buckeye Lake. Between corporate bankruptcies and a dwindling supply of healthy timber, logging on the mountain ended by 1940.

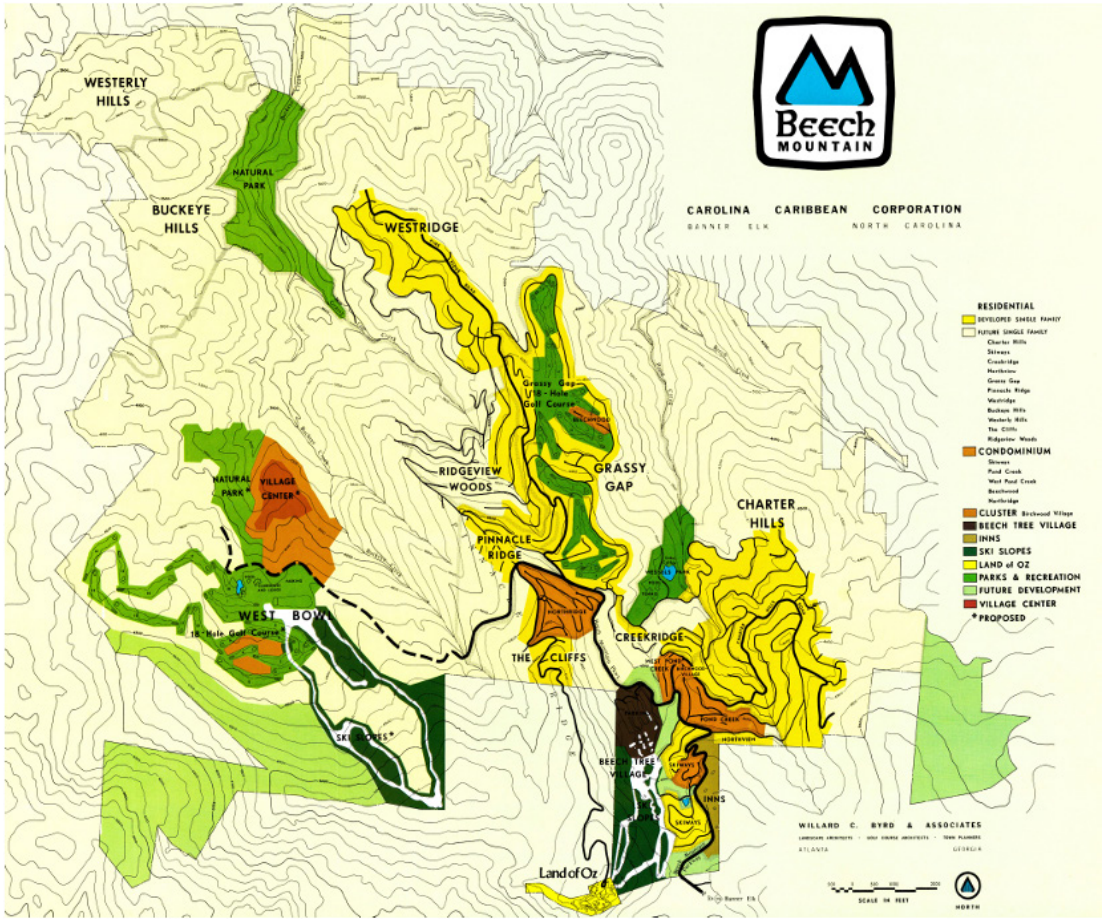
Skiing was becoming increasingly popular with the American public after the invention of the ski lift in the 1930s. As the national road network improved across the 1940s and 1950s, rural and sparsely populated regions of the country became increasingly popular destinations. By the early 1960s, developing a ski resort in western North Carolina became tantalizing to real estate developers. After a long search across Appalachian North Carolina, Beech Mountain was chosen because of its beautiful panoramic views at the summit and its high yearly snowfall rate (over 100 inches!). By 1966, all the landowners on the mountain had been persuaded by the Carolina Caribbean Corporation to sell their land to begin the development of the Beech Mountain Ski Resort. Over the next few years, the mountain's slopes were improved for recreational use, lifts were installed, and lodges were constructed. Roads were cut across the mountain following old logging roads and railroad beds, and a water and sewer system were added. Subdivided lots were made available for purchase to anyone wanting to build a house on the land near the resort, and the Carolina Caribbean Corporation created the Beech Mountain Property Owners Association (POA) to help protect property owners and guide and promote the development of amenities, such as a golf course and tennis courts. However, additional improvements were needed to attract more people. The most notable of these was the Land of Oz amusement park, a Wizard of Oz-themed amusement park showing a collection of Oz-themed attractions and memorabilia.

By 1975, the whole development was in trouble. The cost of building and maintaining critical infrastructure had taken a toll on the finances of the Carolina Caribbean Corporation. It went bankrupt later that year, and activity on the mountain slowed significantly.

Upon the developers' bankruptcy, the POA temporarily took over operations of the ski resort and its auxiliary amenities, stretching its already strained finances. Faced with high yearly operating costs and a continued need for development, the POA led the efforts to incorporate the town to help it establish autonomy and secure state funding for public improvements like water and roads. Incorporation came in 1981, with the Town taking over public infrastructure, and the POA taking over amenities like the golf course and tennis courts. With its mission changing from temporary operation, the POA re-branded in 1983 as the Beech Mountain Club.

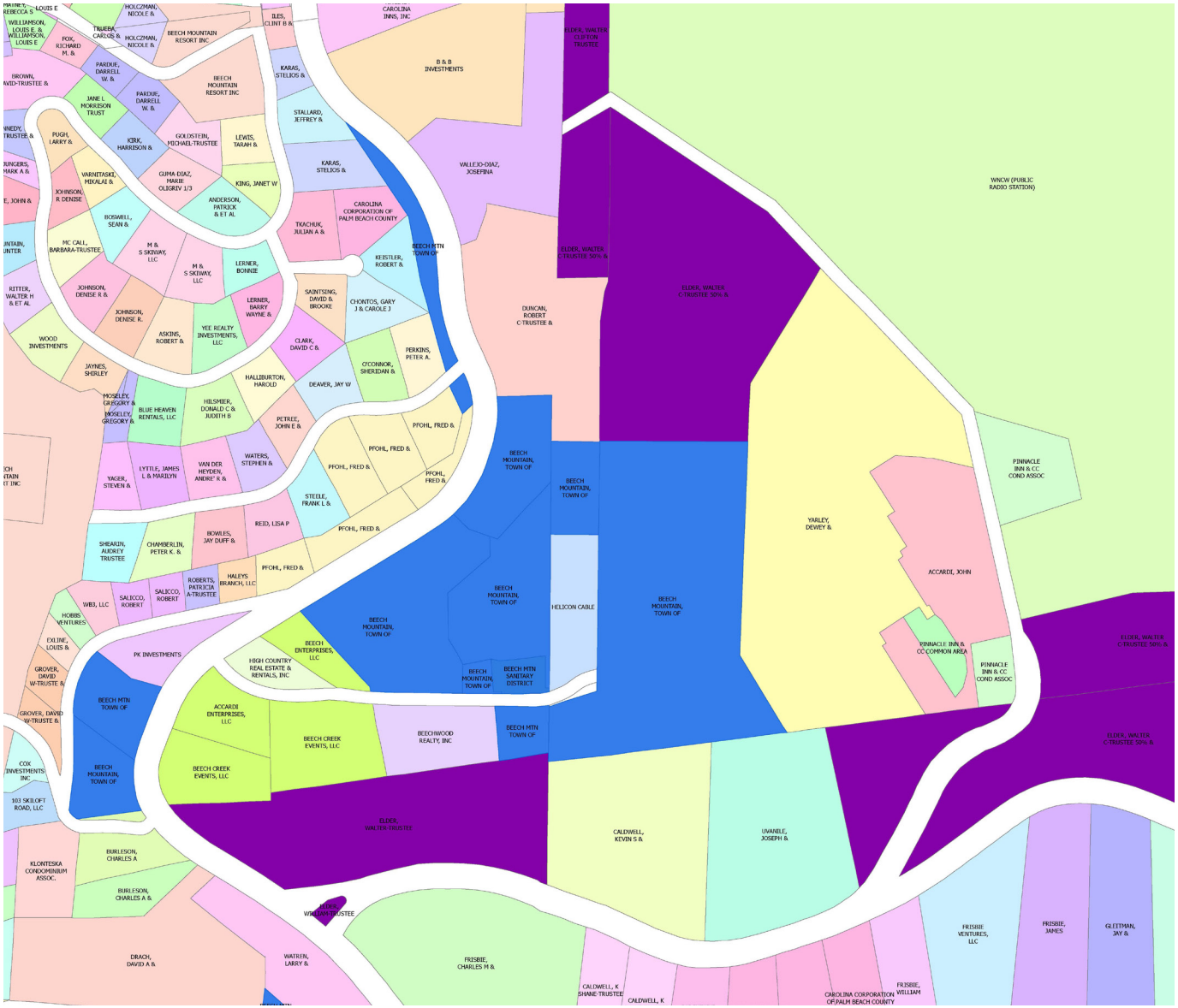
Beech Mountain has grown steadily since its incorporation. Throughout the 1990s, it hosted stages of the Tour de DuPont, where its steep and windy roads gave it a tough reputation among the celebrity athletes who competed here.

The town experienced rapid population growth between 2000 and 2019, when the population peaked. During this time, the town constructed amenities for residents and visitors, such as the sledding hill, the Buckeye Recreation Center, and Shane Park. Despite the COVID-19 pandemic in 2020, the number of visitors did not substantially decrease like it did in most other communities, and a renewed push for sustainable development came. In September 2024, parts of the community were ravaged by the remnants of Hurricane Helene, which overwhelmed local waterways and toppled thousands of trees. Reconstruction and repair efforts have led to these parts of town being reconstructed more resiliently, and has even opened the door for new improvements all over town.



Beech Mountain Master Plan by William C. Byrd & Associates

1.2 Ownership Resources



Map of the project area showing property owners and parcels

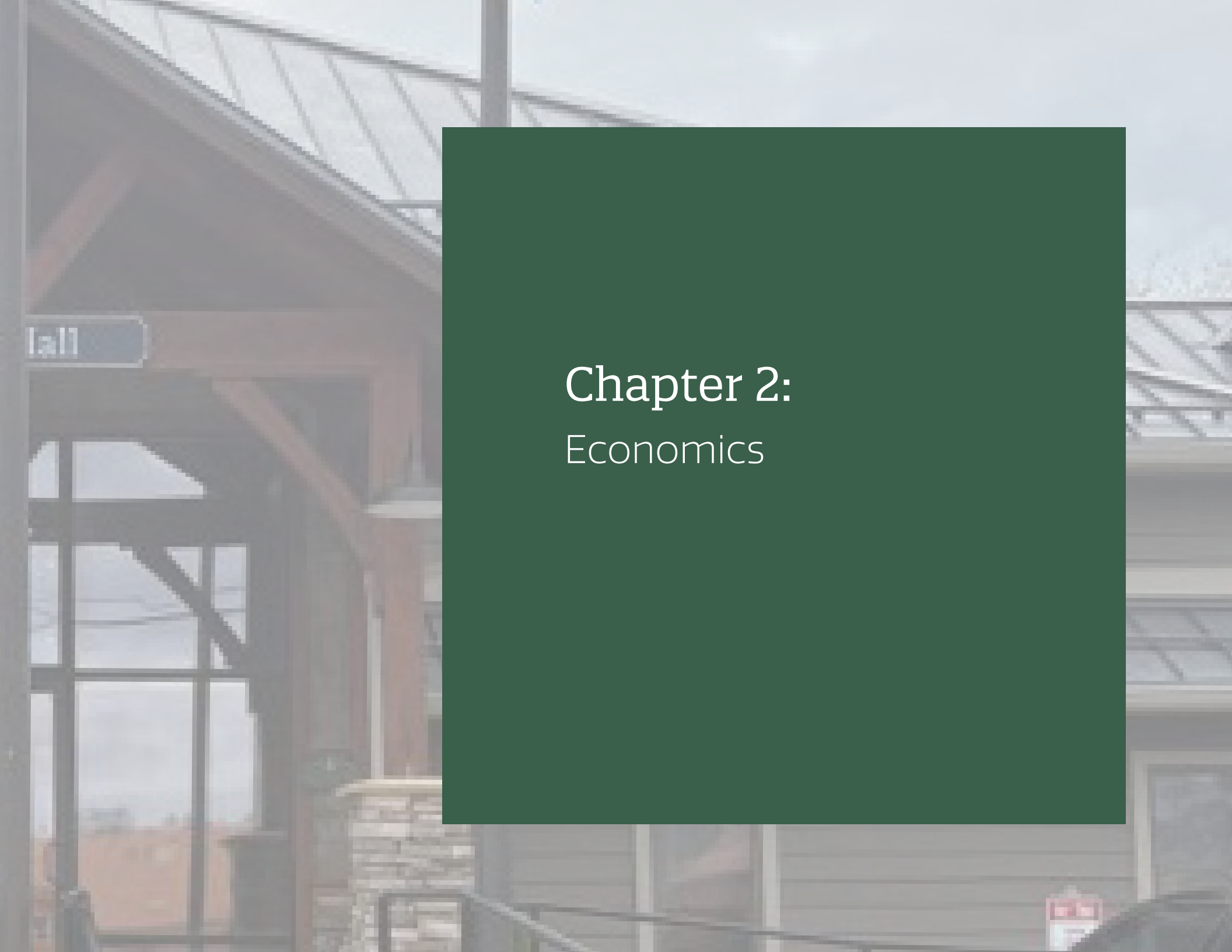
The Beech Mountain Commercial District Master Planning Project area is focused on the town's "downtown district" – the area between the ski slopes and the edge of town near the Pinnacle Inn Resort. In this area, major property owners include:

· Town of Beech Mountain: Town government. The largest parcels of land in the project area are used by the town's dump and public works department. It is also the site of the famous sledding hill.

· The Accardi Family: Local entrepreneurs who run businesses across town, most notably the Brick Oven Pizzeria and The Venue at Boulder Creek.

· The Elder Family: Owners of the mountaintop in the pre-ski resort days. Owners of many of the parcels that circle the town limits.


TOWN



Chapter 2:
Economics

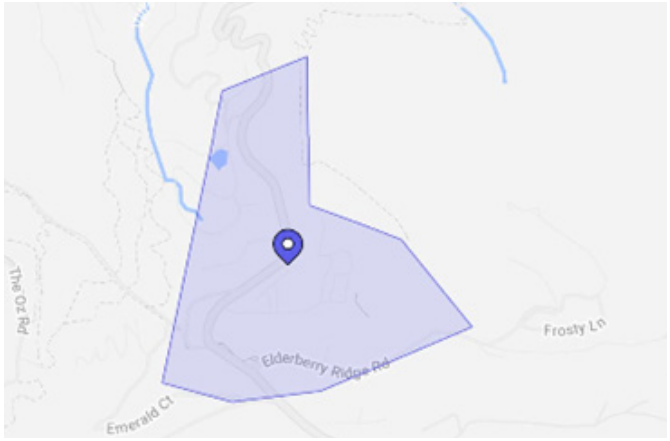
2.1 Introduction

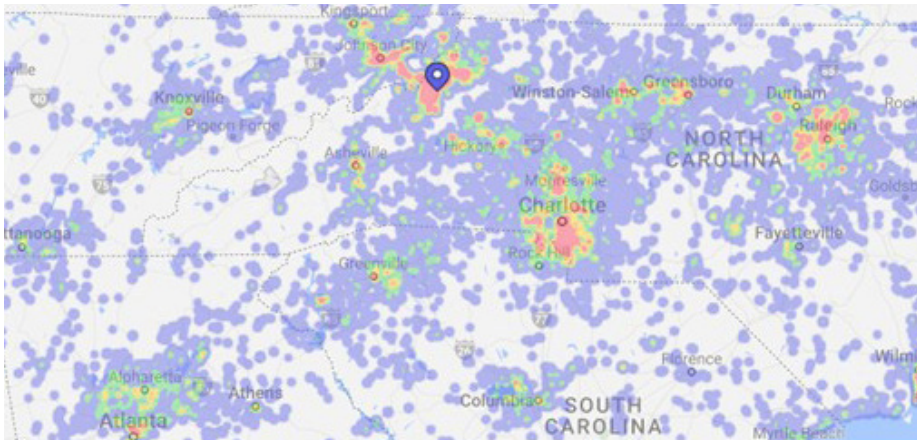
This market study for Beech Mountain informs the planning and design for the downtown master plan, identifying the types of business and investment that could be supported in the market. The research defines the local trade areas relevant to the downtown study area, describes the impact and seasonality of visitors to the community, and provides market data related to demographics, residential trends, employment, lodging, and retail opportunity.

2.2 Market Analysis

Market Definition

Placer.ai data was used to determine Beech Mountain's local trade areas, as well as describe the town's visitor market and its seasonality. This cell phone locational data was collected for the previous year from 4/1/2024 until 3/31/25. Placer is anonymous mobile-device data that aggregates information on customer traffic, dwell time, frequency, origin, etc. For the Beech Mountain master plan, it allows planners to establish trade areas and visitation patterns in order to analyze demand for new business and investment.





Left: Figure 1: Downtown Beech Mountain Study Area for Placer.ai

Right: Figure 2: Downtown Beech Mountain Study Area heatmap of regional visitors. Source: Placer.ai

Placer.ai

For the Placer.ai study, the following parameters were used:

1. 1-year date range from 4/1/24 to 3/31/25.
2. Data pulled for various points of interest (POI):
    - Downtown Study Area and its surroundings including the potential development tracts, key destinations like the Dog Park, Sledding Hill, Visitor Center, various restaurants, Fred's Mercantile, etc.
    - Beech Mountain Resort
    - Banner Elk Downtown (for comparison)
    - Blowing Rock Downtown (for comparison)
3. Users who spend at least 15-minutes within the downtown area or within the various POIs

Based on these parameters, the Downtown Study Area showed:

- **462,849** unique visits
- **202,700** unique visitors. This means that 43.8% of visitors came to Beech Mountain just once during the year. 56.2% of the visitors then would be repeat visitors, or residents.
- **3,295** unique zip codes. This would include the local 28604 zip code, plus 3,294 other zips!
- Visitors came from all 50 states and the District of Columbia, including:
    - 47.9% from NC
    - 17.9% from FL
    - 9.7% from TN
    - 8.5% from SC
- **7.9%** of all unique visits were from 28604 zip which includes Beech Mountain and Banner Elk
- **13.5%** of all unique visits were from Watauga and Avery Counties.

As one might imagine with Beech Mountain and its visitor assets, this number of visits, unique visitors, and visitor origin represents a broad-based market for local businesses.

Trade Areas

Based on the Placer.ai data, primary and secondary trade areas were established using visits/1000 population of all zip codes and their visitors who came to Beech during the time period:

The Primary Trade Area (PTA) is the most local and loyal customer base for Beech businesses. This is the bread-and-butter market for local businesses, and the customers who help sustain business over the course of the year. The PTA is identified in orange in the following map.

- Three zip codes
    - 28604 – Banner/Beech
    - 28622 – Elk Park
    - 37687 – Roan Mountain, TN
- 14,849 population
- 10.4% of all visitors

The Secondary Trade Area (STA) is another loyal local market, however these people live far enough away from the town that they can choose to go to Blowing Rock, Boone, etc. as well as Beech Mountain. The STA is identified in purple in the following map.

- 7 zip codes:
    - 28657 – Linville Falls
    - 28698 – Zionville
    - 28646 – Linville
    - 28679 – Sugar Grove
    - 28692 – Vilas
    - 37691 – Trade, TN
    - 28611 – Collettsville
- 19,612 population
- 2.81% of all visitors

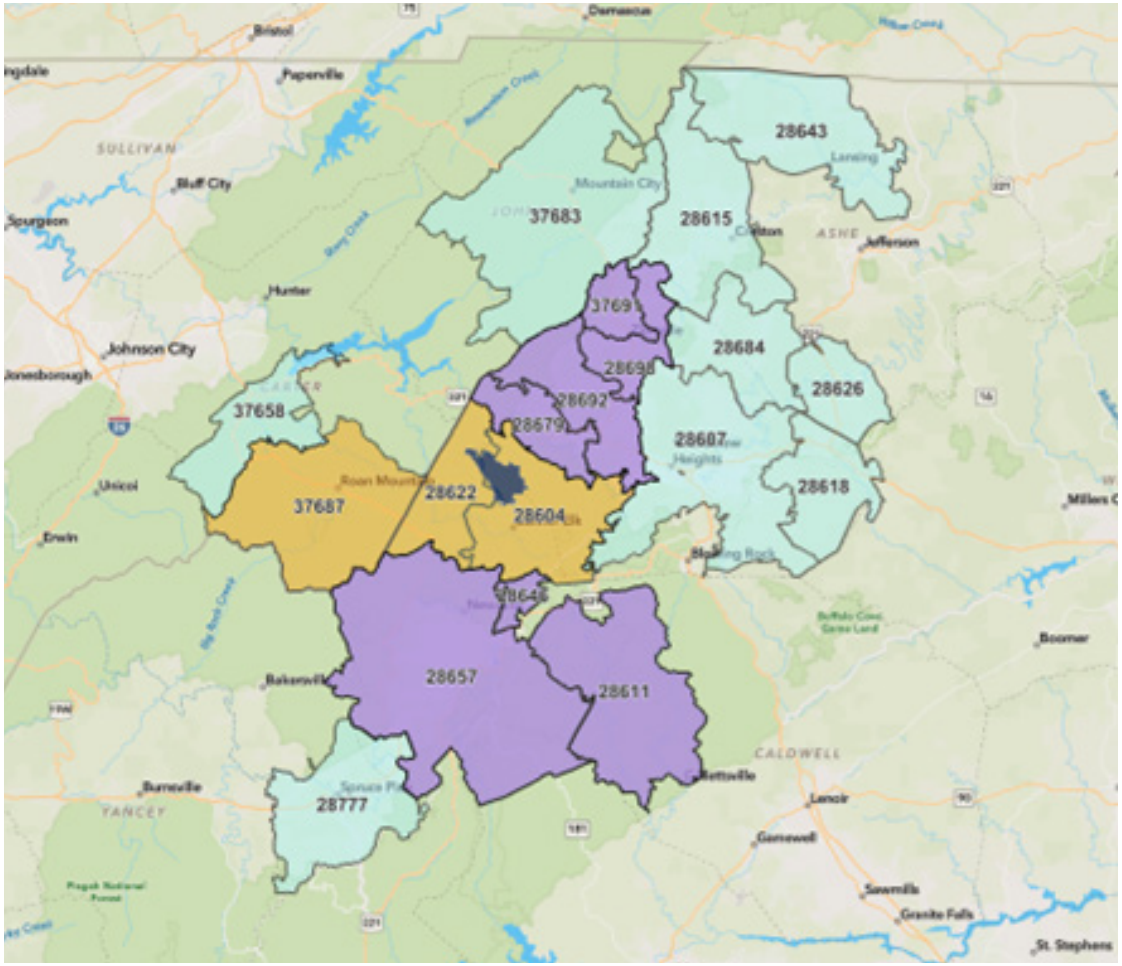


Figure 3: Beech Mountain's PTA (orange), STA (purple) and TTA (teal).

Along with its tertiary trade area (teal in the map above), Beech Mountain's regional draw includes nineteen zip codes and a population of 138,910 people. This represents 36% of all visitors to Beech Mountain over the past year. This is very important and illustrates that while Beech Mountain has a very robust visitor market, over one-third of its customer base comes from the immediate region.

The PTA and STA are the foundation of the market research that follows this section including business demand, demographic profile, etc.

Additional Placer.ai Observations

In addition to trade areas, the Placer.ai data provides us with some key indicators to describe the Beech Mountain market. This includes seasonality, comparisons to nearby peer communities, and the impact of Hurricane Helene.

Beech Mountain Downtown

· Approximately 75% of Beech Mountain visitors live greater than 50 miles away.

· Visitors spend on average over two hours in the community, likely due to key destinations such as the Beech Mountain Resort, Beech Mountain Club, Sledding Hill, etc.

· A plurality of downtown visitors (16.7%) is heading to the Resort when they leave downtown, followed by 15.3% that are heading home.

· Other destination's visitors go to both prior and post visiting downtown are grocery store and gas station. While Fred's does carry limited grocery options, these uses are not located in Beech Mountain and are in nearby Banner Elk.

· Last year, downtown Beech Mountain saw large peaks of visitors each weekend between Christmas and the beginning of March. Smaller peaks can be seen each weekend during the summer months.

· It should be noted here that late 2024 and early 2025 were impacted significantly by Hurricane Helene, which hit western NC on September 27th at the start of the fall color season.

Metric	Result
Visits	462,849
Unique Visitors	202,700
Visit Frequency	2.28
Average Dwell Time	139 minutes
Visitors Living > 50 miles	74.89%

Figure 4: Downtown Visitor Data. Source: Placer.ai

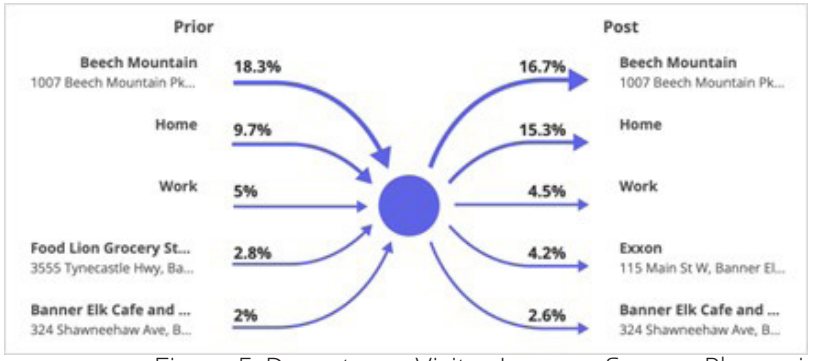


Figure 5: Downtown Visitor Journey. Source: Placer.ai

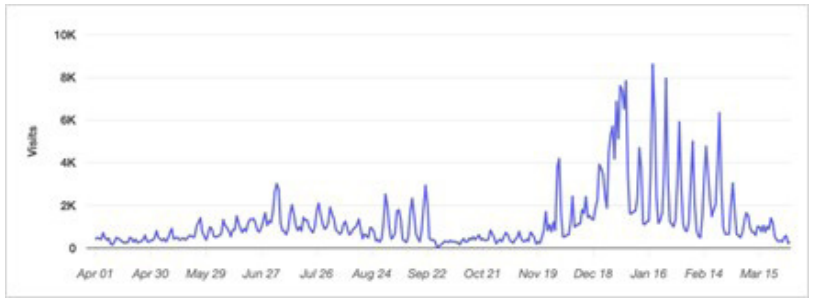


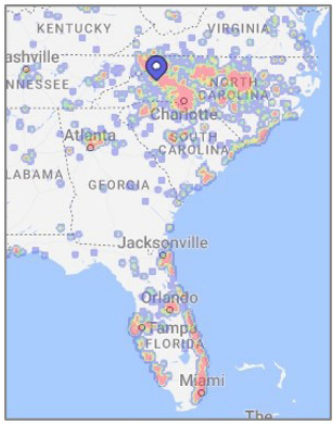
Figure 6: Downtown Visit Trends 4/1/24 – 3/31/25. Source: Placer.ai

Beech Mountain Seasonality

The three key seasons that drive Beech Mountain's visitor base are the Ski Season, Summer Season, and Leaf Season, each of which show different visitor trends.

Summer Season

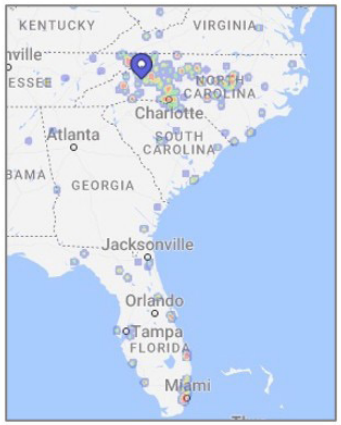
Jun 10, 2024 – Aug 15, 2024



Visits	79,383
Unique Zips	1671
States	40
Top 5	NC – 52.4% FL – 18.9% TN – 6.5% SC – 6.2% VA – 4.6%

Leaf Season

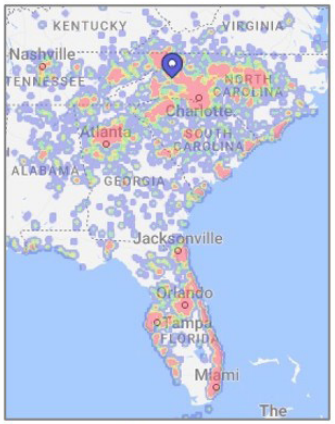
Oct 1, 2024 – Oct 31, 2024*



Visits	8,777
Unique Zips	186
States	23
Top 5	NC – 69.9% TN – 12.0% FL – 9.5% NY – 1.9% SC – 1.5%

Ski Season

Dec 15, 2024 – Mar 1, 2025*



Visits	226,653
Unique Zips	2376
States	44
Top 5	NC – 39.2% FL – 20.5% GA – 12.2% SC – 11.4% TN – 10.7%

*The numbers above for Leaf Season and Ski Season are post-Hurricane Helene. More on Helene's impact in the next section.

For the time period between 4/1/2024 and 3/31/2025

Ski Season

- The Ski Season showed the largest number of unique visits and unique visitors, with 226,653 visits from 44 states recorded during that six-week time frame.
- It also showed a smallest percentage of North Carolina residents at just 39.2%, followed by Florida at 20.5%.
- Peaks occurred each weekend, with the largest peak seeing over 8,500 visitors in a single day.

Summer Season

- The Summer Season saw 79,783 unique visits.
- It had a larger percentage of NC visitors with over half (52.4%) living in the state.
- Regular peaks each weekend saw as many as 3,000 visitors on key days.

Leaf Season

- The 2024 Leaf Season in Beech Mountain saw a significant hit to visitor traffic, nearly flatlining in the weeks following the September 27 hurricane.
- In fact, this time frame saw a much more "local" visitor profile suggesting that those in town during this time were either residents, first responders, or volunteers. 70% of the 2025 leaf season visitors live in NC with another 12% living in nearby TN.

Hurricane Helene

To understand Hurricane Helene's impact last year, we pulled data for the previous year (4/1/2023 – 3/31/2024).

23/24 Data

· 561,300 unique VISITS
· 249,100 unique VISITORS
· 39,700 Leaf Season Visitors

24/25 Data

· 462,849 unique VISITS (**–21%**)
· 202,700 unique VISITORS (**–23%**)
· 8,700 Leaf Season Visitors (**–356%**)

Metric	2023 Leaf Season	2024 Leaf Season Post-Helene
Unique Visits	39,700	8,777
Visit Frequency	1.7	2.01
Average Dwell Time	184 minutes	78 minutes
Visitor Living > 50 miles	75.2%	39.4%

Figure 7: Comparison data for Beech Leaf Season '23 and '24. Source: Placer.ai

Overall, Beech Mountain saw a 21% drop in visits between the 23/24 and 24/25 annual data. It should be noted that the 4/1/2024 – 3/31/2025 data set includes six months of data PRIOR to Helene and six months post-Helene. While hurricane cleanup in Beech Mountain has been successful, it is likely that the 2025 summer season (not included in either data set) was also impacted by Helene. The 21% total drop in visits is therefore likely slightly higher.

· There was a 356% drop in visits from the Leaf Season of 2023 to the Leaf Season of 2024.
· The visitor trends comparison below also provides key observations:

- After Hurricane Katrina, Beech Mountains visitor market essentially flat-lined for two months.
- Even after those two months, it can be seen that the Ski Season was impacted as well. Beech Mountain did get the weekend peaks as usual, the visitor spikes were much lower. The largest single day in 2023 was 10,000 visitors, while the Ski Season after Helene saw a peak of just 8,500 for its most visited day.

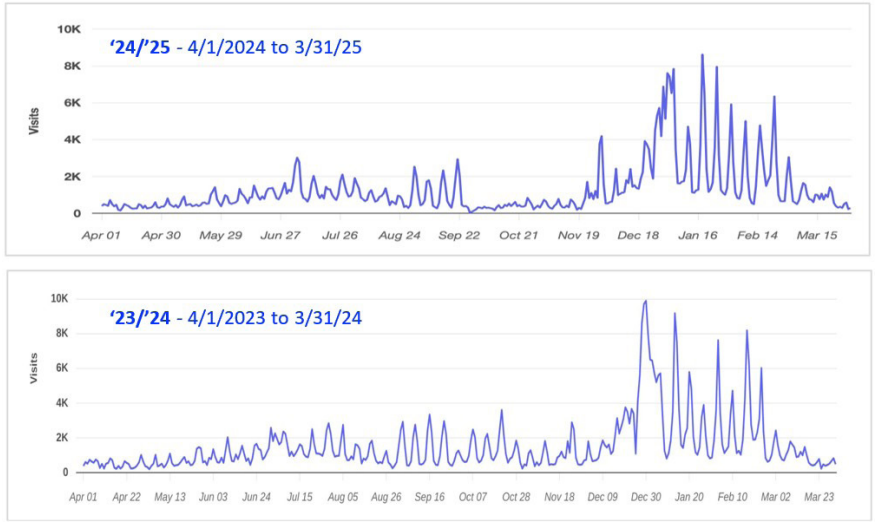


Figure 8: Comparison of Placer.ai Data illustrating Hurricane Helene Impact.

Beech Mountain Peers

Finally, a look at other Points of Interest (POI) compares the Beech Mountain Downtown Study Area to the Beech Mountain Ski Resort, as well as downtown Banner Elk and Blowing Rock.

Beech Mountain Downtown

Metric	Result
Visits	462.8K
Unique Visitors	202.7K
Visit Frequency	2.28
Average Dwell Time	139 minutes
Visitors Living > 50 miles	74.89%

Beech Mountain Resort

Metric	Result
Visits	484.2K
Unique Visitors	236.9K
Visit Frequency	2.08
Average Dwell Time	173 minutes
Visitors Living > 50 miles	87.88%

Banner Elk

Metric	Result
Visits	811.9K
Unique Visitors	323.9K
Visit Frequency	2.51
Average Dwell Time	89 minutes
Visitors Living > 50 miles	61.79%

Blowing Rock

Metric	Result
Visits	999.4K
Unique Visitors	491.5K
Visit Frequency	2.03
Average Dwell Time	105 minutes
Visitors Living > 50 miles	66.87%

Figure 9: Comparison of Points of Interest. Placer.ai data from 4/1/2024 to 3/31/2025. Source: Placer.ai

· Beech Mountain Downtown Study Area had very similar visitor data to that of the Resort itself. Downtown saw 462,000 visitors while the Beech Mountain Resort had 484,000 during the same year timeframe.

· This is likely due to several factors including most people must drive through downtown to get to the resort, ski parking is located within the district, and that several local restaurants and ski rental operations are in the downtown study area.

· Banner Elk and Blowing Rock both have more traditional downtowns and saw significantly more visitors during the previous year. Banner Elk (811,000) and Blowing Rock (999,000) both have a well-rounded mix of business and downtown destinations that Beech Mountain currently does not.

· By the same token, it is likely that some of Banner Elk's visitor base is actually due to visitors coming to Beech Mountain. Businesses like Exxon, Food Lion, and Banner Elk Café were all visited both before and after visitors were in Beech Mountain.

· Beech Mountain Downtown and the Beech Mountain Resort both saw visitors staying significantly longer than visitors to downtown Banner Elk and Blowing Rock. Similarly, both had a much larger percentage of visitors who live more than 50 miles away than either Banner Elk or Blowing Rock.

The data above confirms Beech Mountain's robust visitor market but also leads to other key observations. First, the Beech Mountain Resort is the primary destination in the town and its visitors also interact within the businesses of the downtown study area. Secondly, the businesses that do exist in Beech Mountain's downtown area are a handful of restaurants, Fred's Mercantile, and ski rentals. Each of these are great businesses, but the data above suggests that Beech Mountain visitors and residents must leave Beech Mountain for certain needed commerce.

2.3 Online Survey

An online community survey was conducted concurrently with the market study in order to define key urban design elements of the reimagined downtown, but also what types of businesses, investment and activities could be supported there. This data helps to confirm the findings of the market research that follows. Key input from the survey is shown here.

Survey Information

· The survey was conducted May 12, 2025 through the second design workshop ending on July 9th, 2025.
· It was promoted via social media by the Town and its partners, including email blasts to the town's visitor database.
· 588 responses were recorded.
· Questions focused on:
    o Perceptions of Beech Mountain
    o Business needs
    o Service & activity needs
    o Public spaces
    o Transportation

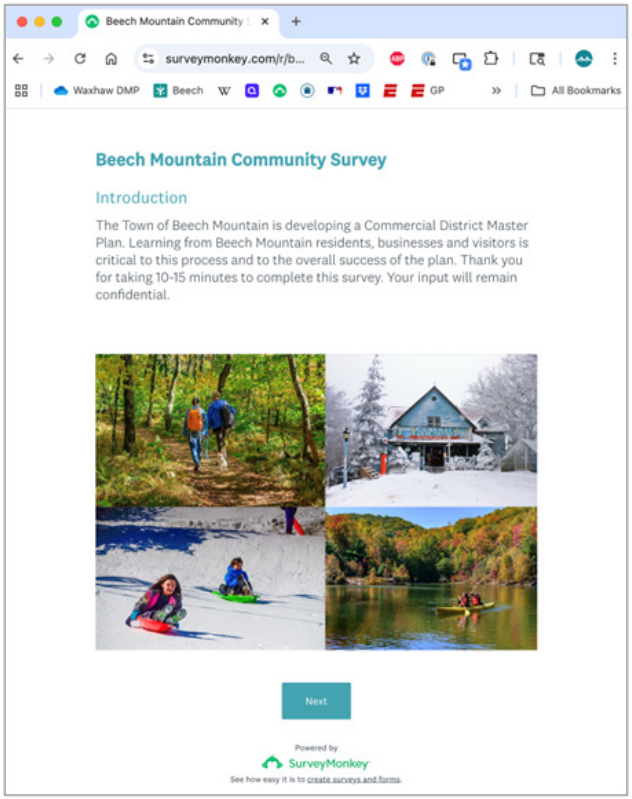
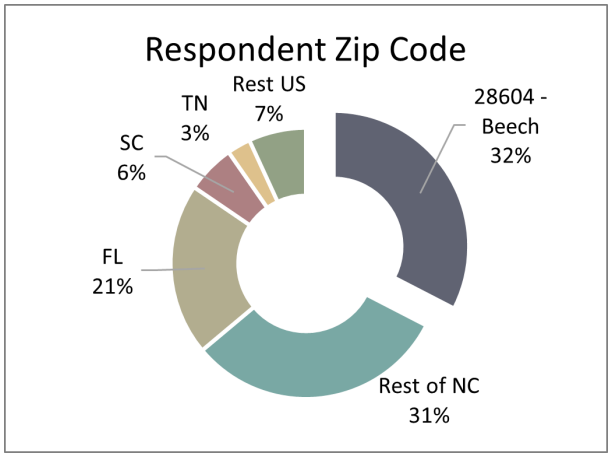
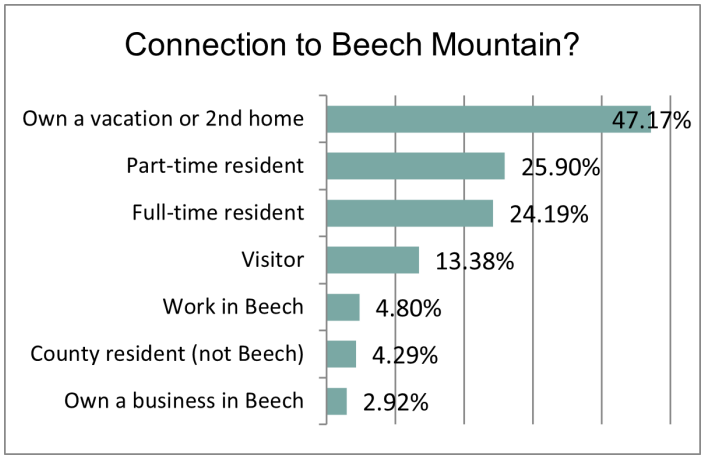


Figure 10: Online Survey

Breakdown of Survey Participants

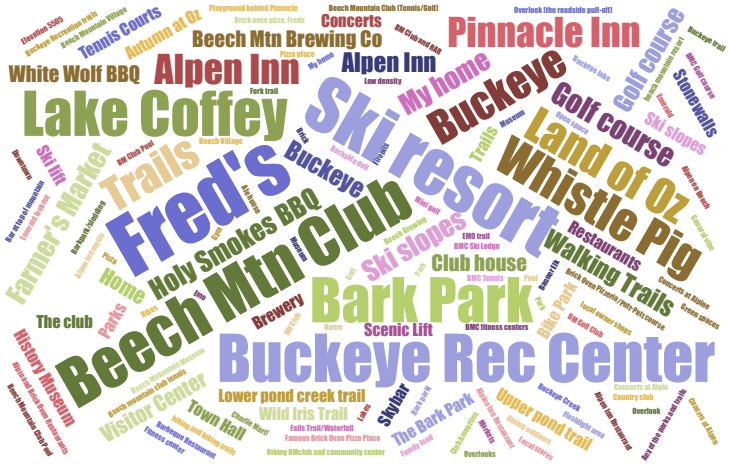
· 37% of Survey Participants live in 28604. Compared to Placer visitor data (7.9% 28604), this survey provides more localized data.
· Still, there was ample visitor participation with 13% of respondents considering themselves "visitors".
· Like Placer data, residents of Florida were second only to North Carolina.
· 42% of all respondents are 2nd homeowners, and 29% are full-time residents.





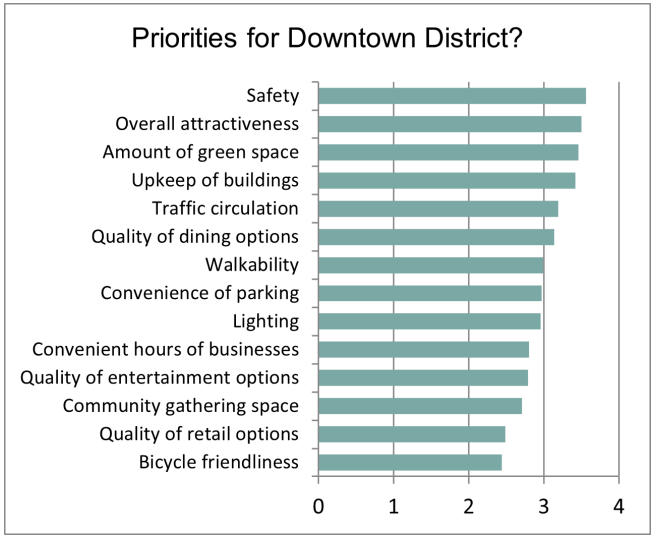
Favorite Places

· Fred's Mercantile, Beech Mountain Club, and Ski Resort top the list.
· Many non-ski outdoor recreation assets were highlighted (Buckeye Rec Center, Bark Park, Trails, Lake Buckeye & Coffey)
· Key businesses include Fred's, 5506' Skybar, Alpen Inn, etc.



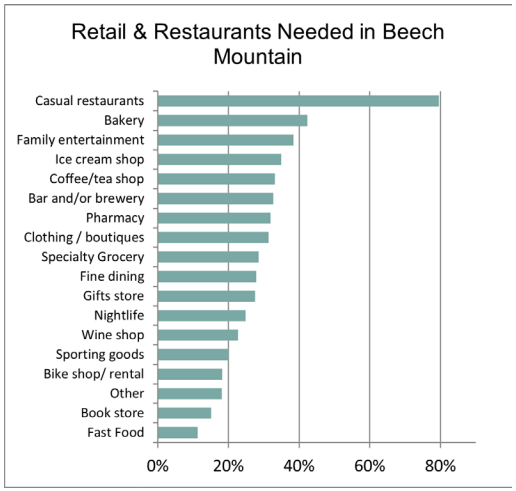
What are Your Priorities for the Downtown District?

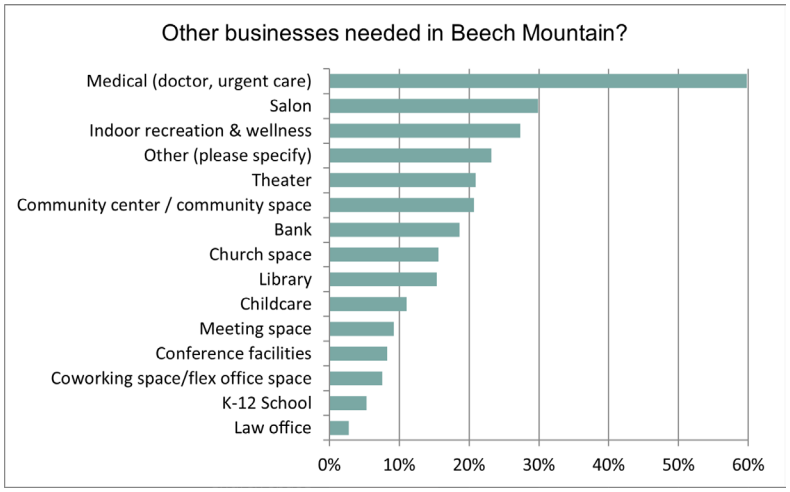
· Safety, Attractiveness, and Green Space ranked high.
· Bicycle Friendliness and Quality of Retail ranked lowest.
· Notable comments included desire to focus on local needs over tourists, and "mountain style" architecture.
· "None" and "no new development" were mentioned in most questions.



What Types of Retail and Restaurant Businesses are Needed?

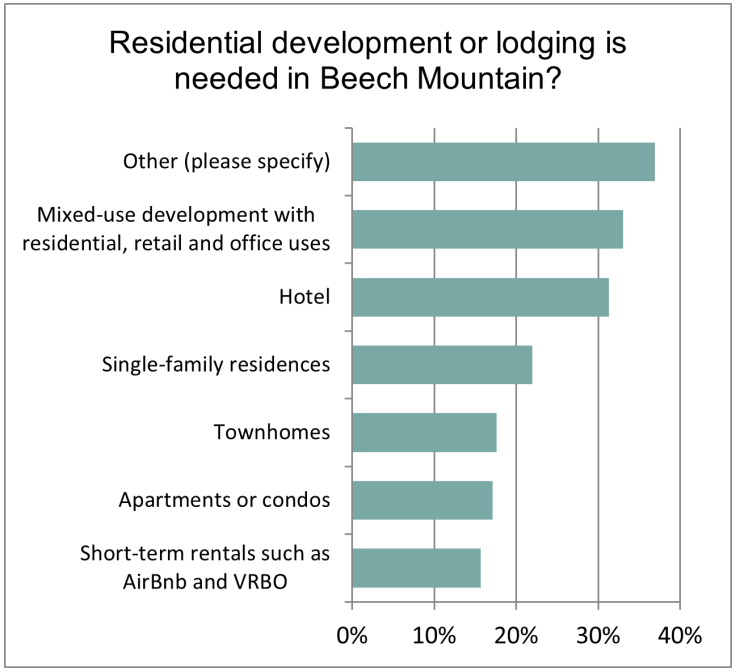
· Casual Restaurants, Bakery, and Family Entertainment ranked the highest
· Fast food, bookstores and bike shops were lowest.
· Comments included the need for grocery, sports bar/pub, gas station, dog daycare, etc.
· Others mentioned proximity to nearby towns and their commerce serving Beech residents.
· Other, non-retail needs saw Medical, Salons, and Wellness a high priorities.





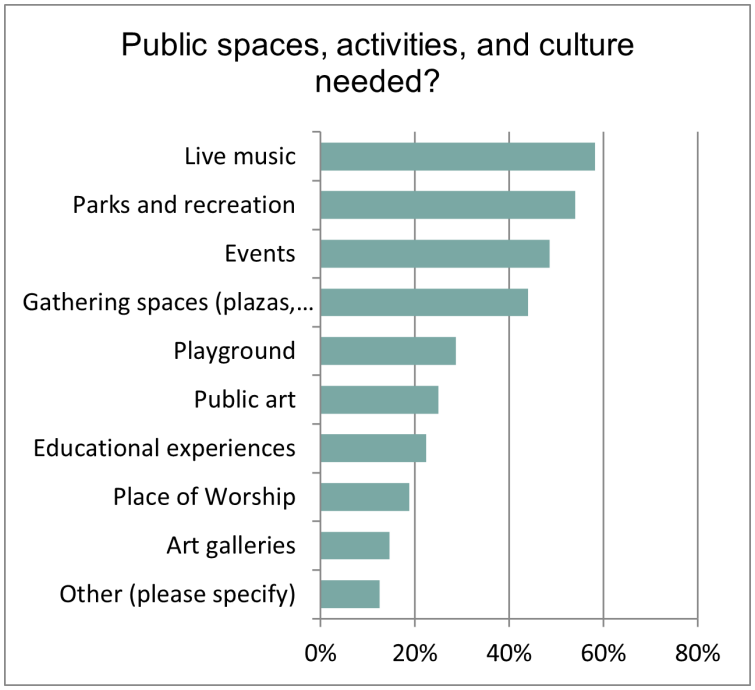
What Types of Residential or Lodging is Needed?

· "Other" ranked the highest with the most commented need being affordable housing for workforce and young families.
· Also ranking high was focusing on mixed-use in the downtown district.
· Participants stated the need for a nice, boutique, independent hotel.
· Short Term Rental ranked the lowest, with many comments suggesting a need to limit STR overall.
· Many respondents felt like no new housing is needed.



What Types of Public Space, Activities, and Culture is Needed?

· Live Music, additional Parks & Recreation amenities and need for events ranked the highest.
· Other comments included expanding access to nature and the outdoors, seasonal festivals, and an amphitheater.



What is your ideal Vision for the Commercial District?

Answers to this question ran the gamut. Key themes included walkability, unique shopping, no chains, mixed use and workforce housing, mountain-style design, and "nothing".

· "One that offers convenience, is aesthetically appealing, has a consistent 'town theme' in their appearance and is pleasant to walk around "
· "**Walkable**, drivable, quaint, variety of shops and restaurants. Keeping small town charm"
· "Music in the courtyard, easy walking to and from the area, shaded areas for summer, plenty of outdoor seating, playground area for families shopping with kids"
· "Small with a few more options for **dining, some boutique style shopping, some additional services** like urgent care and pharmacy."
· "Not a strip center. **Go vertical, multi-level and walkable**. You need a space that fits the mountain market with proper ingress, egress."
· "Area on the mountain where cars do not travel due to all the people out enjoying the center, businesses, and atmosphere even during off season."
· "**Open air, mixed use**, mix of nationally and local retailers. Seasonal events and programming. Unique architecture and design. "
· "Quaint and **mountain styled architecture** that houses both commercial and residential space, All within walking distance once your car is parked"
· "**No chains, not cookie cutter**, unique kind of like Biltmore Village (NO CHAIN RESTAURANTS OR STORES) "
· "It would be nice to **connect the visitor center area and the ski base** area via walking path or other so that everything it one cohesive environment "
· "Mixed use space - **retail & workforce affordable housing**. Walkability with more access to Town center"
· "**Don't change anything**. We don't want to lose the small-town charm. No commercial businesses are necessary. I love that my kids can roam freely to Fred's, the park, sledding hill, and Brick Oven."

2.4 Demographic Snapshot

In order to understand and interpret local needs for commercial, retail, and residential, it is important to look at trends within the Town, its trade areas, and immediate region. Demographic data used in this report comes from the US Census Bureau, as well as Claritas Inc., a national data service used by planners, consultants, and private businesses for market research.

Population

The population for Beech Mountain in 2023 was estimated to be 681 residents. The Town of Beech Mountain more than doubled in population between 2010 and 2020. There has been stable population growth since. The 28604-zip code is projected to grow by another 3.8% over the next five years, the fastest growth in the region.



It is important to note that while Beech Mountain has a population of just 681 full-time residents, there is a tremendous amount of second homes whose owners stay in town for six or more months at a time. More importantly, Beech Mountain's primary and secondary trade area has an estimated 2025 population of 34,461 people. This local market is what sustains local businesses over the years but also drives demand for new or expanded business. In other words, Beech Mountain businesses don't simply serve 681 people, but rather a local area that is much larger.

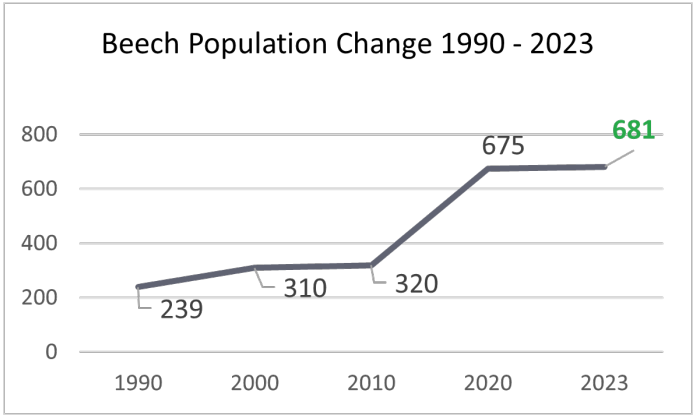


Figure 11: Population Change 1990 - 2023. Source: US Census and NC OSBM

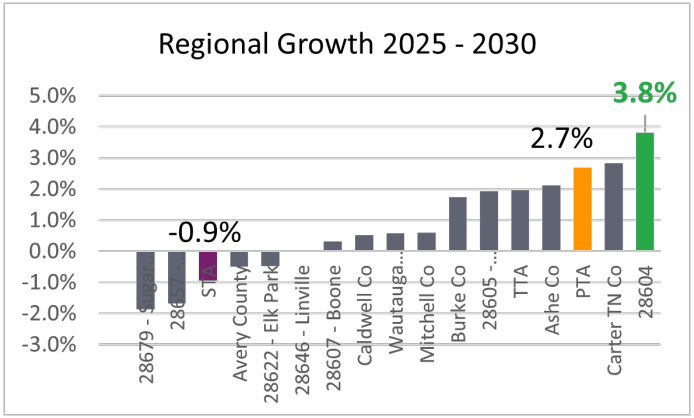


Figure 12: Regional Population Projected Growth through 2030. Source: Claritas, Arnett Muldrow

Age, Household Size, Education

As typical of a retirement or resort community like Beech Mountain, the town is generally older (57.8 median age) with smaller household sizes (1.94 people) than most of the region. Only Blowing Rock (58.8) is older, while the State of North Carolina average age is nearly 20 years younger at 39.9. Beech Mountain is the only community in the region that has a median household size of less than two people. Also typical of retirement communities, the Town of Beech Mountain is highly educated, with 43.2% of its residents having a bachelor's degree or higher.



Income

The Town of Beech Mountain has the highest median household income ($90,323) within the region. Blowing Rock has the next highest income at $89,899. Watauga County ($56,668) and Avery County ($56,668) are significantly lower, but in-line with the rest of the region. Beech Mountain has the second lowest percentage of families below the poverty level (3.9%) next only to Blowing Rock (1.8%). The State average is 9.4%.



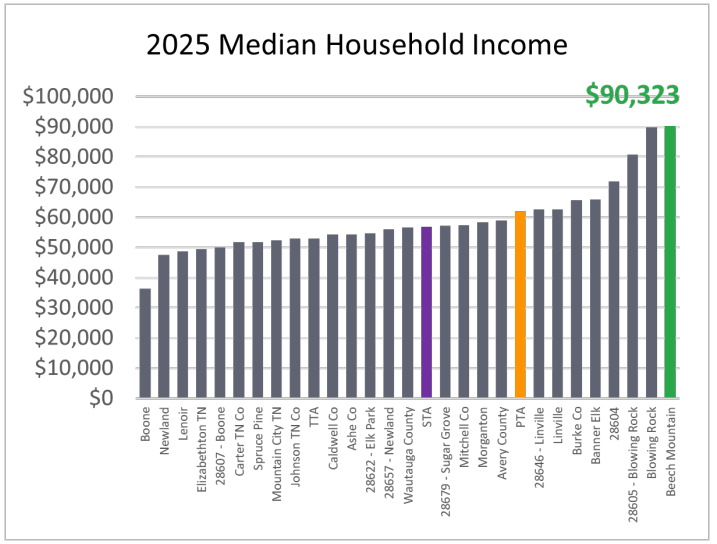


Figure 13: Regional 2025 MHI. Source: Claritas, Arnett Muldrow

2.5 Housing

Type and Tenure

Housing in Beech Mountain is predominantly owner-occupied, single-family homes. 84% of homes are single family, with 16% multi-family. 17% of units are occupied by full-time rentals.

While Beech Mountain is just 681 full-time residents, 77% of its homes are seasonal – either 2nd homes or vacation homes. Many of these residents live in the town for six months during the year. Whether these residents are here for an extended time, or they come here for vacation, many of these seasonal homes are used as short-term rentals (STR). An analysis of Beech Mountain's STR market follows.



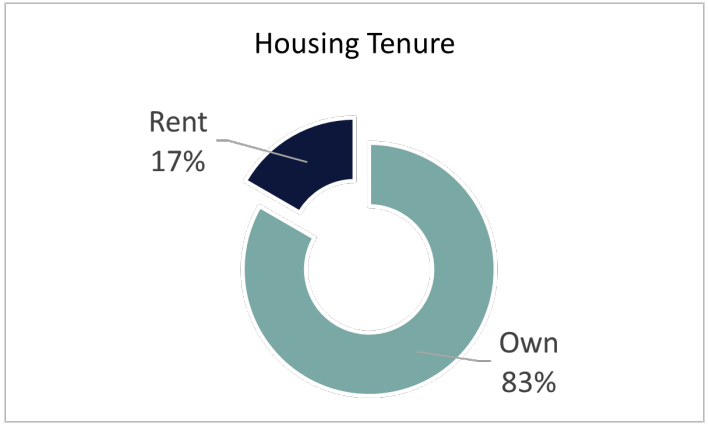


Figure 14: Town of Beech Mountain 2025 Housing Tenure. Source: Claritas

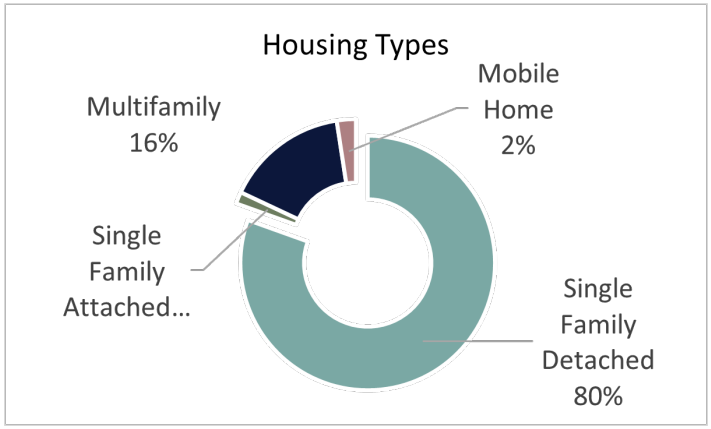


Figure 15: Town of Beech Mountain 2025 Housing Types. Source: Claritas

Housing Value

Beech Mountain has some of the highest home values in the region. Only Blowing Rock and its zip code has higher values.

Zillow, a real-time real estate market resource, estimates Beech's median home values to $463,743. This is a slight change (-0.3%) over last year, but a 111% increase from 2020, when national housing prices started rising dramatically. It should be noted that both figures represent nationwide trends, but being a destination resort community, Beech Mountain's real estate appreciation will likely continue to grow.

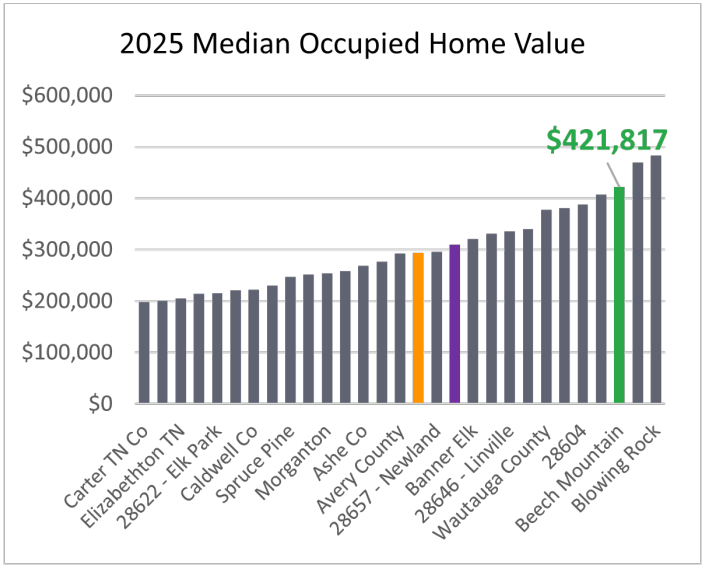
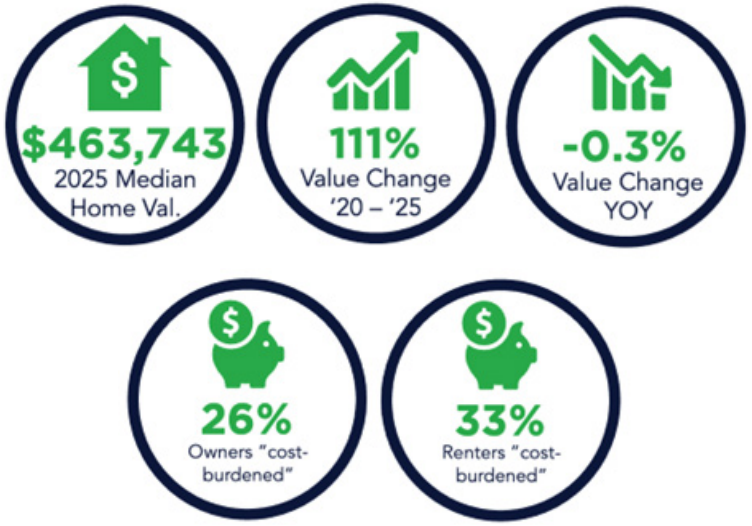


Figure 16: Regional 2025 Median Home Values. Source: Claritas, Arnett Muldrow



Income

Both median household income and median home values indicate that Beech Mountain is an affluent community with some of the highest incomes in the region. Still, 26% of homeowners are considered to be "cost-burdened", meaning that they spend more than 30% of their income on housing (mortgage plus utilities). While this may sound alarming, retirement communities are where residents are on fixed-incomes yet have disposable incomes. However, 33% of renters are cost burdened. Unlike Beech's homeowners, these renters likely include daily and seasonal workforce. A common theme throughout this master plan has been a need for more affordable workforce housing in the community.

2.6 Short Term Rental (STR)

Beech Mountain was created as a resort community and has always been a location for retirement, vacationing, recreation, etc. As it continued to be a desirable place to be, new homes, townhomes, and vacation homes were built. Over the past decade or more, places like Beech Mountain have seen a proliferation of short-term rentals – either 2nd homeowners renting their property for when they are not in town, or new construction that goes on the market as short-term rental. Online platforms like AirBnb and VRBO have contributed to the growth of the STR industry, creating user-friendly methods to both rent and reserve vacation homes.

In any community, STR can serve to support growing demand for lodging when more traditional offerings are not available, while also being a great investment opportunity for homeowners. In places like Beech Mountain, single-family homes available for short term rental can be more desirable for the mountain experience than a chain hotel. While STR does provide great opportunities for lodging, some destination communities have also seen challenges with the proliferation of short-term rentals including issues related parking and trash pickup, but also a reduction in long-term housing stock and higher home prices overall.

Beech Mountain is in the "Banner Elk" submarket of the larger Boone market. This is according to AirDNA, an aggregator of short-term rental data and analytics. This submarket is essentially the 28604-zip code which includes both Beech and Banner Elk. All data provided here is from AirDNA.

In May of 2025 when this research was completed, Beech Mountain's submarket had 3,013 listings with a 45% occupancy rate. Air DNA's current score for the submarket is 68/100. This score is based on several factors. Beech Mountain scores well on investability and seasonality, with lower scores on rental demand and revenue growth. Both of these factors (demand and revenue growth) are impacted by the sheer number of listings and product on the market.







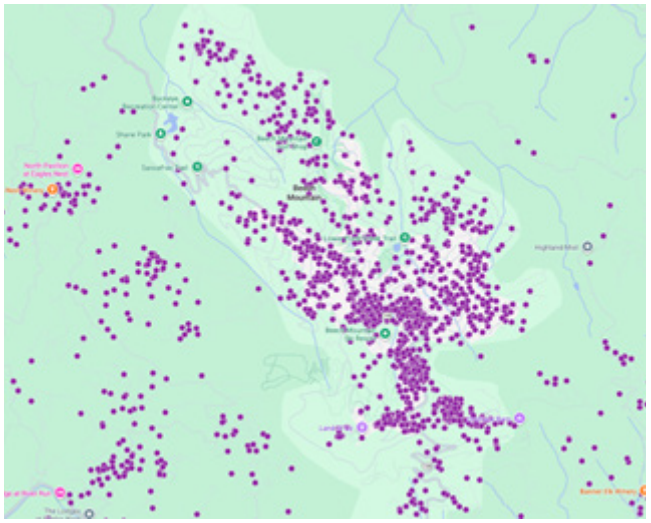


Figure 17: Short Term Rental (STR) listings in Beech Mountain's submarket. Source: AirDNA

STR listings and demand in the Beech Mountain area has been growing since before 2020, but has been generally stable over the past three years with bookings. Beech Mountain sees peaks in listings each July for summer travelers, as well as December – March for skiers.





Figure 18: Beech Mountain Submarket Booking Demand for past three years. Source: AirDNA

The data above show the profitability of STR in Beech Mountain. The area has a variety of listing types from small mountain homes to townhomes to large cabins that can accommodate up to 20 or more people. When analyzing all of these listings together, the average daily rate is $317. This equates to an average annual revenue of all listings of $45,500, a substantial revenue stream. Last year, the highest performing property made $197,800.

All told, Beech Mountain offers high revenue potential for short-term rentals, but at the same time there is a great deal of competition. Given that 77% of housing units in Beech Mountain are 2nd homes, STR will likely continue to be a revenue generator in the town. A common theme throughout public input with this plan was the desire to limit continued development of STR, while also looking for ways to develop workforce housing.

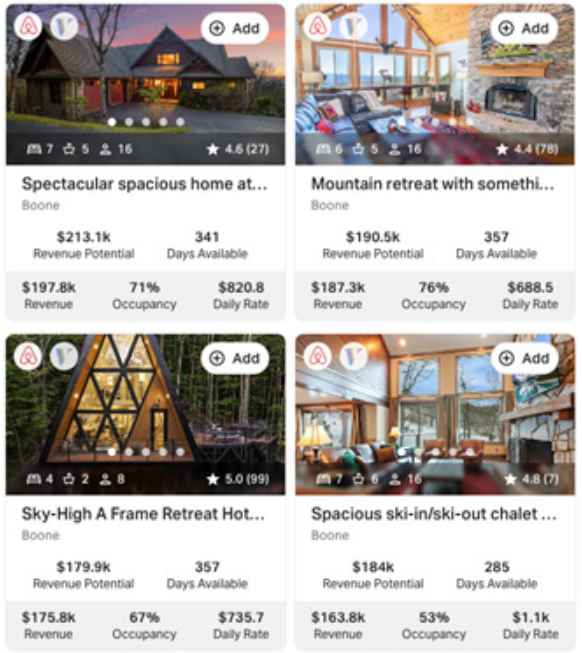


Figure 19: Key property within the Beech Mountain/ Banner Elk submarket (Boone). Source: AirDNA

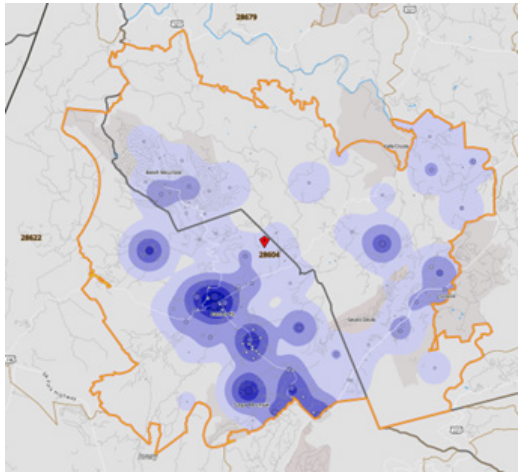
2.7 Employment

In 2023, there were approximately 3,100 jobs in the 28604-zip code. The largest employment sectors in the zip code area are accommodations and food services (21%), retail trade (18%), and arts, entertainment, recreation (16%). Most of these jobs are located south of Beech Mountain in the Banner Elk area.

The zip code is a net importer of jobs, with 83% of all workers commuting from the outside. Just 532 people both live and work in 28604.

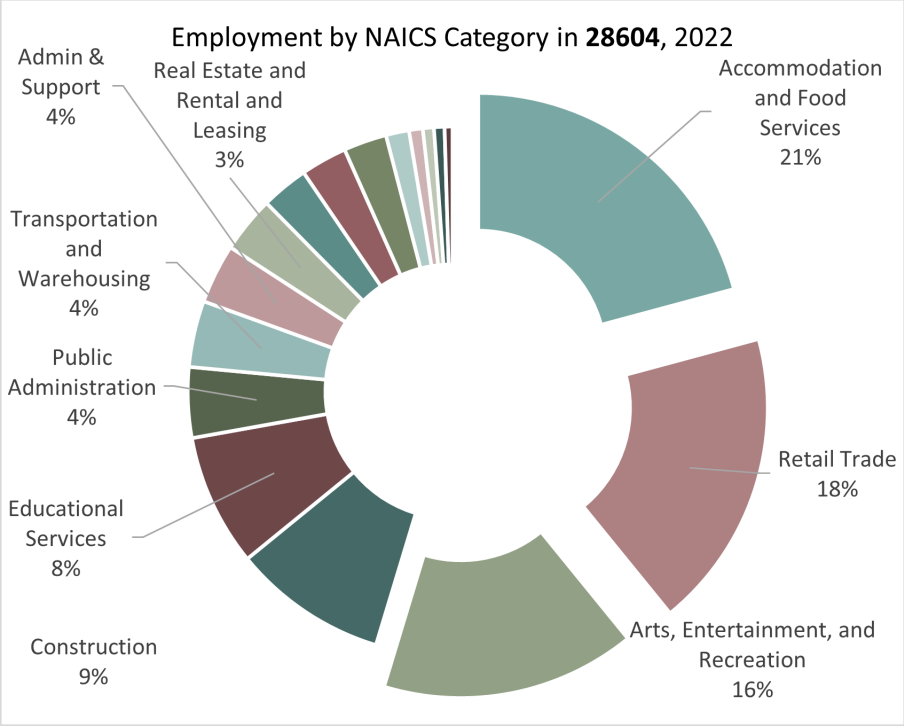
Within the town limits, the top employers include the Beech Mountain Resort, Town of Beech Mountain, and the Beech Mountain Club. Approximately 73% of jobs in Beech are in accommodations, retail, and recreation (ski resort). Tourism is the main driver of the economy with most jobs centering around hospitality and service, with many being seasonal in nature.

Median annual pay in Beech Mountain is $34,000 ($16.30/hr) but varies depending on sector.



Left: Figure 20: Heat map of jobs in the 28604-zip code. Source: US Census On the Map

Below: Figure 21: Employment by NAICS Sector in the 28604 Zip Code, 2022. Source: US Census On the Map



2.8 Retail

Retail Demand

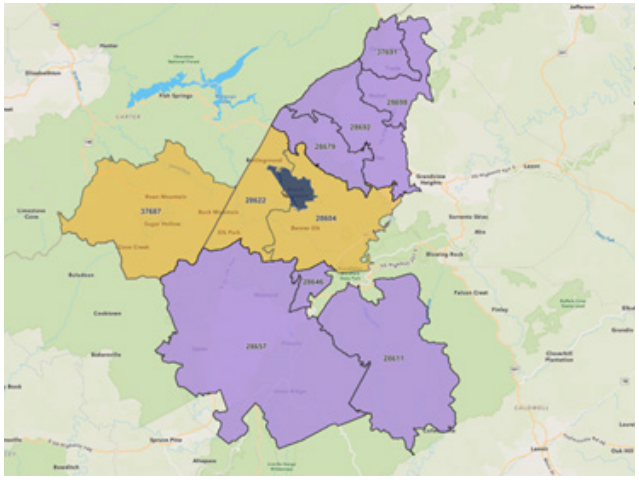
"Retail Leakage" refers to the difference between the retail expenditures by residents living in an area and the retail sales produced by the stores located in the same area. If resident's expenditures in an area are higher than retail sales in the same area, then the area is said to be "leaking." Conversely, if retail sales in an area are higher than consumer expenditures, the area is said to be "gaining." The following retail data comes from Nielsen Claritas and is provided for the primary and secondary trade areas as well as Beech Mountain.

Beech Mountain itself is a $5.4 million retail market (annual sales), which is one of the smallest markets our team has worked in. The town has very limited commerce outside of dining, ski rentals, and a few key anchors such as Fred's Mercantile. Much of this commerce is seasonal. Many of the necessities that people need that they can't find at Fred's are located in Banner Elk including grocery stores, gas & convenience, pharmacy and personal care, etc. These business are important to serve locals, but are in many cases over a half-hour away from parts of Beech Mountain.

Because of this, the Town of Beech Mountain had leakage of $32.6 million last year equating to demand that is six times that of the current retail market. Most importantly however is the retail supply and demand from the primary and secondary trade areas. The PTA relevant to Beech (3 zip codes shown in orange on the right), had leakage of $82 million last year while the STA (purple zip codes) had $249 million in leakage, for a combined demand of $331 million.

This is a significant amount of leakage which translates directly to demand created by the residents who live in the trade areas.





	Beech Mountain	PTA	STA
Stores Sell	$5.4 million	$327 million	$249 million
Consumers Buy	$38 million	$409 million	$498 million
Market Leaks/Gains	$32.6 m LEAKAGE	$82 m LEAKAGE	$249 m LEAKAGE

Left: Figure 22: Beech Mountain's Primary Trade Area (orange) and Secondary Trade Area (purple). Source: Arnett Muldrow

Right: Figure 23: Total Retail Sales, Consumer Expenditures, and Retail Leakage in the Primary Trade Area, Secondary Trade Area, and Beech Mountain. Source: Claritas, Arnett Muldrow

The numbers above are based on the aggregate of all retail and dining, but the analysis breaks it down further by store type. The table below provides retail leakage for select categories within the PTA and STA. The first figure is the unmet demand from the PTA (orange) and the second is that from the STA (white). This retail leakage equates to demand and may present opportunities for retail expansion in Beech Mountain.



Figure 24: Retail Leakage in the Primary and Secondary Trade Area in Select Categories. Source: Claritas, Arnett Muldrow

Retail Capture

While these leakage numbers on the previous page represent true demand and opportunity, no community would be able to capture 100% of the commerce that is leaking its trade areas. Residents will continue to shop online for certain goods, while also continuing to go to nearby communities such as Banner Elk, Blowing Rock and Boone for certain businesses. However, with the development opportunity envisioned in this downtown plan, focused economic development and marketing, Beech Mountain can reasonably capture a portion of this leakage.

Our approach always errs on the side of capture that is reasonable and attainable. We look at two scenarios, both of which are conservative:

- High Scenario = capturing 30% of what is leaving the PTA and 15% of what is leaving the STA
- Low Scenario = capturing 20% of leakage from PTA and 10% from STA.

		Calculated Capture (Square Footage)	
NAICS Code	Select Retail Categories	Low SF 101,718	High SF 152,577
NAICS 4421	Furniture Stores	4,473	6,709
NAICS 443141	Household Appliances Stores	711	1,067
NAICS 443142	Electronics Stores	4,640	6,960
NAICS 4451	Grocery Stores	10,209	15,313
NAICS 4452	Specialty Foods	882	1,324
NAICS 4453	Beer & Wine	1,462	2,194
NAICS 446	Health and Personal Care Stores	8,457	12,686
NAICS 447	Gas Station	7,206	10,808
NAICS 4481	Clothing Stores	20,918	31,377
NAICS 4482	Shoe Stores	1,592	2,388
NAICS 4483	Jewelry, Luggage, Leather Stores	1,103	1,655
NAICS 45111	Sporting Goods Stores	3,828	5,742
NAICS 4512	Book Stores	664	996
NAICS 4531	Florists	351	527
NAICS 4532	Gifts, Office Supply, Stationery	292	439
NAICS 4539	Other miscellaneous store retailer	9,763	14,644
NAICS 722511	Full Service Restaurants	3,167	4,751
NAICS 722513	Limited Service Restaurants	21,998	32,997

This capture was further broken down by individual categories that make sense for the downtown district. By these metrics, we show attainable retail capture from 101,718 square feet (low scenario) to as much as 152,577 square feet (high scenario).

These figures are based on current demand in addition to five-year projected growth in demand. They also detail store types rather than merchandise lines, meaning that there is demand for this type of bricks & mortar store. These numbers also account for online sales through Amazon, etc. Finally, if the population grows as projected in the greater Beech Mountain trade areas, this demand will also increase.

Key opportunities for Beech Mountain's downtown include:

· **Clothing:** Clothing stores had $17 million in leakage in PTA and STA, indicating demand for up to 31,377 square feet of space. Most of this demand is in family clothing stores. Women's clothing and clothing accessories stores also show opportunity.

· **Health and Personal Care:** This category includes pharmacies and drug stores primarily, but also beauty supplies and optical. In Beech Mountain, the demand is mostly with drug stores. There is a combined trade area leakage of over $14 million, and the capture scenario shows up to 12,686 square feet of demand for this store type. As a frame of reference, the Banner Elk Pharmacy is about 5,000 square feet, while drug store chains like CVS can range from 10,000 to 15,000 square feet.

· **Grocery Stores:** There is conservative demand for up to 15,313 square feet of grocery store space in Beech Mountain. Most of this demand is generated from the Secondary Trade Area, where there are conventional grocers (like the Food Lion in Banner Elk) to serve local needs. Also, a conventional grocer is 35,000 square feet or higher, so not viable in Beech based on this potential capture. By the same token, Fred's Mercantile is categorized as "general merchandising" but does provide simple grocery and staple needs for Beech Mountain residents. The amount of demand and regional dynamics of the local trade areas do present the opportunity in Beech Mountain for more of a destination-type independent grocer (like Food Matters Market in Brevard). It also suggests the potential for existing business like Fred's to expand its grocery offerings.

· **Gas Stations:** This category was identified as a key need by public input. The closest gas station is down the mountain in Banner Elk, up to 30 minutes away from many area of Beech Mountain. There is demand for up to 10,808 square feet. Small, traditional gas stations can be as small as 3,000 square feet while more modern convenience type stores can be up to 5,000 square feet.

· **Restaurants:** There is a combined leakage of over $46 million in restaurants in Beech Mountain's trade areas. On first glance, this seems like a tremendous opportunity for Beech Mountain to grow its restaurant base. However, the vast majority of this demand (32,997 square feet) is in "limited service" restaurants which includes fast food and fast casual type businesses. Based on the current environment in Beech Mountain as well as public input, national and regional chain restaurants and particularly fast food are not appropriate for Beech Mountain, even with pent up demand. There is also the fact that in Beech Mountain, many of the current restaurants are seasonal and close for portions of the year. An initial restaurant strategy should first focus on shoring up the existing restaurants, encouraging or incentivizing year-round operation in order to meet local demand.

Still, "limited service" does include businesses like sandwich and coffee shops, as well as quick serve restaurants that are not chains nor fast food. There is also demand for up to 4,751 square feet of "full-service" restaurants which is generally the types of restaurants that currently exist in the town. It is conceivable that this type of restaurant be located in the downtown Beech Mountain development. Finally, restaurants in a downtown walkable environment like is envisioned for Beech Mountain often are destinations that generate their own demand.

- **Furniture Stores:** There is demand for up to 6,709 square feet of space in this category. This type of demand can be typical in a growing community like Beech, particularly where most of the tax base and new construction is residential. The opportunity here would be more mountain-style destination furniture stores, perhaps similar to Mountain Emporium or Rustik by Underwood, both of which are located nearby in Banner Elk.

- **Sporting Goods:** There is demand for up to 5,742 square feet of sporting goods in Beech Mountain, which would likely equate to a single business. This is a key opportunity for Beech, as it has a number of recreational assets including hiking and walking trails, as well as numerous active recreational resources and programming. This category does not include ski rentals, which is currently offered in Beech Mountain and throughout the area.

- **Beer & Wine Shops:** Fred's Mercantile offers an excellent selection of craft beer and regional wines. The market research shows up to 2,194 square feet of demand, which could suggest a wine shop in the downtown area, or an expansion of existing offerings in Fred's or other existing businesses.

· **Specialty Retail:** Several smaller retail categories show opportunity for merchandise expansion in Beech Mountain. This includes:

  - Shoe Stores – 2,388 square feet
  - Jewelry & Luggage – 1,655 square feet
  - Book Stores – 996 square feet
  - Florists – 527 square feet
  - Gift shops – 439 square feet

2.9 Business Development Strategies

Based on the research above along with the vision of a new Downtown Beech Mountain, key business development strategies include:

- **Share the Plan and its market research.** While it seems simple, this first strategy is very important. The Town should share the market research of this plan with local businesses, restaurants, and potential investors. This would include current business owners, potential investors, the ski resort, Beech Mountain Club, Beech Mountain Chamber of Commerce, etc.

- **Facilitate a Lodging Study.** This analysis described the lodging market through the lens of short-term rental and illustrated not only demand, but also the need for options other than rental cabins. There are key local investors in Beech Mountain who are considering developing boutique hotel lodging, and there is also a conventional hotel being considered in nearby Banner Elk that will impact the market. It is recommended that the Town partner with local investors to conduct a lodging study to determine demand as well as beds needed, price point, amenities, etc.

- **Establish Project Development Financing within the Downtown District.** Commonly known as Tax Increment Financing in most states, project development financing is a tool that allows communities to pay for public infrastructure improvement through the incremental growth of tax base that is generated by a new private development. It spurs economic growth by funding improvements like streets, utilities, public amenities such as parks, etc. A town must first prepare a Project Development Financing Plan with proposed boundaries (downtown district), projected private investment (new development within the district) and public improvements to be funded. These improvements could be funded through this method either as pay-as-you-go projects, or through issuance of bonds, both of which would be paid for by the increased tax base from new investment. This tool is **not a new tax** and ultimately any bond issues would require local voter approval.

North Carolina does not have many of these districts established, but key projects have been successful in Kannapolis, Cary, Woodfin, and others. While statutory standards are high (local referendum), the Downtown Beech Mountain district is mostly undeveloped and is a perfect opportunity to establish project development financing.

· **Consider STR restrictions in the downtown district.** A current bill in the NC state senate (Senate Bill 291) proposes additional guidelines for regulating short-term rentals in communities. It preempts local governments from banning STR or imposing certain restrictions like minimum owner occupancy, length of stay, etc., focusing more on providing added property-owner rights with limited local government regulations. However, if passed, local governments would still be permitted to restrict STR to residentially zoned areas. In other words, a community could prevent them in commercial zones, as it can today. It is recommended that the Town create zoning within the downtown district that permits the types of uses and development envisioned in this plan but also excludes STR as a permitted use. Any residential development (townhomes, apartments, mixed-use) in the district could essentially be limited to full-time residential, or even more affordable and attainable housing for young professionals or seasonal workforce.

· **Identify and recruit workforce housing development.** With the seasonality of Beech Mountain's businesses and destinations, coupled with the higher home values and overall cost of living, the community has always had a challenge in meeting the demand of seasonal and workforce housing. Beech Mountain Resort provides limited seasonal employee housing, including the redevelopment of a former lodge for shared dormitory-style units. It is recommended that the Town identify other sites and opportunities to provide additional seasonal and affordable housing, identify potential developers, and recruit investment. This could include affordable housing concepts for the downtown district. For workforce housing, the town could look to other successful projects such as:

  o **Hilton Head, SC – Workforce Housing Plan & Northpoint Project**
  Hilton Head has adopted a Workforce Housing Strategic Plan and Framework offering tools like density bonuses and adaptive reuse. The Northpoint development, a public-private partnership, will deliver 150–170 units across income ranges with completion expected in 2027. https://hiltonheadislandsc.gov/workforcehousing/

o **Myrtle Beach, SC – Multiple Approaches**

Workforce housing efforts include converting a motel into the 40-unit Edge Apartments, opening International Residence Hall for up to 624 J-1 and H2-B workers, and establishing a Community Land Trust. These strategies combine adaptive reuse, dorm-style housing, and land trust models to expand seasonal and workforce housing. https://www.wmbfnews.com/2025/04/17/historic-myrtle-beach-motel-reopened-workforce-housing-building/

o **International Residence Hall, Pigeon Forge, TN**

Built in 2022 for Dollywood, this $20 million dorm-style residence hall houses up to 750 seasonal workers, primarily student exchange and interns. Developed by Holtz Builders, it provides affordable, purpose-built workforce housing. https://www.holtzbuilders.com/project/irh-pigeon-forge-case-study/



Figure 25: International Residence Hall, Pigeon Forge. PHOTO source: Holtz Builders

o **Stowe / Lamoille County, VT**

Stowe formed a Housing Task Force to create tools for affordability, while Vail Resorts provides dorm-style worker housing at subsidized rates. The Lamoille Housing Partnership develops affordable rentals for households at 30–120% AMI, expanding countywide access. https://www.stowevt.gov/Government/Housing-Task-Force

o **Lumberyard Project, Aspen, CO**

A 300-unit, deed-restricted affordable housing development targeting households from 85% AMI and below to up to 240% AMI. The site will include trails, free transit, and space for childcare, with construction expected to finish by 2029. https://www.aspencommunityvoice.com/lumberyard

o **Rifle Apartments, Rifle, CO**

This 60-unit project offers one- to three-bedroom apartments for families earning as low as 30% AMI, with rents ranging from $496 to $2,000. It is funded through LIHTC and a public-private partnership, scheduled for completion in 2025. https://www.postindependent.com/news/rifle-breaks-ground-on-affordable-housing-project/



Figure 26: Rifle Apartments. PHOTO source: EJ Architecture

o **Acadia National Park, ME – Friends of Acadia Housing**

Friends of Acadia launched the "Raise the Roof" campaign to create 60 seasonal employee beds, with the first eight opening in 2025. A second, larger site with 56 beds is under design to support the Acadia National Park's staffing needs. https://friendsofacadia.org/housing/



Figure 27: Dane Farm workforce housing project. PHOTO source: Friends of Acadia

· **Continue to grow data sets.** This plan provides an up-to-date market analysis for Beech Mountain which details market opportunities for the downtown district. The market study includes numerous sources of data including Placer.ai, US Census, Census of Retail Trade, Claritas, online surveying, etc. As the Town continues to cultivate a strong business environment, recruit investment, and develop the downtown district, the market opportunities will evolve. It is recommended that the Town work with its public and private partners to continue to grow the data with updates every 3-5 years. Additional data from dedicated visitor surveys, employer surveys and engagement, etc. will help detail more specific needs generated by tourists to the area, but also workforce development needs of key employers. It is also recommended that the Town and its Tourism Department consider an account with locational analytics firms such as Placer.ai, Unacast, pass_by, etc. to provide visitor data for local points of interest, events, etc.

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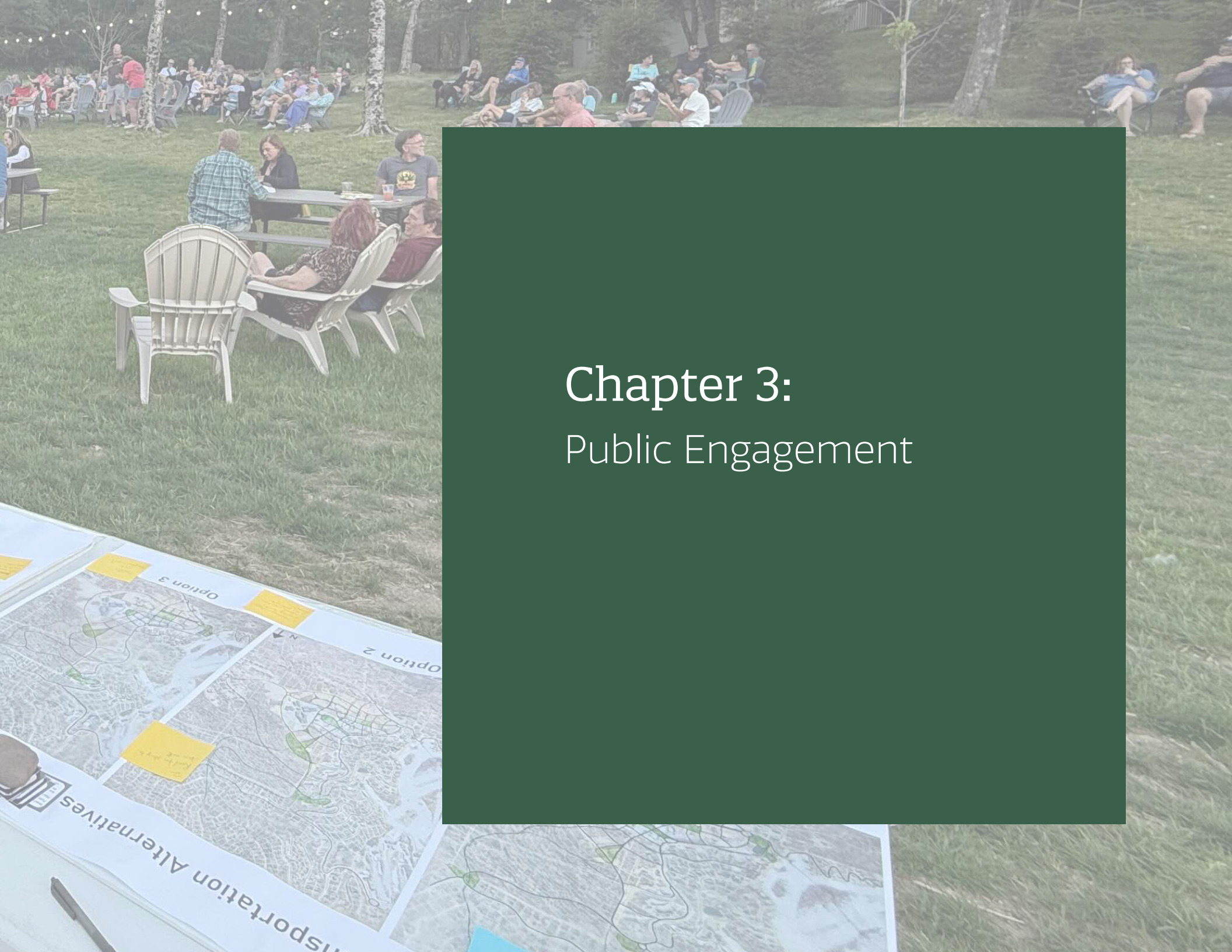


Chapter 3:

Public Engagement

3.1 Public Engagement

The success of any plan is built on involving the public in the process. The consultant team worked closely with Economic Development staff to create a public participation plan unique to Beech Mountain. The strategy included:

· Creating a project website
· Community partner interviews (5 sessions)
· On-line survey (588 responses)
· Pop-up events (5)
· 3-day Design Charettes (2)

Public engagement began in April of 2025 through targeted community partner interviews. Business owners, large landowners, non-profit leaders, government officials, and town staff were interviewed about what they felt were the assets in the community, challenges for a thriving commercial center, and what they would like to see when dreaming big for Beech Mountain. Approximately 30 participants attended five sessions during these two days. Most of the participants were year-round residents. From these conversations, six themes became clear to the vision of the commercial corridor.



Themes

1. Transform Beech Mountain from a resort town to a mountain destination.
2. Create a community gathering space in the center of Town.
3. Circulation and parking are keys to the commercial center's success.
4. Provide for a more walkable and pedestrian-friendly community.
5. Balance the needs of tourists, seasonal, and full-time residents.
6. Build upon the assets already existing in the Town.

During the Charette in May 2025, participants could left additional ideas on “Big Idea” Boards. Each board was based on the themes developed from the community partner discussion. In May, an online survey was launched. The results of the online survey can be found in Section 2.3. The summer months on the mountain include more part-time residents than other times of the year. To capture a broader range of this type of resident, the public engagement strategy moved to being at events where people were already gathering. In this phase of engagement, the objective was to educate the public about the process, encourage people to take the online survey, and give feedback on drawings created in the first charette.

Five pop-up events were held between June and July.
· Beech Mountain Farmer’s Market
· Family Night at Brick Oven Pizza
· Concerts on the Lawn at Top of the Beech Inn
· Trivia Night at the Whistle Pig
· Slip n Slide on the 4th of July at the Sledding Hill

The pop-up sessions confirmed the need for a community gathering space, a strolling district, the desire for walking trails and sidewalks, green space, affordable housing, connection to the ski slope to downtown, and more affordable housing options.






Left and Above: Public engagement at local pop-up events


Holy Smokes BBQ
White Wolf Lodge
PARKING
ONLY



Chapter 4:
Transportation

4.1 Introduction

EPR was retained by the town of Beech Mountain as part of the Hill Studio team to provide traffic engineering analysis in support of the Town of Beech Mountain's master planning study as well as to examine existing traffic concerns.

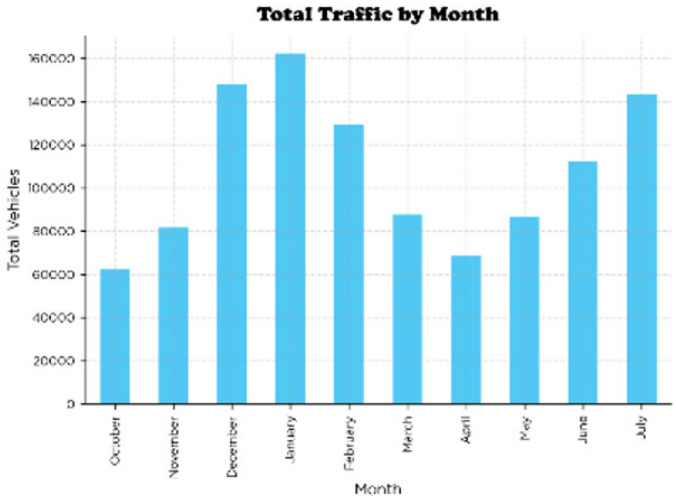
To address existing traffic concerns, EPR examined available traffic count data and crash history information, received input from Town staff, conducted a field review, and extracted public input as heard through the ongoing town planning charrette and public input opportunities. Traffic data assembly included reviewing and summarizing the directional hourly/daily traffic data provided by the Town from the count stations near Elderberry Ridge Road and just beyond the ski resort entrance. Crash history as available from NCDOT was obtained and summarized, and incidence response data from town staff was assembled and mapped.

For the future traffic and mobility needs assessment, EPR collaborated with the Hill Studio design team to provide input into road network opportunities, roadway typical sections, potential trip generation from new development, and parking needs. Other longer term mobility strategies were also considered in coordination with the future development vision and future development concepts being developed by the project designers.

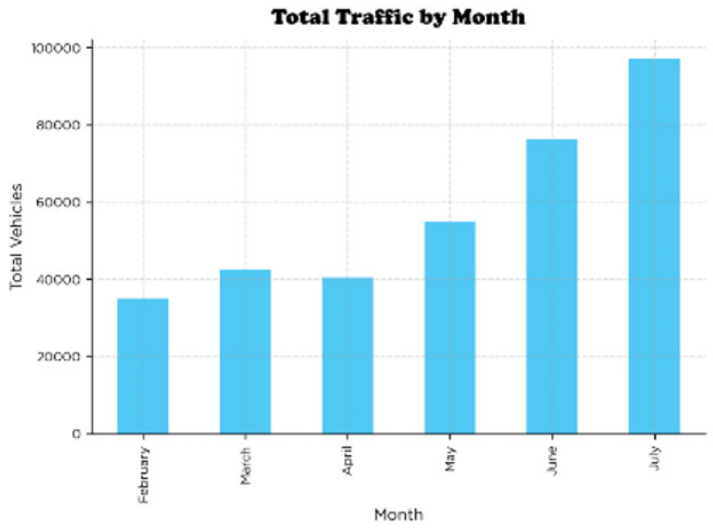
The following provides a summary of the study methodology, data, and potential recommendations. Existing concerns and ideas are addressed first, followed by input to the longer term planning efforts.

4.2 Existing Traffic Volumes and Flow Conditions

A. Traffic Volumes: Traffic volumes fluctuate extensively in the town, depending on season and activities occurring on the mountain. The town has two traffic count stations, one on each end of the town, that record volumes by direction and by the minute. To help understand the fluctuations in volumes, EPR graphed the data for each count station. The data covers October 2024 through July 2025. Attachment A to this document includes numerous graphs of the data for the two count locations. The data illustrates daily and hourly volume patterns for representative times between October and July. For a high level summary comparison, the following graphs illustrate the traffic patterns occurring at the two count station locations.



Overall monthly total volume monthly comparison. Site 1 – south end of town. The total volumes are the summation of the daily measurements for each respective month.

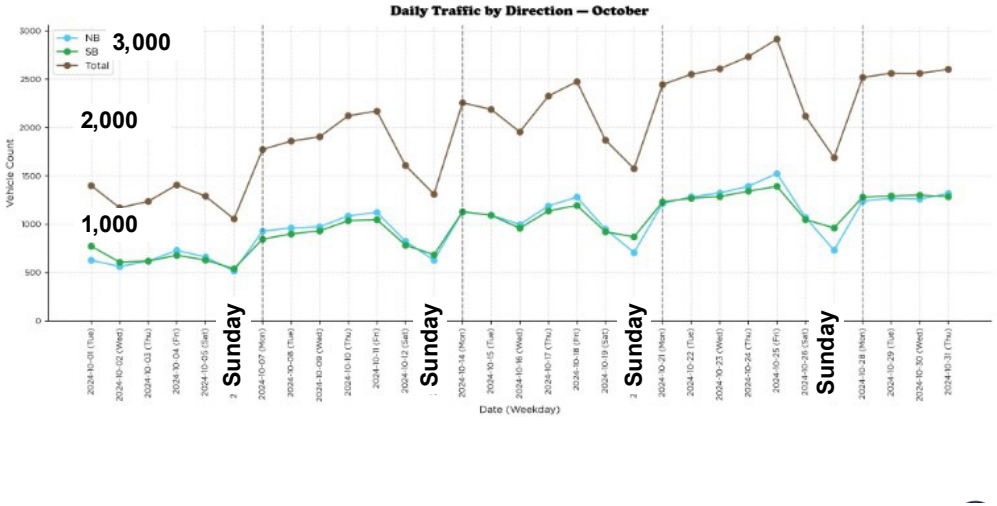


Overall monthly total volume comparison. Site 2 – north end of town. Note that the volume provided by the Town for this count station began in February.

From this data we see the influence of the peak ski season for volumes entering from the South (from Banner Elk direction), and in the spring and summer the volumes increase between April and July. This comparison could inform decisions about when additional resources, including parking supply and shuttles, dedicated traffic management staff and technology resource investments could be most advantageous. For example, if traffic levels in June or July are "tolerable" then perhaps it is only December and January that require the additional mobility options. This data summary likely confirms Town staff's understanding per years of experience working through the various issues.

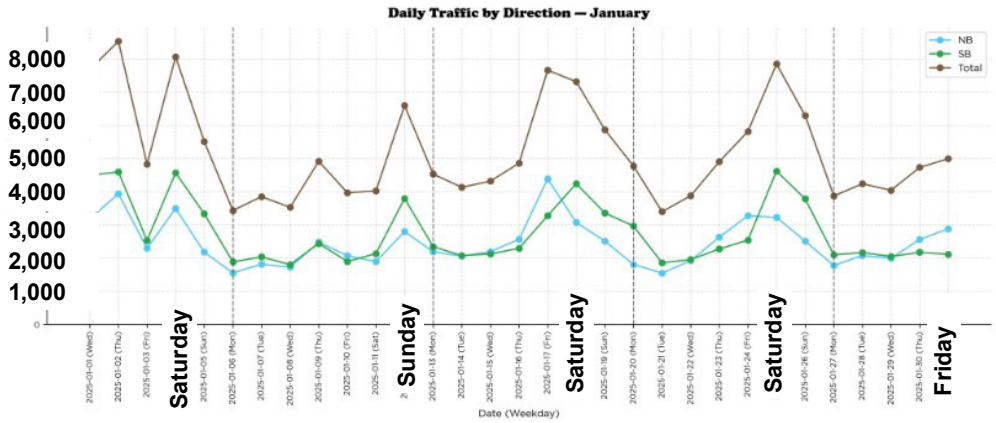
Further data comparisons are provided in the following graphic series. These graphics show the differences in hourly volumes occurring on a Saturday and Sunday in January versus in October. The data reveals that the peak hourly volumes are increased by nearly 500%. This data confirms what Town staff and citizens already intuitively know. But, the data is also useful for informing decisions about the need for additional road network to help mitigate the traffic impacts during peak flow periods. Also, an understanding of traffic flow variations further reinforces the need to plan for how much additional parking could be utilized with parking pricing and shuttle strategies during the peak periods. This is discussed more later in this document.

ADT October vs January

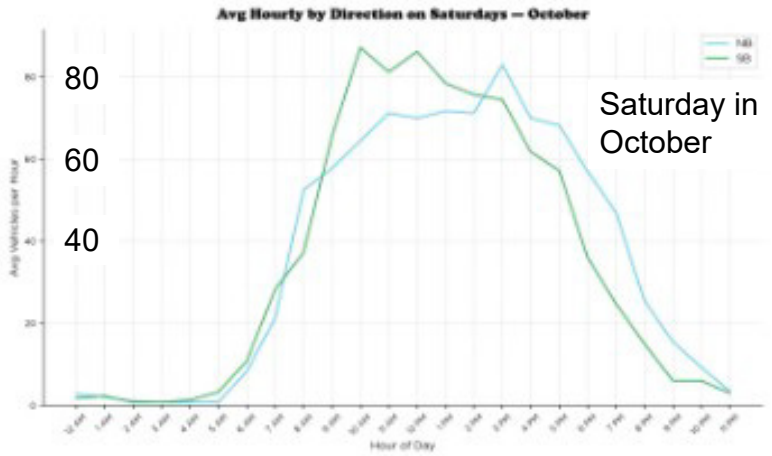


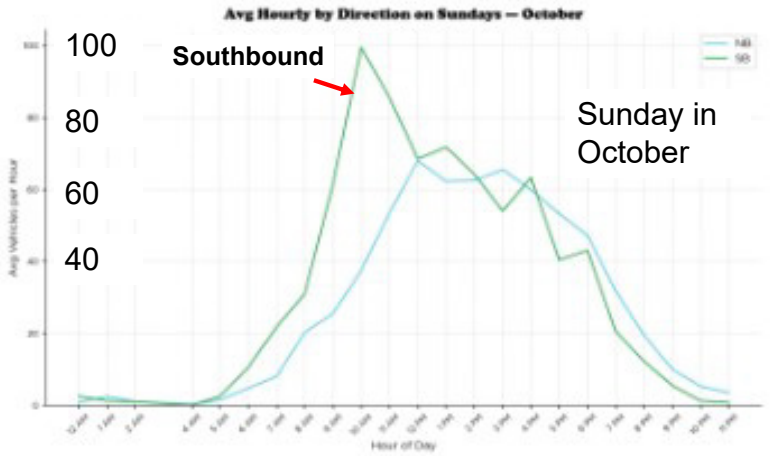
ADT October vs January

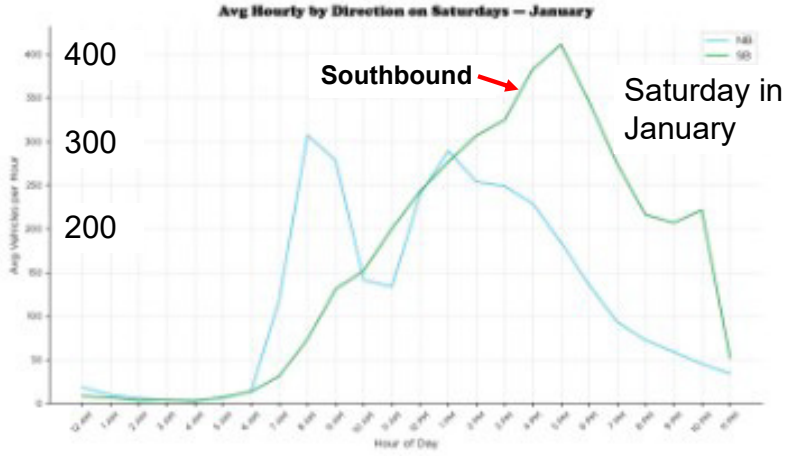
EPRPC

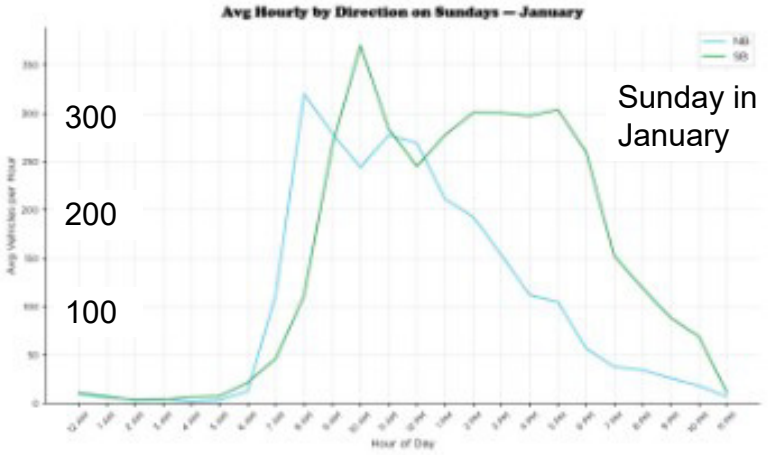


October vs January Hourly trips









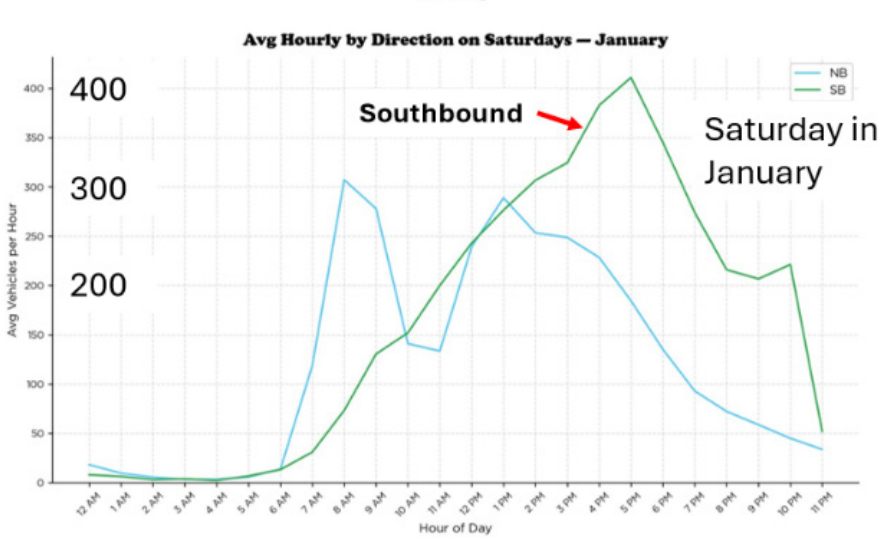
Left and Above: Seasonal Volume Comparison – October Versus January Site 1 – south end of town.

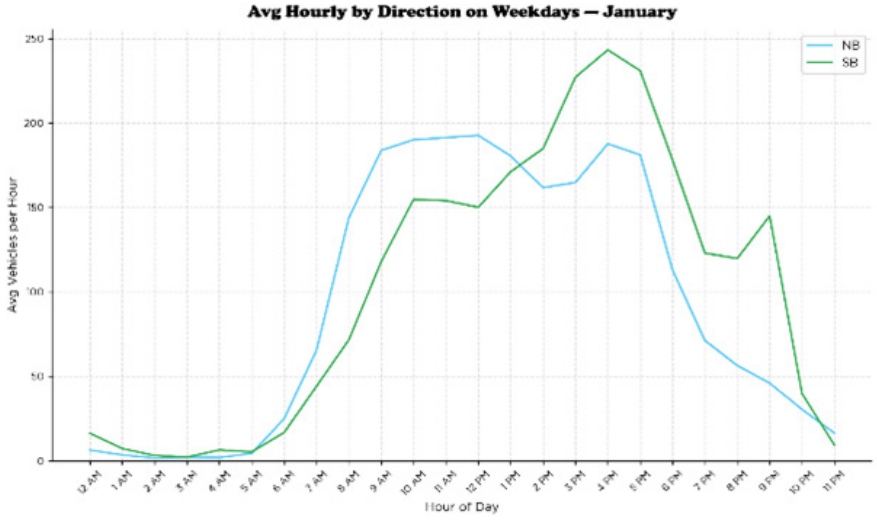
With SR 184 (Beech Mountain Parkway) as the only major north-south connection through the Town, further planning will need to address identifying other solutions to enhance mobility capacity and options. The graphic below illustrates a beginning thought process for how new travel routes could be implemented to enhance connectivity and travel options in the town. (idealized line work showing potential directional connections) Note that the longer term town planning effort is resulting in a rich network of additional roads and travel ways to help accomplish what is schematically illustrated below.

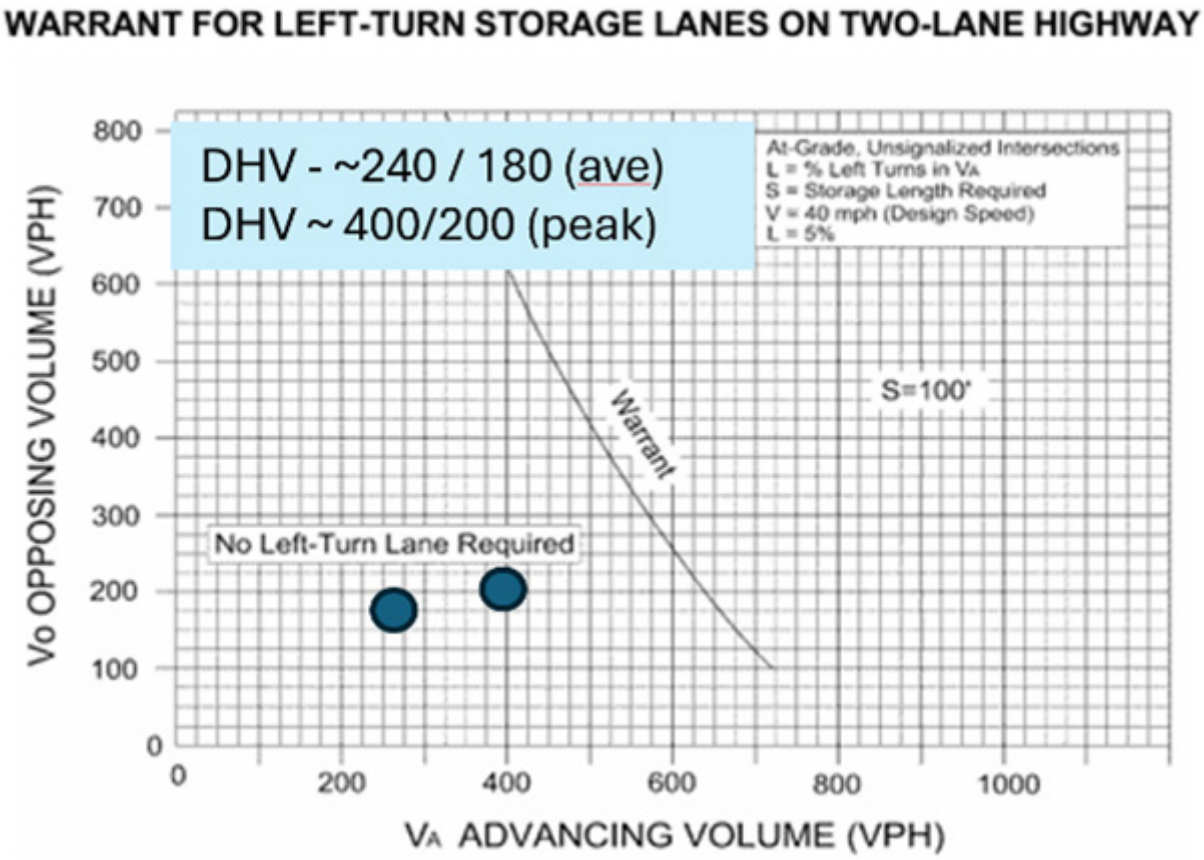


B. Existing Conditions – Left and Right Turn Lane Needs: At peak traffic periods, vehicles that stop to make a left turn often cause backups of vehicles behind them while they wait for a gap in the opposing traffic flow. This can occur at multiple locations, including the commercial district by the visitors center, and also to the north at the entrance to the ski resort.

Commercial area – a cursory level turn lane analysis was conducted using FHWA based warrant nomographs that compare, on an average hourly basis, the approaching and opposing traffic volumes. Per inspection of the Town's count data, it appears that a representative (average) peak weekday period would be in January where we might expect approximately 240 vehicles per hour in the southbound direction and 180 vehicles per hour in the northbound direction in the peak hour of the day. This same analysis was performed considering the January peak traffic using a volume of 400 VPH approaching and 200 VPH in the opposing direction.







The findings of this analysis is that a left turn lane is not warranted (i.e. in the Town Center area), even when compared to relatively high season volumes.

4.3 Ski Resort Intersection Congestion

Public and staff input noted that congestion occurs at the ski resort entrance (image to right) due to vehicles turning into and out of the parking area. A strategy to manage traffic flows at the parking lot entrance could be a compact roundabout.

The image below illustrates a planning level (i.e. without benefit of field survey and full design level investigation) how a compact roundabout could potentially fit at this location. Note that further engineering analysis and preliminary design efforts would determine how the parking lot could be reconfigured to optimize parking spaces and access to the roundabout. For a temporary trial period, a modular mini-roundabout could be constructed. See an example at this vendor website – Vortex (https://vortexroundaboutscom.wordpress.com/).





4.4 Parking Operations Parking Related Traffic Congestion

For the congestion at the parking entrances in the town center and sledding hill, per input received from discussions with staff, it appears that an underlying issue causing congestion is a tight supply of parking during peak event days. As we understand, those peak days occur Friday through Monday on a few weekends after New Year's Day. This likely corresponds to the traffic volume graph showing how the volumes peak during certain times of the season. The traffic near parking lots becomes congested when the parking lot is full, but people still choose to enter the parking area and circulate looking for an opening which creates a backup onto Beech Mountain Parkway. In partnership with the resort, the Town provides staff to assist with the parking entrances, and signage is also provided to indicate if the lot is full. However, as we understand, motorists often choose to proceed to a parking lot in hopes of finding a parking spot.

The table below shows the approximate parking supply provided in the town to compare actual versus optimal. As shown, as currently understood there is need for approximately 200 more parking spaces to better accommodate resort parking. Note that a more exhaustive assessment should be performed to assess parking occupancy during a peak parking demand day. Finding locations and strategies to address this need could help to reduce traffic circulating on the road system who are trying to find parking during the peak periods.

Facility	Optimum	Actual
Resort Parking	731	731
Resort Overflow	515	265
Public Parking	112	112
Town Hall	45	40
Buckeye Rec.	31	31
TOTALS:	1,434	1,179

Parking data table (approximate supply estimate from the Town, optimum adjusted by inspection of counts)

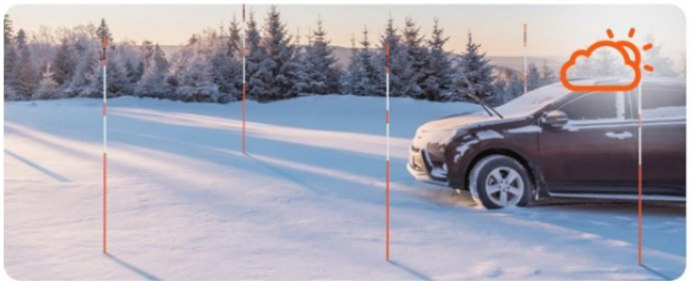
Given a seasonal peak of approximately 4,000 vehicles per day (vpd) traveling to the Town, a preliminary estimate of parking demand can be made by subtracting the off-season peak volume—approximately 1,500 vpd based on October data—as background traffic. This results in 2,500 additional vehicles on a peak day. If we assume that this traffic is accessing the ski resort and are split between AM and PM time periods, then we might assume 1,250 spaces are needed for the resort parking at a peak period. As shown in the table above, approximately 1,000 spaces are provided for resort parking, thus there may be a deficit of approximately 250 spaces during a peak period.

At present it is unlikely that the state will prioritize Beech Mountain Parkway for major capacity investments. Based on traffic data, the peak daily peak season traffic volume sometimes exceed approximately 8,000 trips (sum of both directions) per day. NCDOT reported average daily traffic volumes are reported to be less than 4,000 vehicles per day, likely due to timing and location of their counts. Based on the reported (NCDOT) volumes it is unlikely that SR 184 would be prioritized for roadway capacity improvements. Additionally, the crash rate along the segment from Banner Elk to Beech Mountain is significantly lower than the statewide average, further reducing the likelihood that NCDOT would initiate major improvements to the roadway.

Given that the road is unlikely to receive any major investments by the state and it could take some time to identify and secure sites for additional parking, identifying other congestion reduction strategies, such as improved parking management methods, could be useful to help remove traffic from the roadway as quickly as possible.

Some potential solutions to the initial concerns are:

· Marking the lots to maximize the number of spaces. Carefully designed parking space and drive aisle layout utilizing Computer Aided Design software, could help to maximize the number of spaces. Layout design will need to be coordinated with an effective way of "marking" spaces. For unpaved surfaces this will be challenging. Chalk, paint, or flexible delineator posts could be options. (image to right from a proprietary vendor (VEVOR))



· Providing space detection technology that will identify parking space status through an "app" that will provide direction to motorists to where parking is available. Proprietary systems are available from numerous vendors. The town could create a request for information for potential bidders, leading to a request for proposals for the most appropriate system for the town. An example of related technology is shown at the following link (web search – not an endorsement Smart solution for parking lots | ParkingDetection.com). Furthermore with continued Artificial Intelligence integration, these systems continue to get more robust and user friendly.

· Related to the above, providing remote signage displaying this information and directing clients to an "app" to interface with this information.

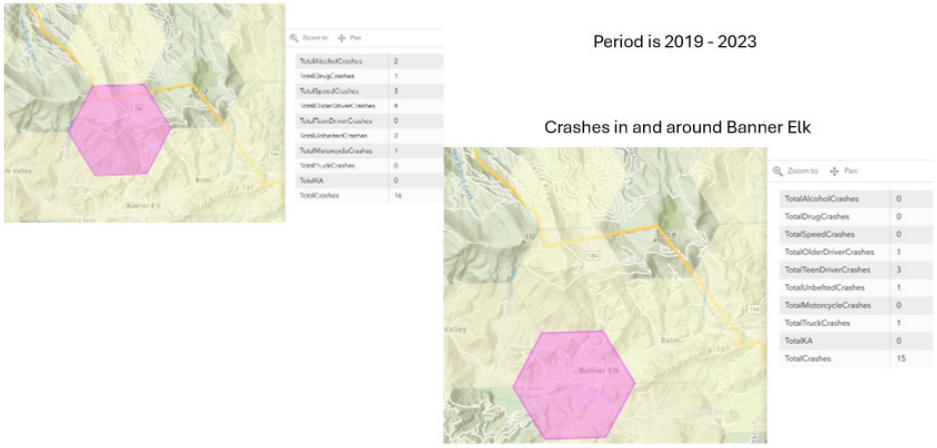
· As the Town continues to advance the urban design effort, careful consideration should be given to augmenting the parking supply,and planning for safe access to the parking. This could include creating turn lanes and/or mini-roundabouts at parking entrance locations to help mitigate the impact of turning vehicles during peak periods of traffic flow.

4.5 Safety, Crashes, and Incident Response

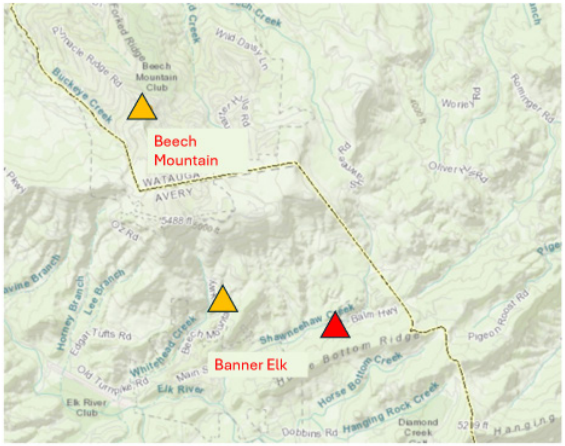
Traffic safety and impacts of incidences was examined as part of this study effort. During peak travel periods, incidences cause significant backups and delays. Beyond the concern for motorist safety is the need to keep traffic flowing so as not to negatively impact the Beech Mountain customer, and citizen, experience. To gain an understanding of past crash and incidence experience, data from NCDOT and the Town was assembled and summarized. Note that NCDOT data is limited to major crashes and does not include traffic incidences of SR184 being blocked by vehicles not being able to make it back up the steep hills during inclement weather events. The following summarizes crash and incident data assembled for this study, beginning with the NCDOT data.

Crashes from Beech Mountain to Banner Elk

EPRPC



Injury crash record over the past 10 years



Crashes from Beech Mountain to Banner Elk

EPRPC

Period is2019 - 2023

Crashes in Beech Mountain

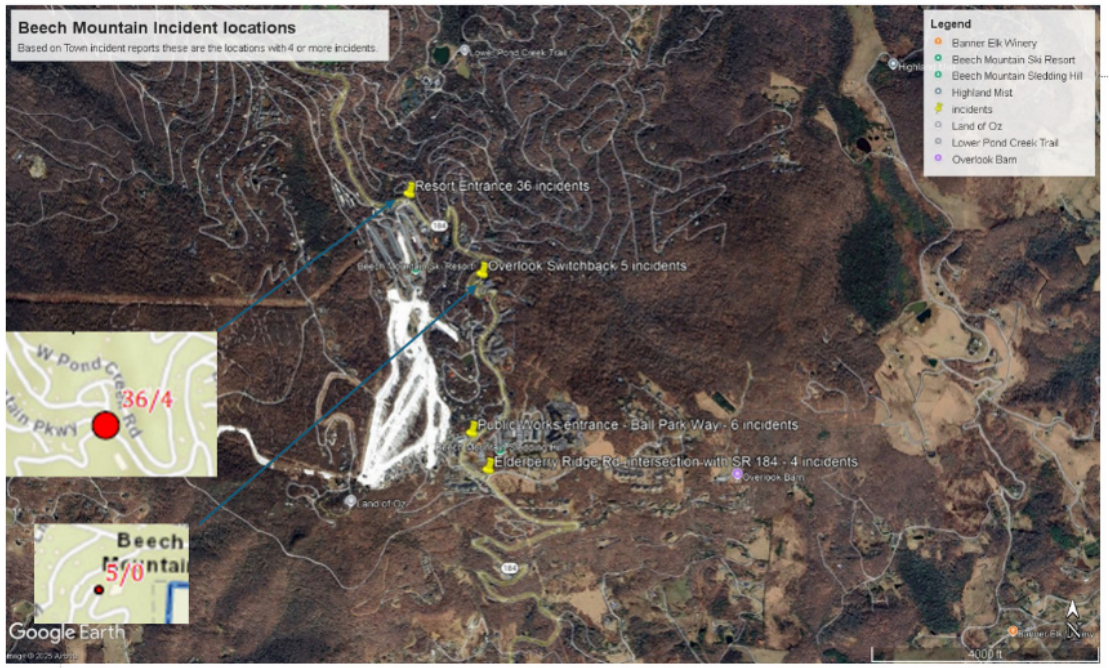
TotalAlcoholCrashes	2
TotalDrugCrashes	1
TotalSpeedCrashes	3
TotalOlderDriverCrashes	4
TotalTeenDriverCrashes	0
TotalUnbeltedCrashes	2
TotalMotorcycleCrashes	1
TotalTruckCrashes	0
TotalKA	0
TotalCrashes	16

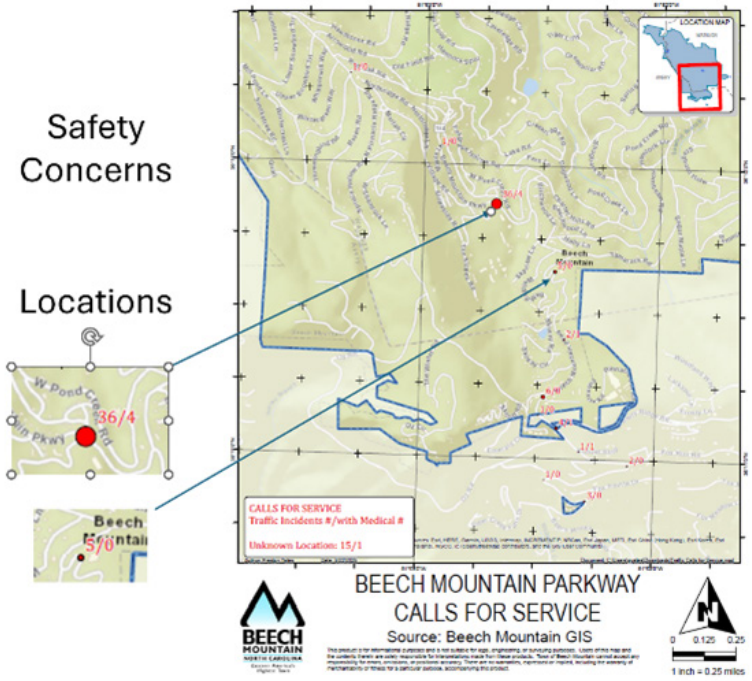
Crashes in and around Banner Elk

TotalAlcoholCrashes	0
TotalDrugCrashes	0
TotalSpeedCrashes	0
TotalOlderDriverCrashes	1
TotalTeenDriverCrashes	3
TotalUnbeltedCrashes	1
TotalMotorcycleCrashes	0
TotalTruckCrashes	1
TotalKA	0
TotalCrashes	15

As shown in the preceding two graphics and table the NCDOT data is minimal and not particularly useful for addressing concerns in the Town of Beech Mountain and related traffic congestion issues. Adding to the NCDOT data, the Town provided a summary of locations where frequent incidences involving "stuck" or run off road incidences occur. Per discussions with the Town staff, these occur frequently during periods of inclement weather, often when ski conditions are optimal and traffic volumes are at their peak. The incidences cause significant traffic backups while Town staff responds and works through moving the vehicles out of the way of through traffic. Anecdotal feedback reveals that delays caused by these occurrences can frustrate both "customers" and citizens and may lead to ski resort customers not returning in the future. This anecdotal commentary can not be verified, but remains a concern nonetheless.

The following graphic illustrates frequent incident locations, which generally correspond to areas with steep grades in the switchback sections of roadway between the town center and ski resort. Data is shown for # of incidences/# requiring medical assistance.





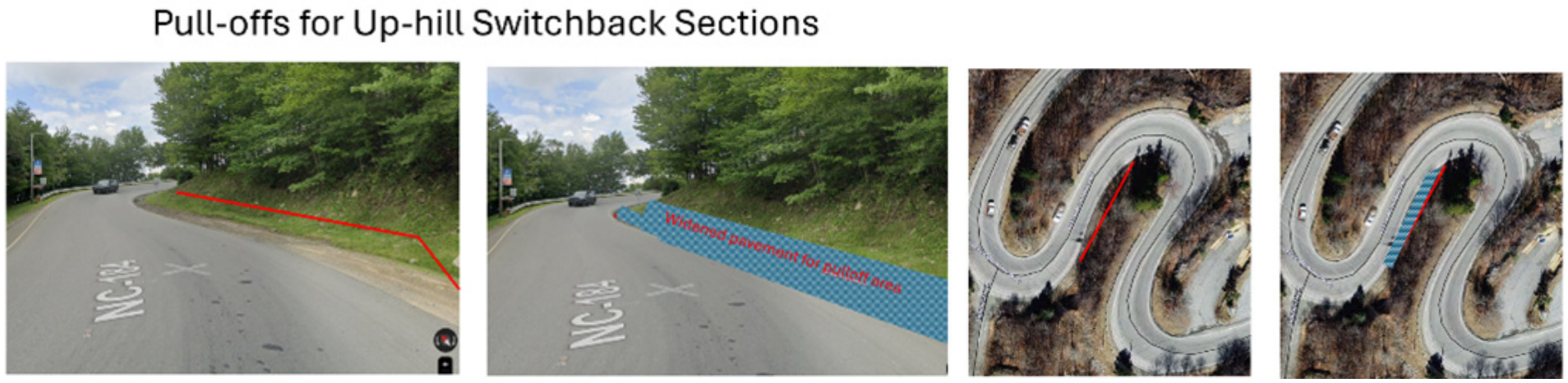
In discussions with the Town Manager and Public Works Director, the incidents were described as primarily weather-related vehicular issues—typically involving vehicles either leaving the roadway or being unable to proceed due to steep inclines. These situations are further complicated when rescue or emergency vehicles are unable to reach the affected vehicle because other traffic is immobilized between them. Representative locations are shown below for where vehicles experience steep grades approaching the switchback curves.





Potential solutions to this situation are:

· Constructing pull-off areas on the shoulders of the road where errant vehicles can get off the road to allow other vehicles to pass.



· During periods of ice or heavy snow, restricting vehicles that do not have chains or 4-wheel drive. Ski resort customers would need to be shuttled to the site, or (see the Town design plan) access could be created to the south end of the ski slopes to the existing gondola system.
· Where feasible, remarking and widening the road to create a center area (hatched out) for emergency use. Given the topography this option is very limited for feasible locations.

4.6 Guardrail Maintenance

Several sections of guardrail along Beech Mountain Parkway appear to be in need of updating, both for condition and, to meet modern standards, height. While this potential concern was not validated through crash data or anecdotal remarks, it may be advisable to coordinate further with NCDOT for their awareness and to be on their radar for upgrades as maintenance funds and program resources allow.





4.7 Multimodal Opportunities

Through the field review and public and stakeholder input process, there appears to be interest and opportunities to continue to increase mobility options and features in the Town.
Features to add for existing infrastructure could include:

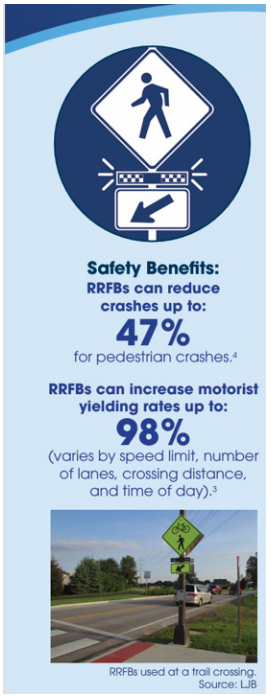
· Rectangular Rapid Flash Beacons for locations, such as in the town center, where pedestrians cross between commercial uses on each side of the Parkway.





As we understand, NCDOT may not have the ability to approve and fund the improvement(s), however the Town could further explore accomplishing this with town resources for initial funding and maintenance. As observed in the off-peak periods there was little pedestrian activity and traffic volumes were light enough to allow for many lengthy gaps in traffic for crossings. However, in the peak season periods this may not be the case.





RRFBs used at a trail crossing.
Source: LJB

With the future Town master planning efforts, additional measures to include for multimodal mobility enhancements would include ideas such as:

· Road designs that incorporate raised crosswalks and curb extensions
· Road designs using "complete streets" principles and features
· A ski lift / gondola system to connect from parking in the Town center to the south end of the ski resort gondola system to the current chair lift system
· Additions to the greenway and trails system throughout the town
· Seasonable shuttle bus service
· Grant funded micro-mobility service during peak seasons
· Vendor run e-bike system in peak summer months
· Use of roundabouts (sizes vary by setting and land use context)

As the master planning effort advances, several of these concepts may be seamlessly integrated into the future configuration of the Town. A combination of strategies will likely offer the most effective solution.

Complete Street Principles and Design

NCDOT offers a variety of approved typical sections that accommodate a range of roadway elements—including on-road bike lanes, on-street parking, curb and gutter, multi-use paths, buffer areas, and reduced lane widths. These options can be incorporated during future roadway reconstruction to enhance overall mobility and support multimodal transportation. Although there are currently no plans to reconstruct the roadway, incorporating desired design elements into the Town's master plan can help influence NCDOT to consider them during future roadway improvements. Within the existing 60-foot right-of-way, NCDOT Typical Sections #2E and #2H could potentially be applied, though they may require eliminating on-road bike lanes or other select features to fit the available space. Below is a resource table from NCDOT describing their roadway typical section requirements

Typical Section #	Description	Total Travel Lanes	Total General Purpose Travel Lanes	Total Managed Lanes	Median Type	Access Control	Bike Lanes	Sidewalks/ Sidepath	Speed Limit Range (mph)	Outside Treatment	Min. Right-of-Way needed (feet)	Old Typical Section # (Dec. 2010)
2A	2 Lane Undivided with Paved Shoulders, 55 mph	2	2		Undivided	None	No	No/No	55	Paved Shoulder	60	2A
2B	2 Lane Undivided with Paved Shoulders, 25-45 mph	2	2		Undivided	None	No	No/No	25-45	Paved Shoulder	60	2B
2C	2 Lane Undivided with Paved Shoulders, 25-35 mph	2	2		Undivided	None	No	No/No	25-35	Paved Shoulder	50	2C
2D	2 Lane Undivided with Paved Shoulders and Sidewalks, 25-45 mph	2	2		Undivided	None	No	Yes/No	25-45	Paved Shoulder	90	2D
2E	2 Lane Undivided with Curb & Gutter, Bike Lanes, and Sidewalks, 25-45 mph	2	2		Undivided	None	Yes	Yes/No	25-45	Curb and Gutter	60	2E
2F	2 Lane Undivided with Paved Shoulders and Sidewalks in CAMA Counties, 25-45 mph	2	2		Undivided	None	No	Yes/No	25-45	Paved Shoulder – CAMA County	80	2F
2G	2 Lane Undivided with Curb & Gutter, Parking Both Sides, Bike Lanes, and Sidewalks, 25-45 mph	2	2		Undivided	None	Yes	Yes/No	25-45	Parking Both Sides and Curb and Gutter	85	2G
2H	2 Lane Undivided with Curb & Gutter, Parking One Side, Bike Lanes, and Sidewalks, 25-45 mph	2	2		Undivided	None	Yes	Yes/No	25-45	Parking One Side and Curb and Gutter	75	2H
2I	2 Lane Divided (23' Raised Median) with Curb & Gutter and Sidewalks, 25-45 mph	2	2		23' Raised Median	Partial, None	No	Yes/No	25-45	Curb and Gutter	85	
2J	2 Lane Divided (23' Raised Median) with Curb & Gutter, Bike Lanes, and Sidewalks, 25-45 mph	2	2		23' Raised Median	Partial, None	Yes	Yes/No	25-45	Curb and Gutter	90	2I

4.8 Other Potential Opportunities

Road Maintenance and Ownership

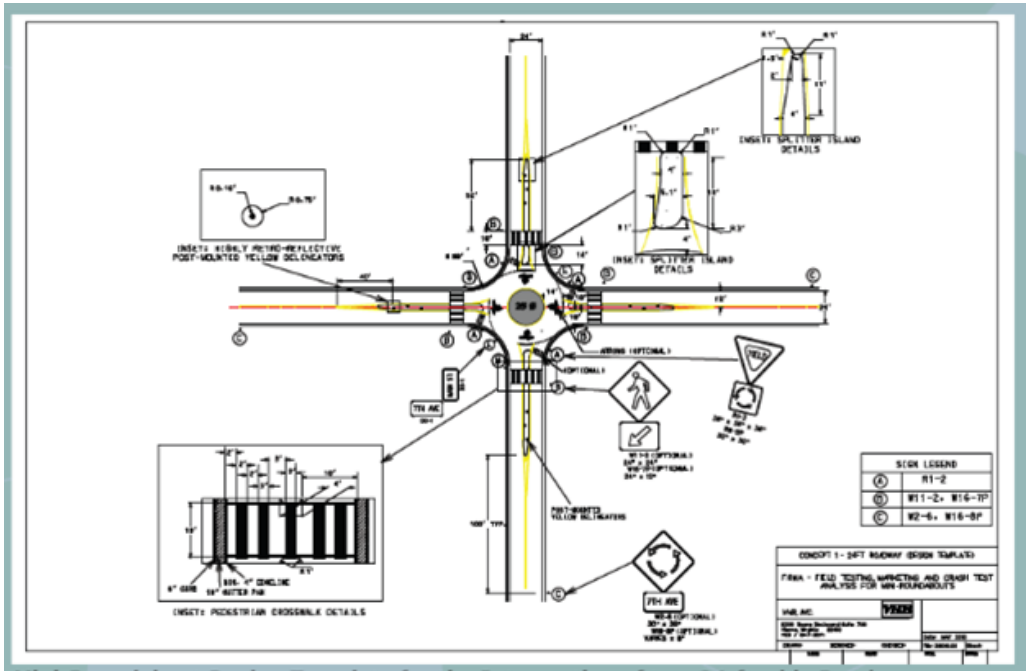
Town maintained roadways have more flexibility for design criteria, withing AASHTO requirements, than ones controlled by the state. As state maintenance of SR 184 (Beech Mountain Parkway) ends just north of the ski resort, if the Town wanted more control of design features and elements, then a change in road ownership could be discussed with NCDOT. This would have significant financial implications to the Town. If this were of interest then a negotiation could be conducted, perhaps with a request for the Parkway to be brought current with all anticipated maintenance needs prior to transfer of ownership responsibilities. A fiscal impact study should be conducted prior to exploring this potential option.

Improved Intersection to Overflow Parking

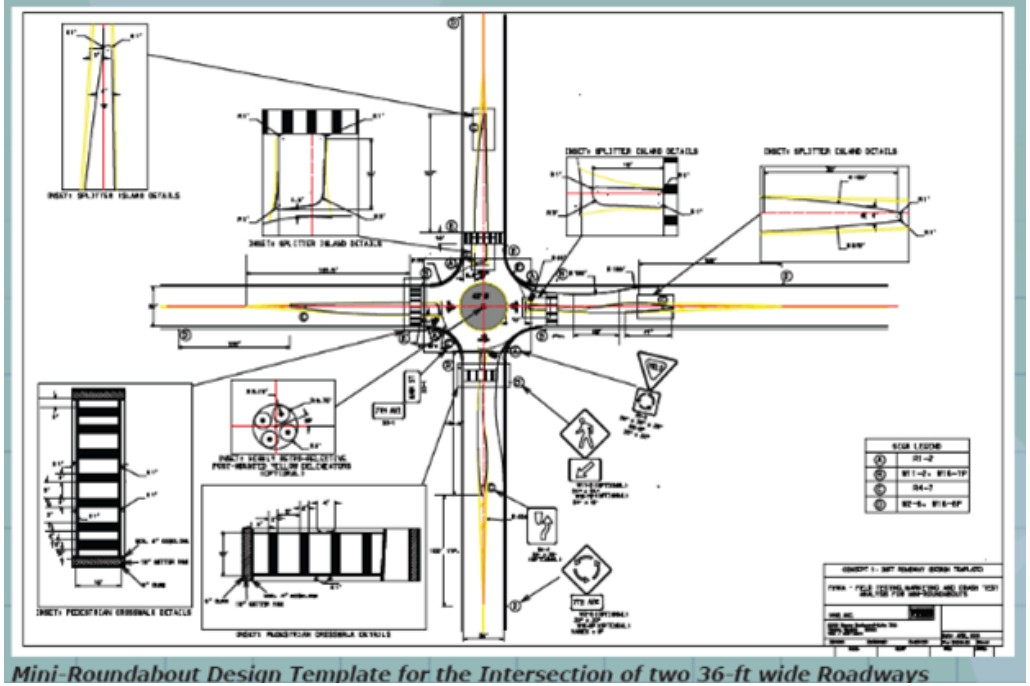
Depending on the final recommendations from the Town master planning effort, a roundabout at Elderberry Drive along Beech Mountain Parkway could help to manage traffic accessing the overflow parking lot in peak periods. This intersection configuration helps to mitigate backups caused by left turns, and it is also a safer intersection configuration than a conventional intersection that exists today. The final geometric needs will require additional study, including topographical and right of way survey information.







Mini-Roundabout Design Template for the Intersection of two 24-ft wide Roadways



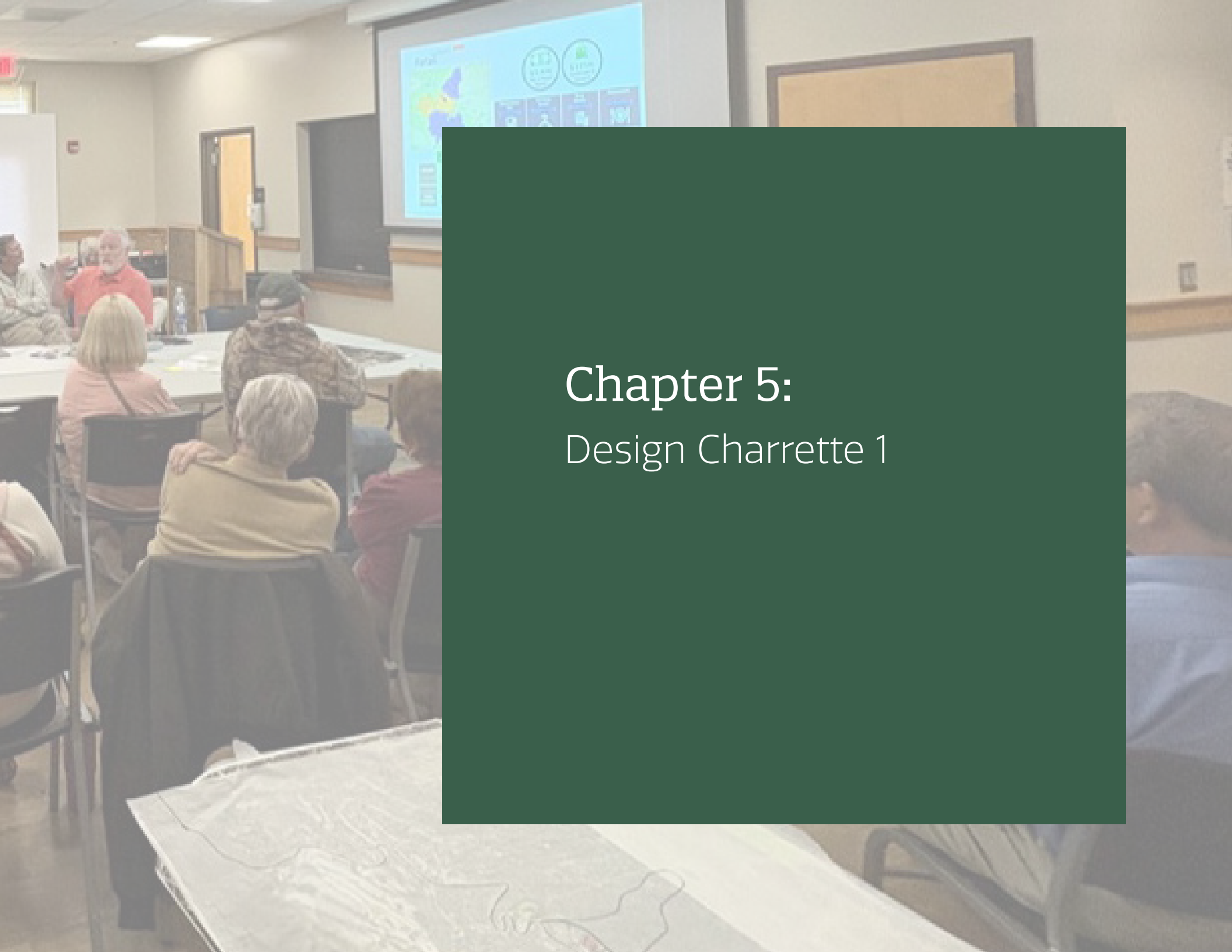
Mini-Roundabout Design Template for the Intersection of two 36-ft wide Roadways



Above: Roundabout construction. Photo credit: Vortex Roundabouts

Left: Roundabout Design Templates

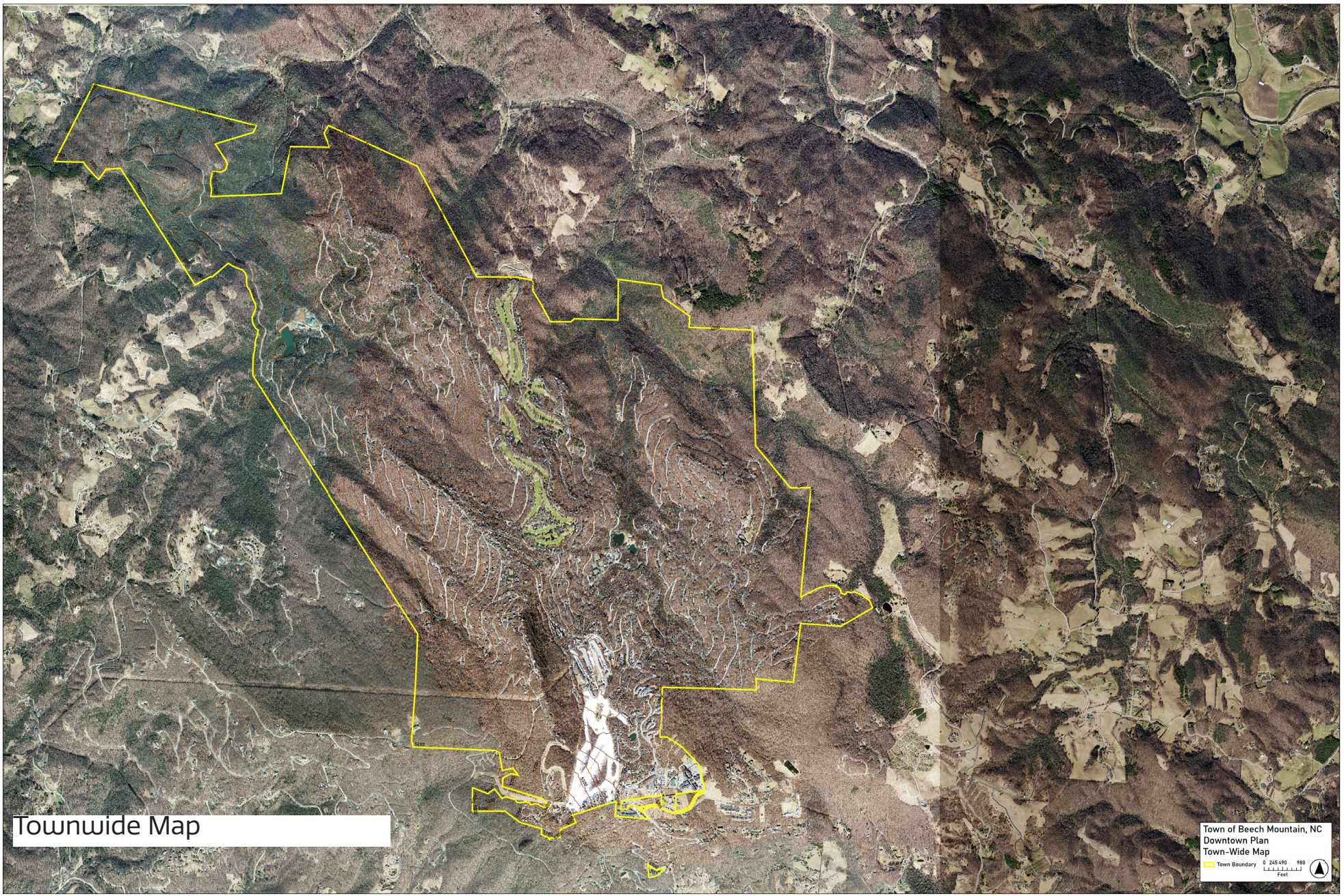




Chapter 5:

Design Charrette 1

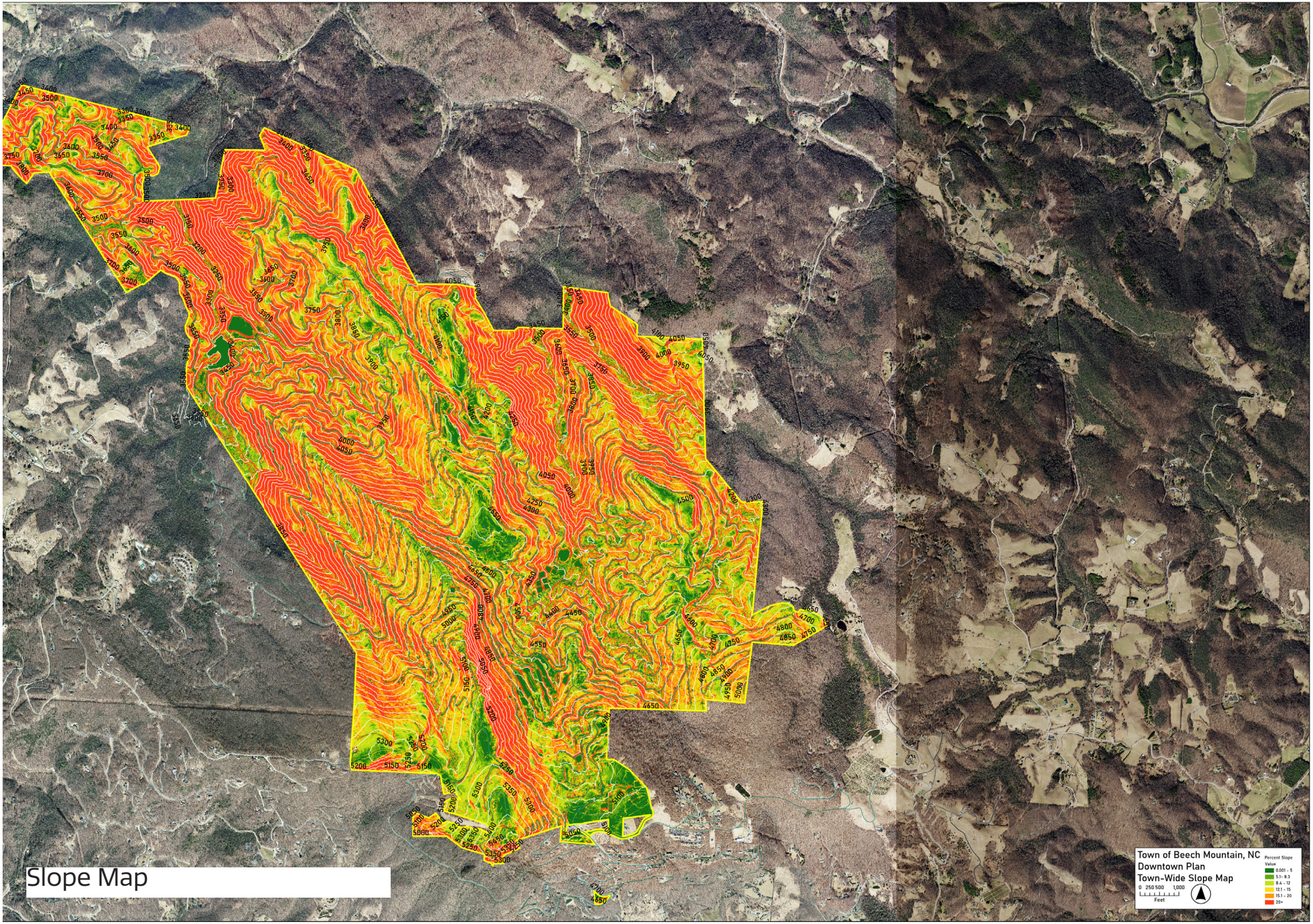
5.1 Site Context and Analysis Maps



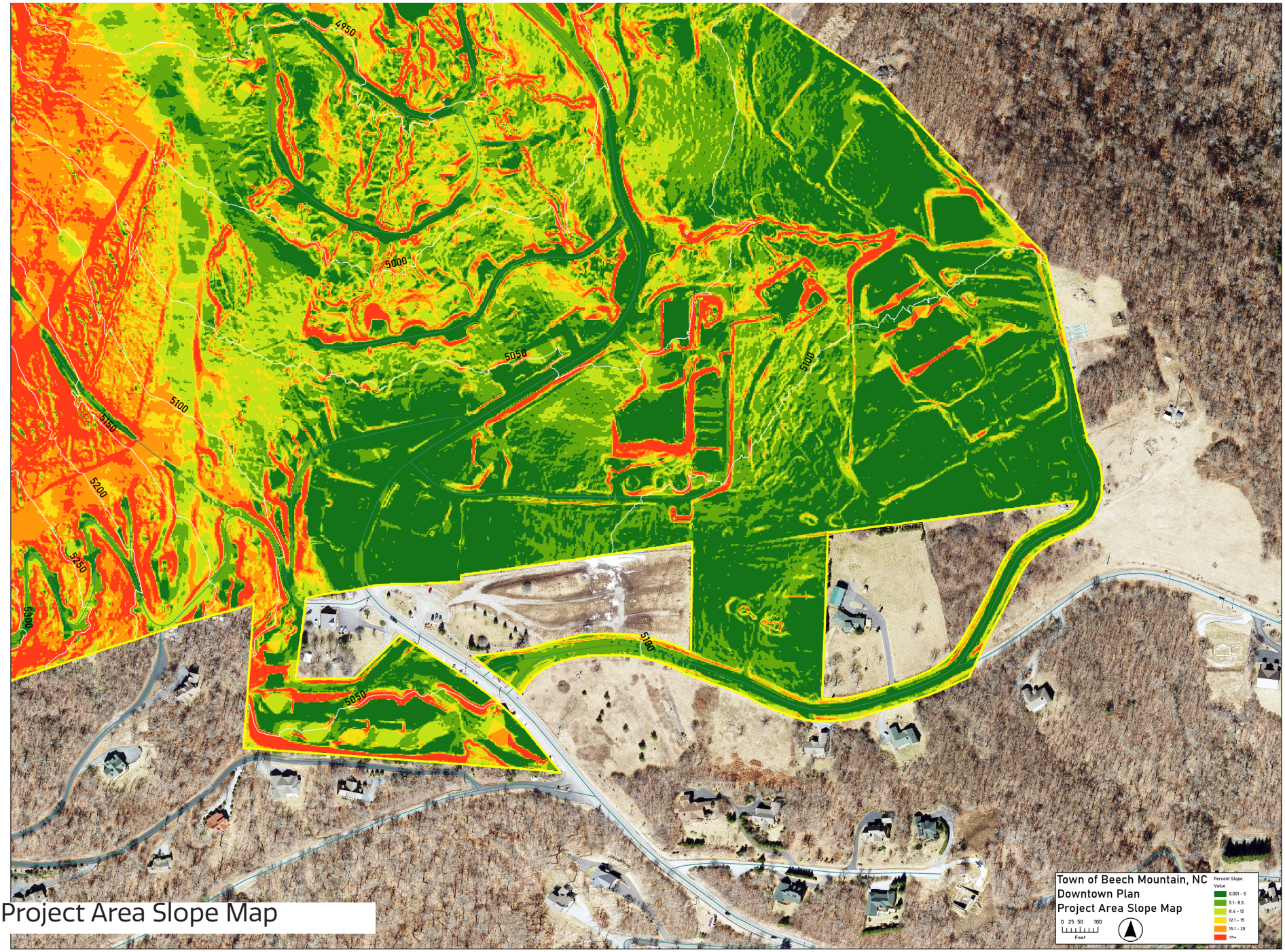
Townwide Map



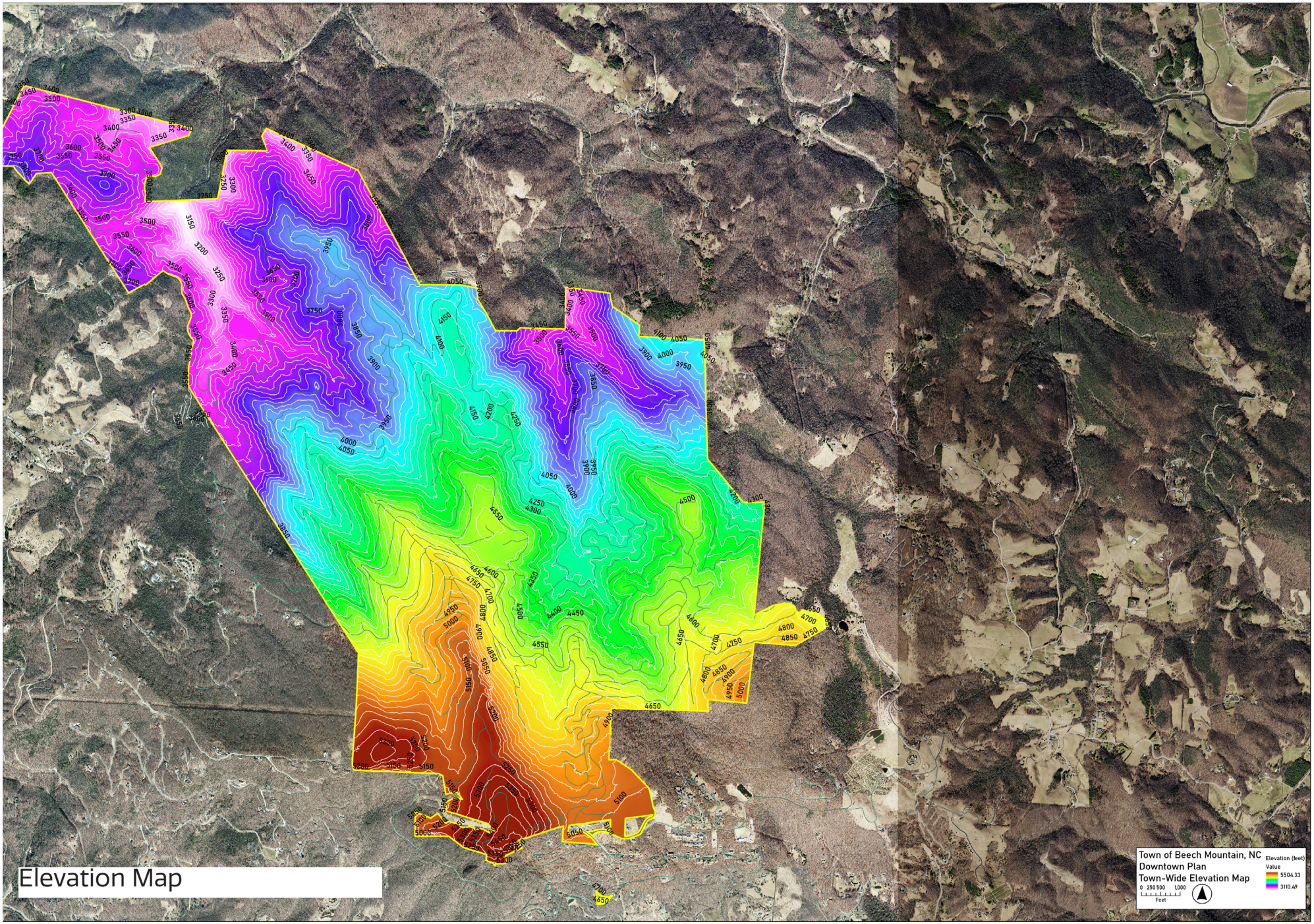
Project Area Parcels Map

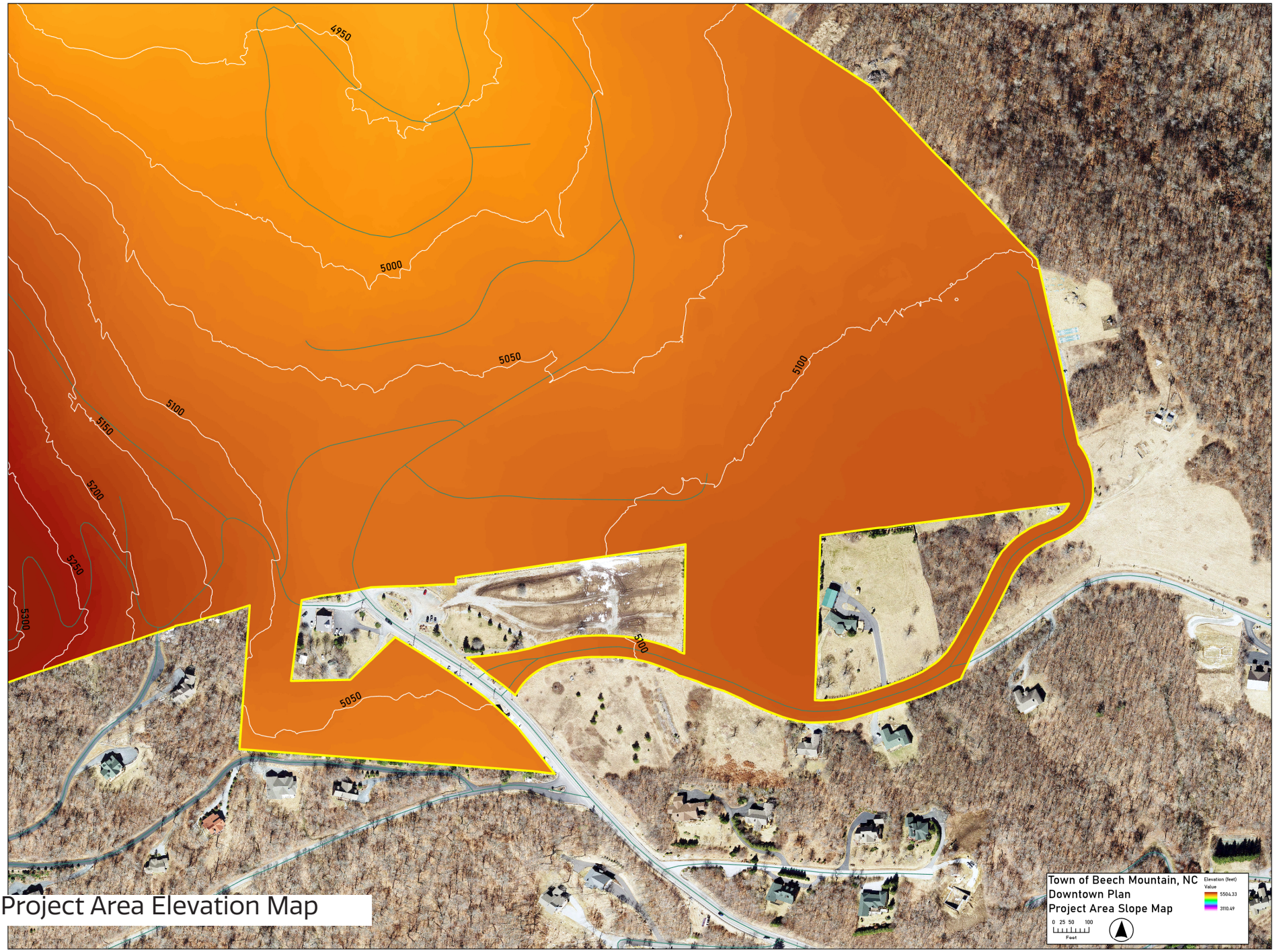

Town of Beech Mountain, NC
Downtown Plan
Town-Wide Slope Map
0 250 500 1,000
Feet
Percent Slope
Value
0.001 - 5
5.1 - 8.3
8.4 - 12
12.1 - 15
15.1 - 20
20+

Slope Map



Project Area Slope Map


Elevation Map
Town of Beech Mountain, NC
Downtown Plan
Town-Wide Elevation Map
0 250 500 1,000
Feet
Elevation (feet)
Value
5504.33
3110.49



Project Area Elevation Map

5.2 Site and Workshop Photos















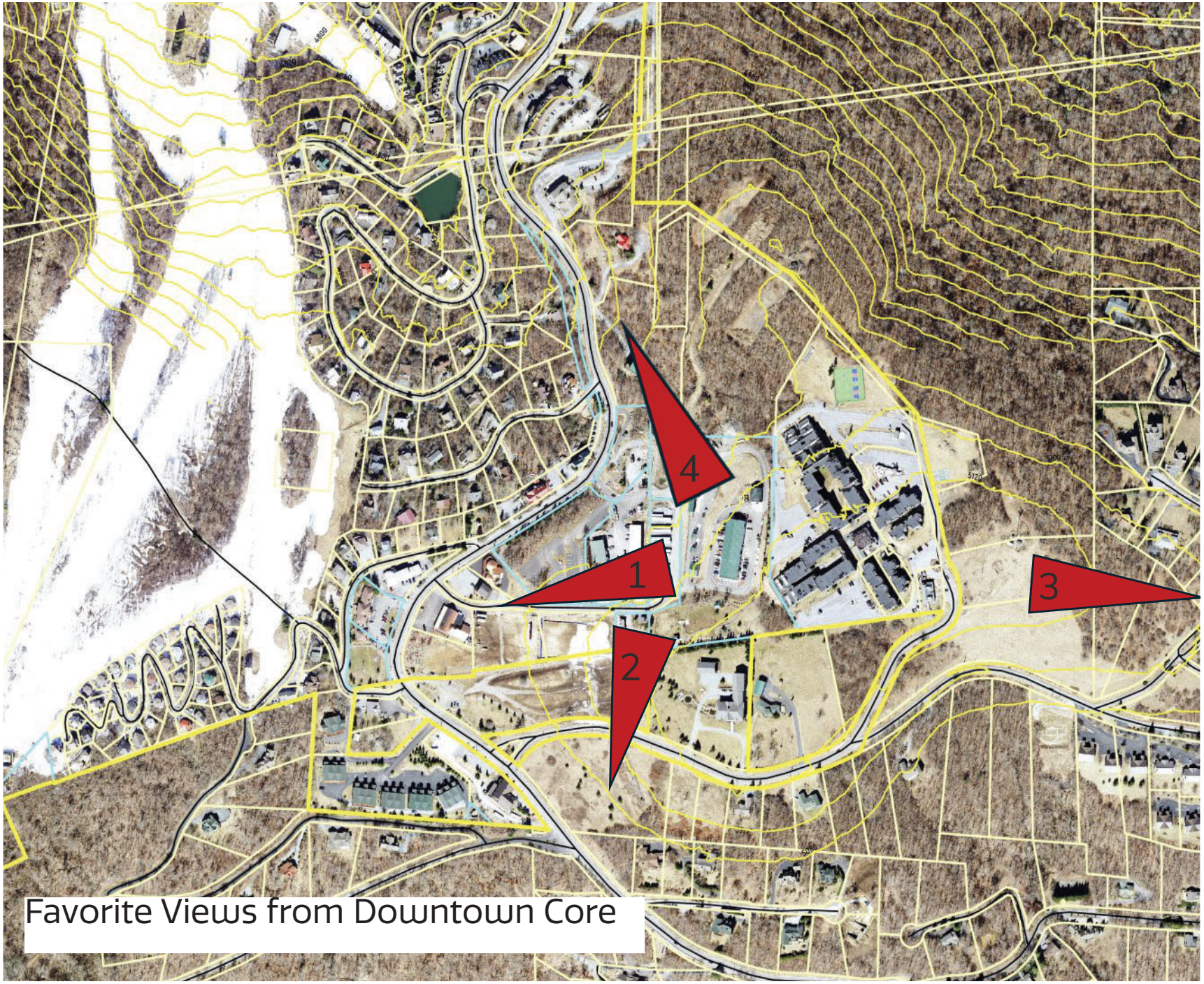












Favorite Views from Downtown Core





3



4




SHARE YOUR BIG IDEA











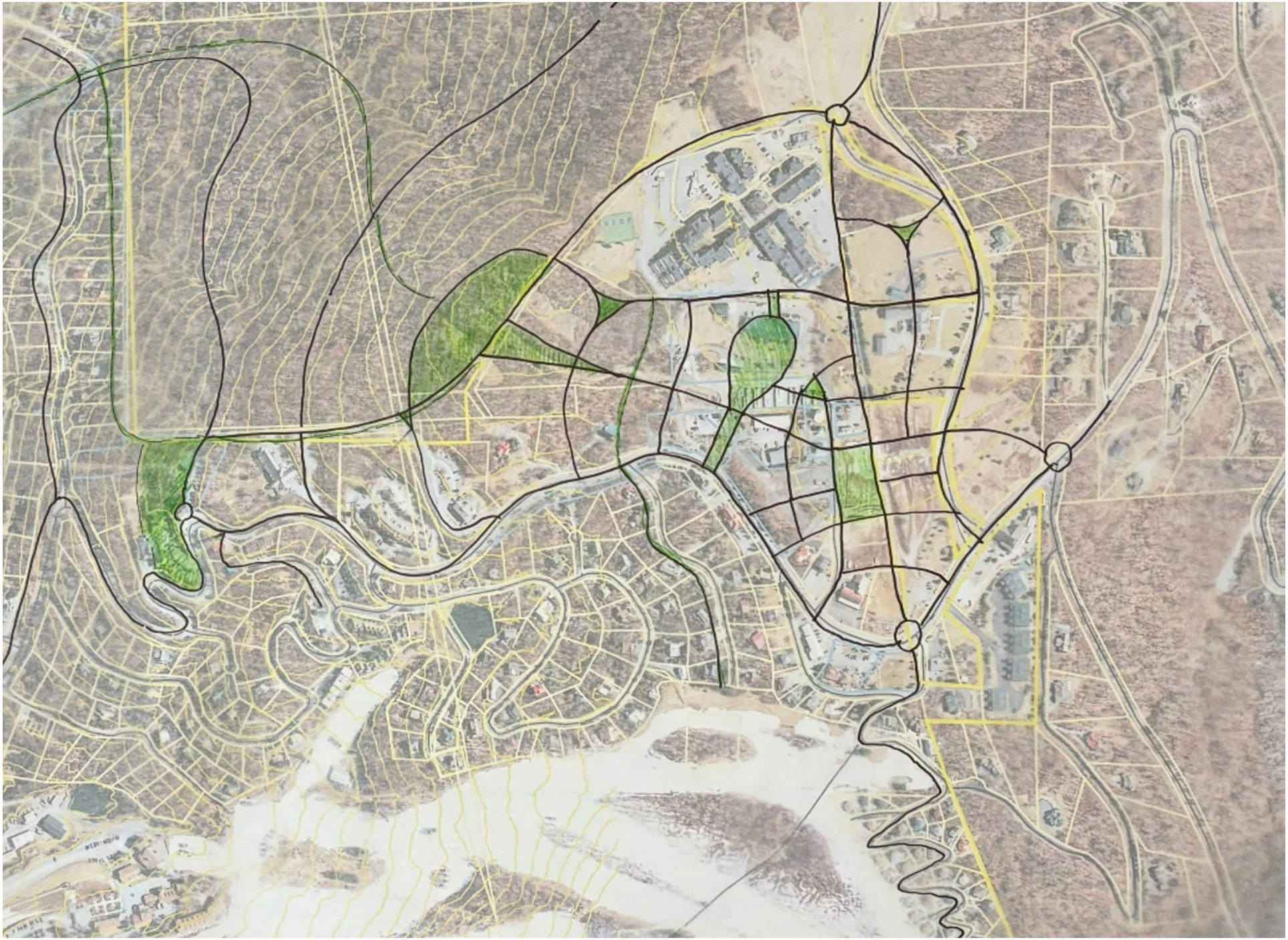


5.3 Concept Plans Produced

One of the problems that needs solving, regardless of a downtown, is a better circulation network through Beech Mountain. The Main Street by Town Hall is the only through street through this area, and during high-visitation periods, it creates inconveniences. During emergencies, this can put additional stress on first responders. A grid-like pattern is preferable, to relieve choke points and provide alternatives due to traffic jams or emergencies. In these three scenarios, planners experimented with a more robust vehicle circulation pattern for the central area of Beech Mountain. Notice also the use of roundabouts at key intersections (like the entrance to the resort) which can greatly alleviate turning backups.

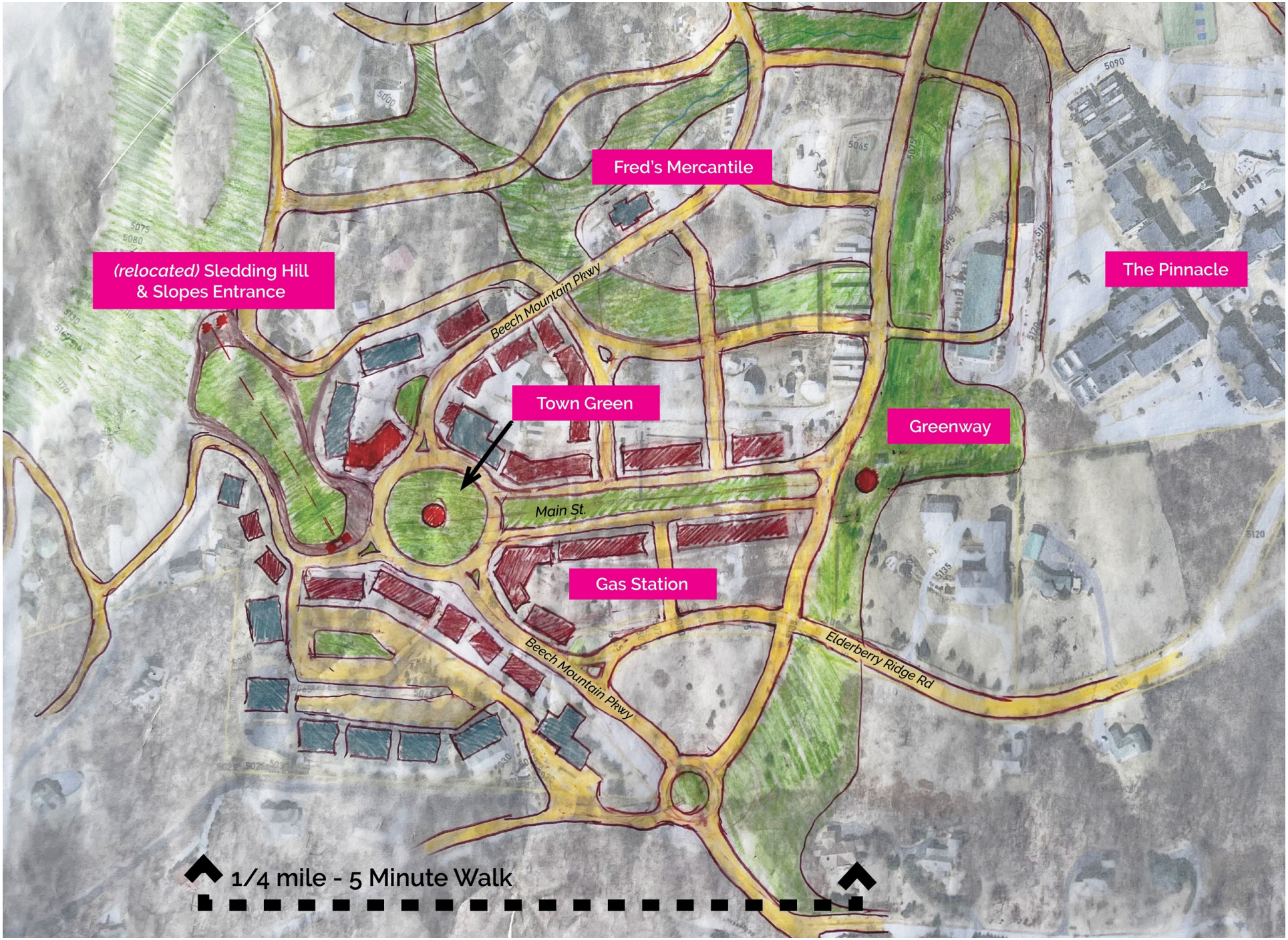
Additionally, three downtown plans were developed to explore solutions for new walkable mixed-use development, traffic circulation, and green space. These three plans include ideas for a large traffic circle which would also serve as a town green, a traditional grid street pattern, and large interconnected stretches of open space for parks and trails through the town.

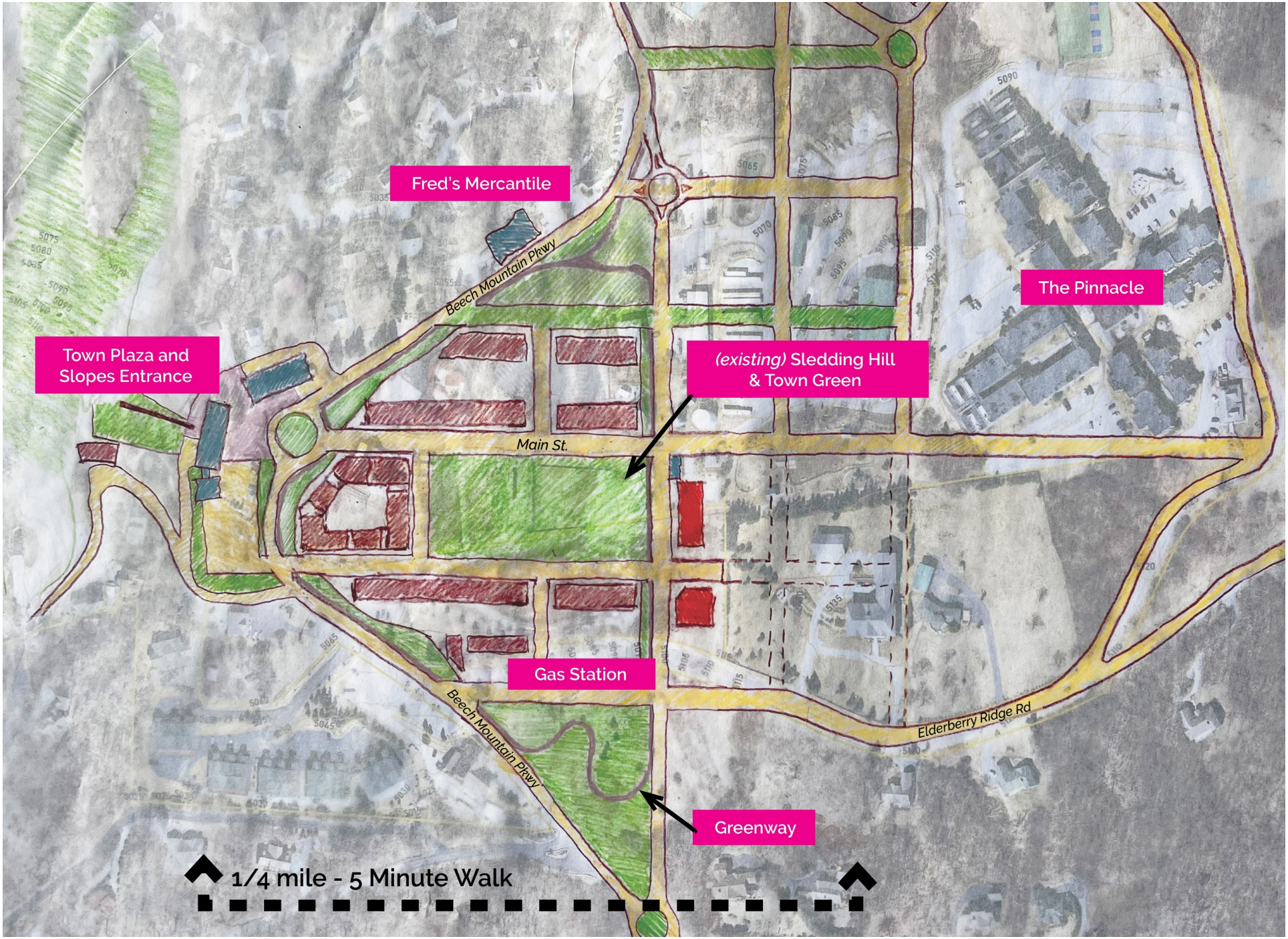
The sketches following these plan concepts represent initial attempts to site a new multi-use district as the heart of downtown. Sketches show the general size of commercial areas recommended by our economist, and volumes show initial sizes and general shapes of buildings to frame the extraordinary scenery. Note all schemes provide significant intentional greenspace, preservation of existing cherished landscapes and buildings, shared parking and good doses of connectivity.



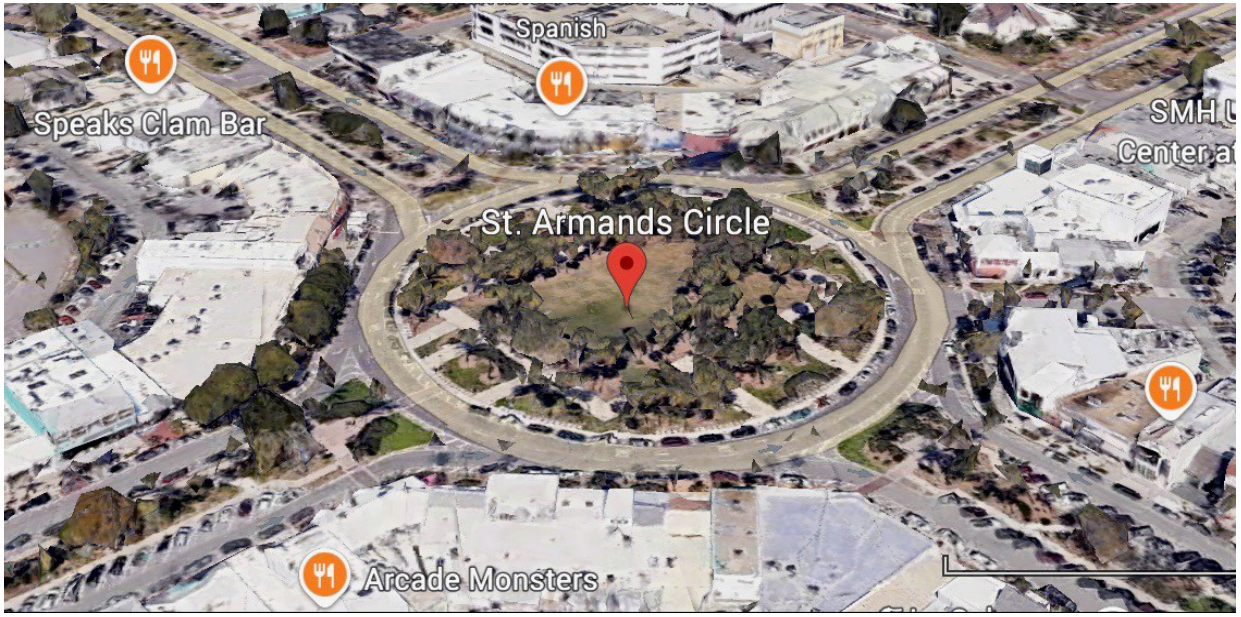





Fred's Mercantile
(relocated) Sledding Hill & Slopes Entrance
Beech Mountain Pkwy
The Pinnacle
Town Green
Greenway
Main St.
Gas Station
Elderberry Ridge Rd
Beech Mountain Pkwy
1/4 mile - 5 Minute Walk


Fred's Mercantile
Beech Mountain Pkwy
The Pinnacle
Town Plaza and Slopes Entrance
(existing) Sledding Hill & Town Green
Main St.
Gas Station
Beech Mountain Pkwy
Elderberry Ridge Rd
Greenway
1/4 mile - 5 Minute Walk



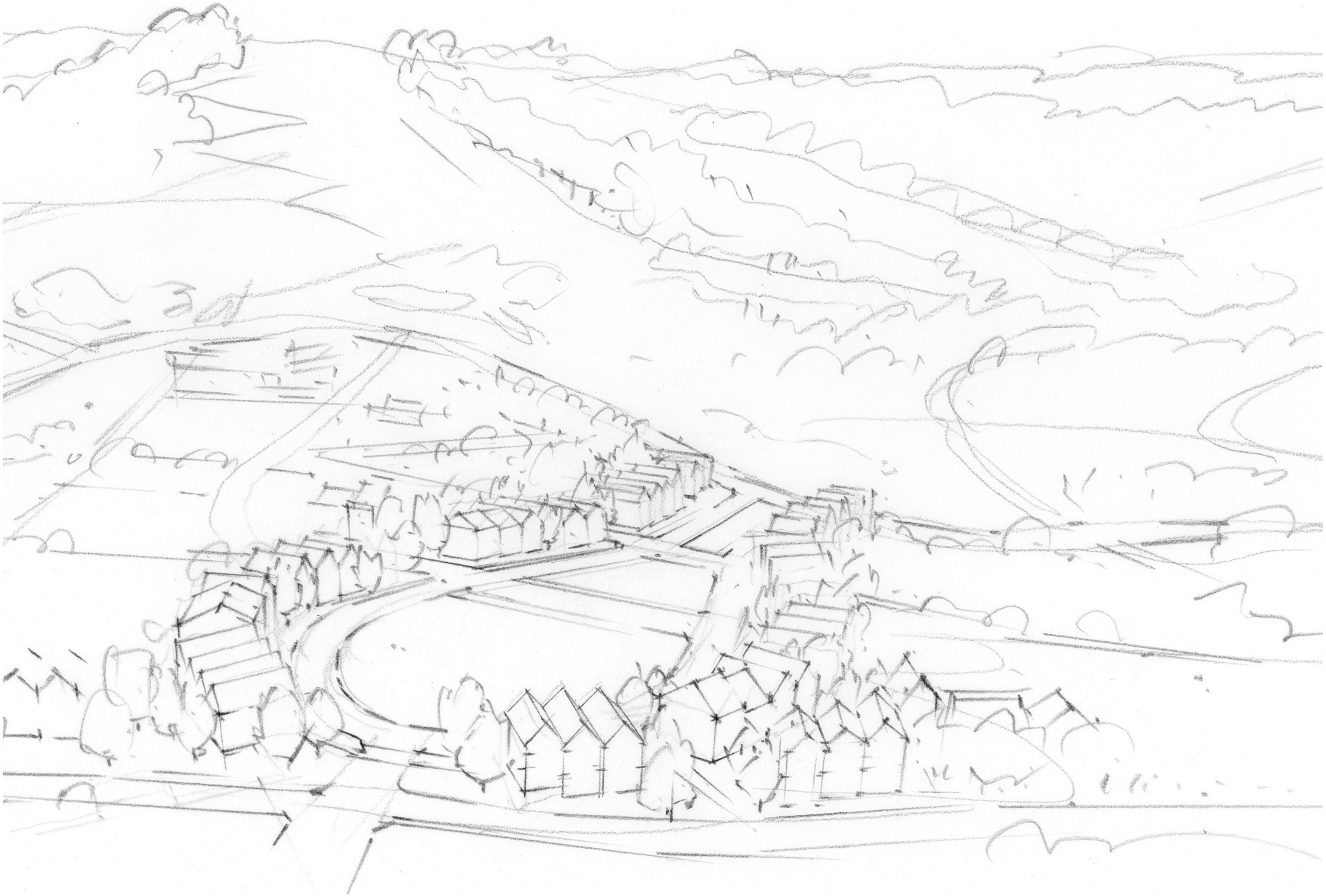


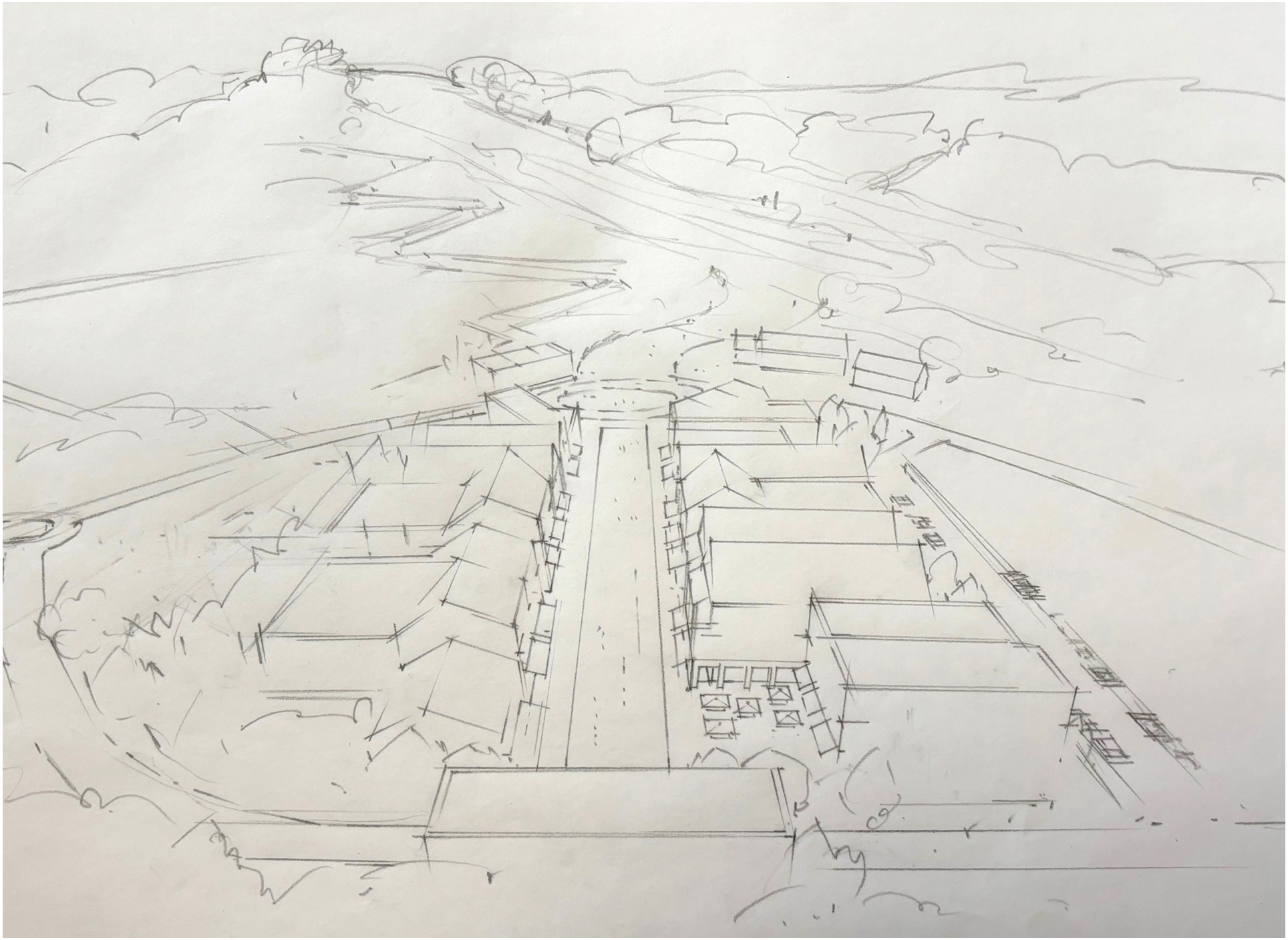
Left: St. Armands Circle in Sarasota, Florida used as reference for the Town Green

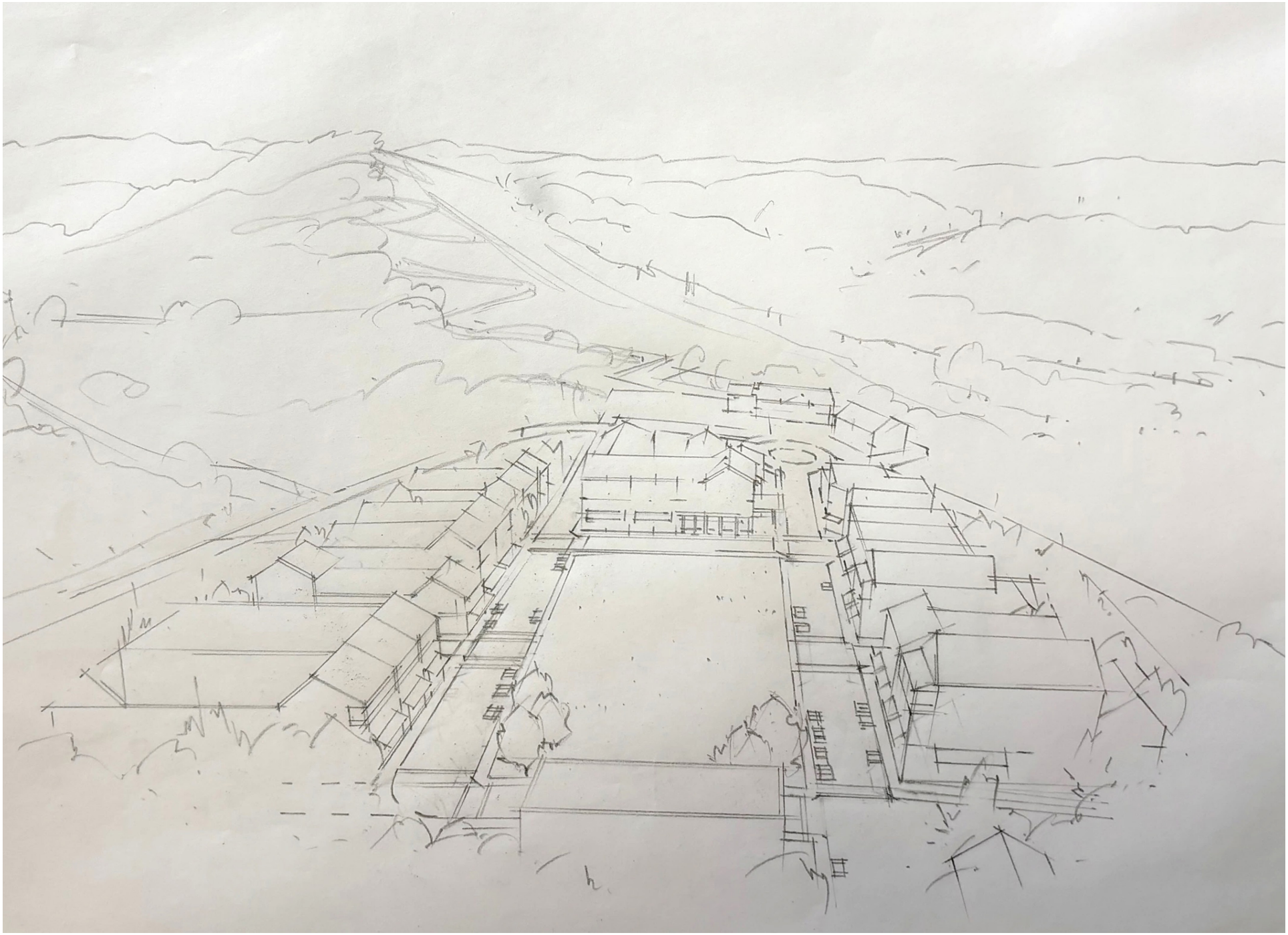
Below: Photo rendering of a proposed bike and scooter park

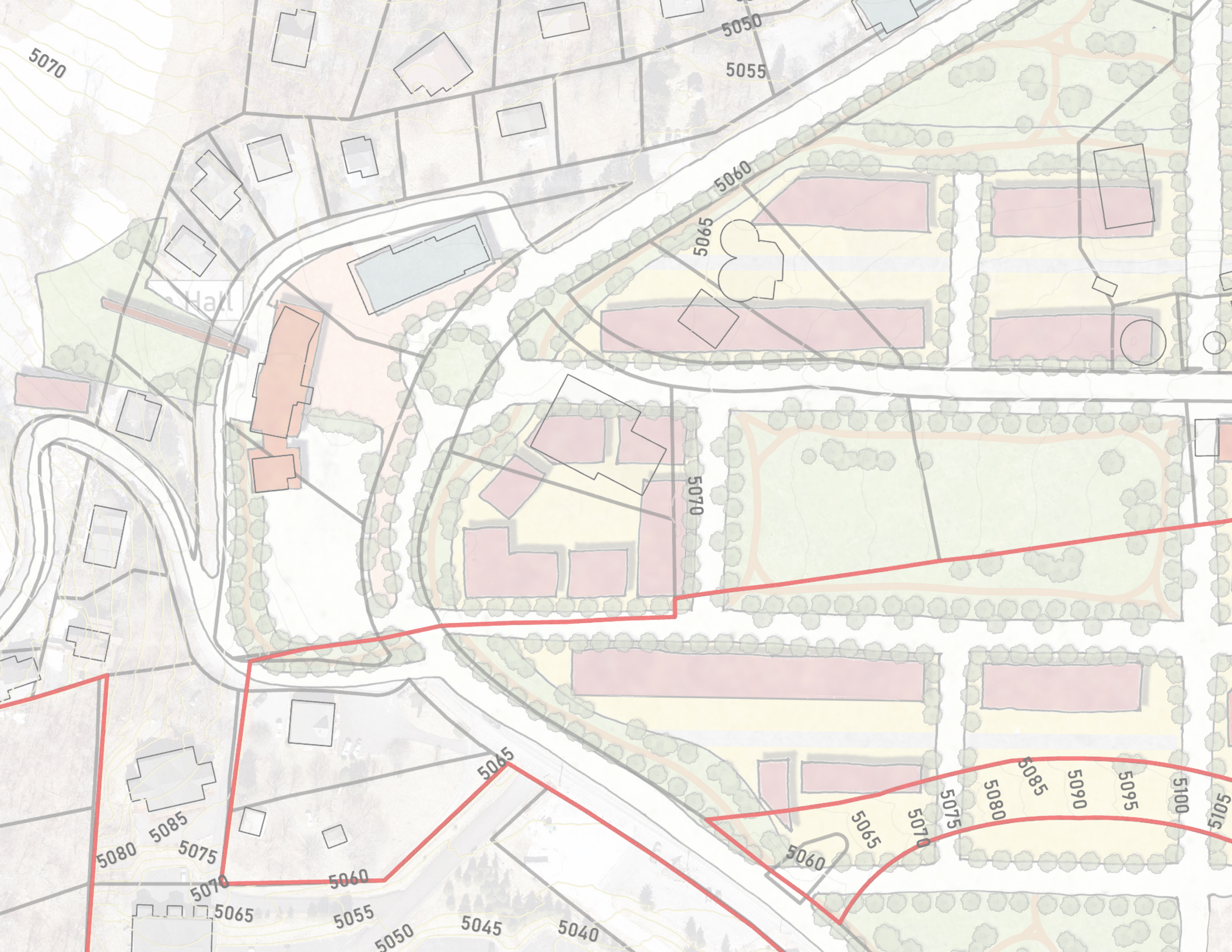








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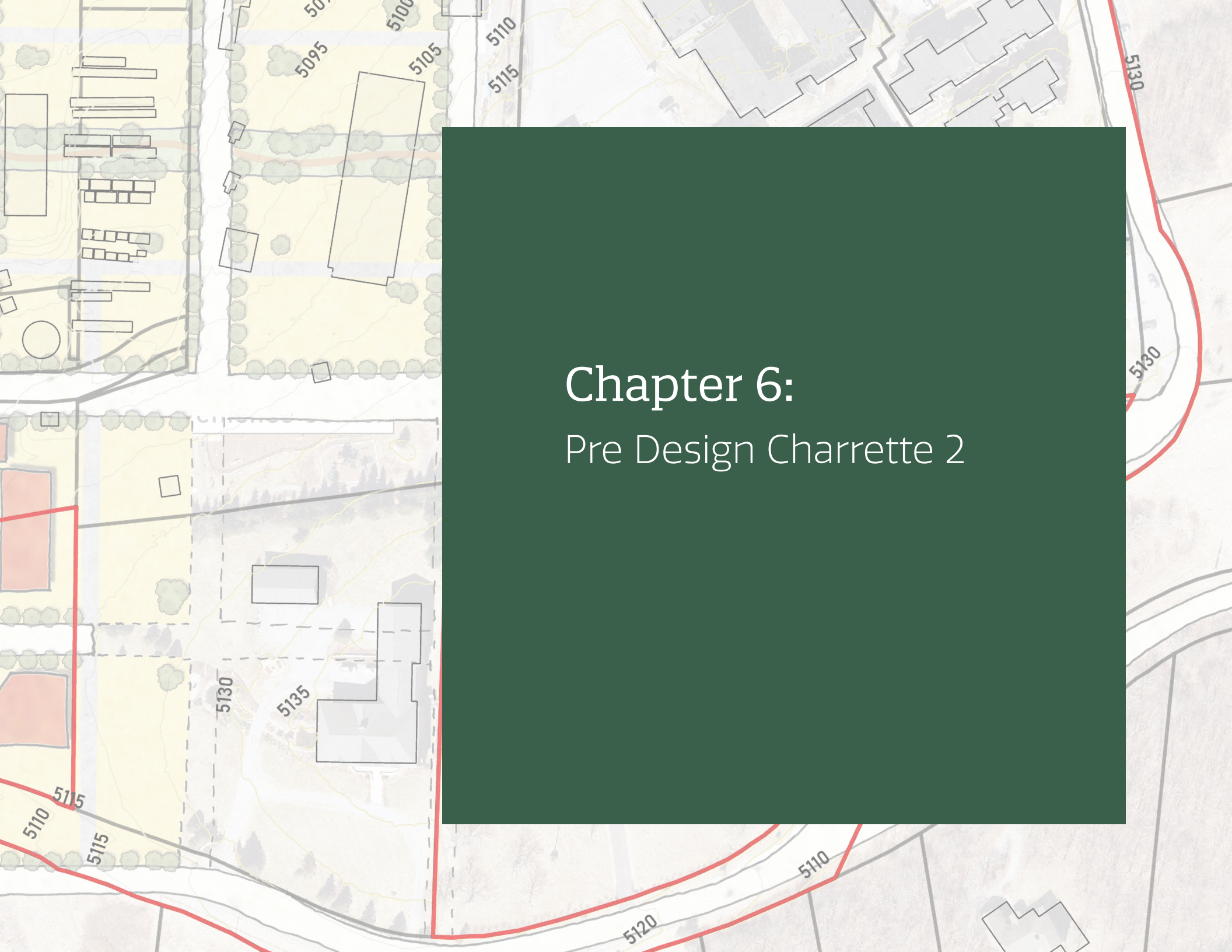


Chapter 6:

Pre Design Charrette 2

6.1 Concept Plans Refined

Between the two design charrettes, planners worked at Hill Studio to digitally render and refine each of the three previously developed plan concepts. In preparation for the second design charrette, each plan was broken down into its different layered elements. This includes greenspace, road and trail circulation, developable blocks, and 5-minute walking radii from key areas. Finally, each plan was compared to the current parcel lines. The following pages showcase how each plan seeks to address the wants and needs raised by Beech Mountain residents and visitors in developing a core downtown.



The three proposed plan concepts: Concept A (left), Concept B (bottom left), and Concept C (bottom right)





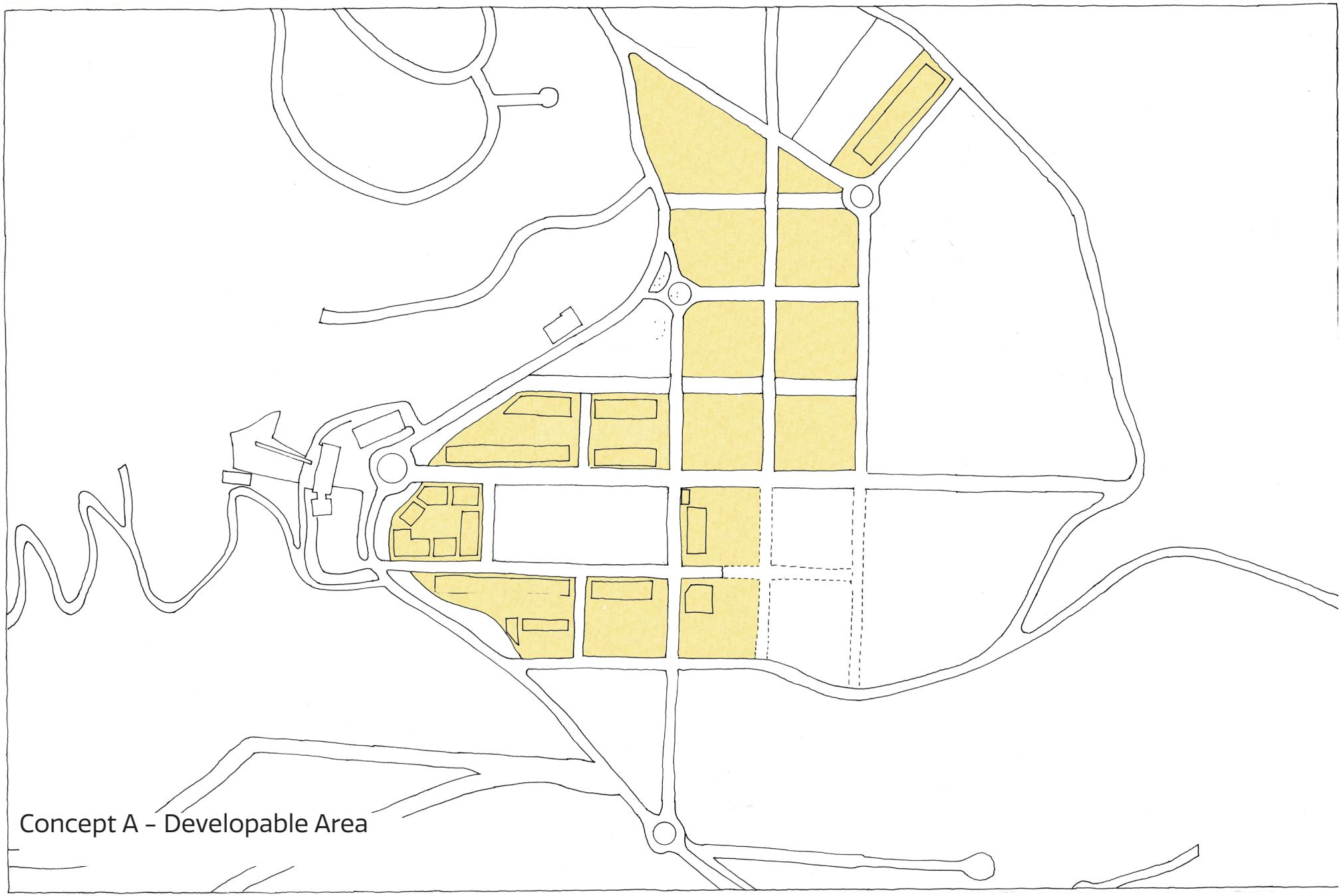


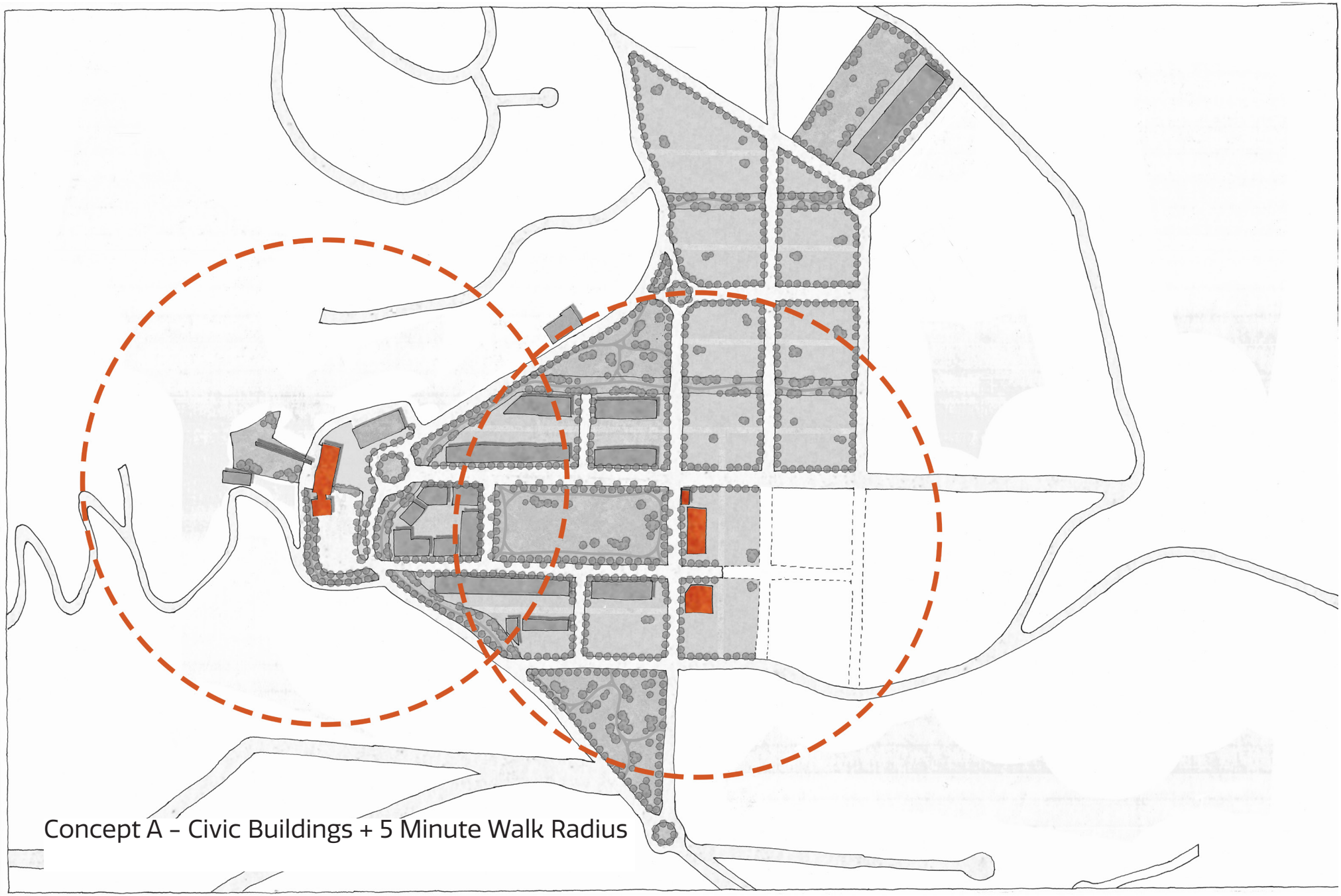
Concept A – Illustrative Plan



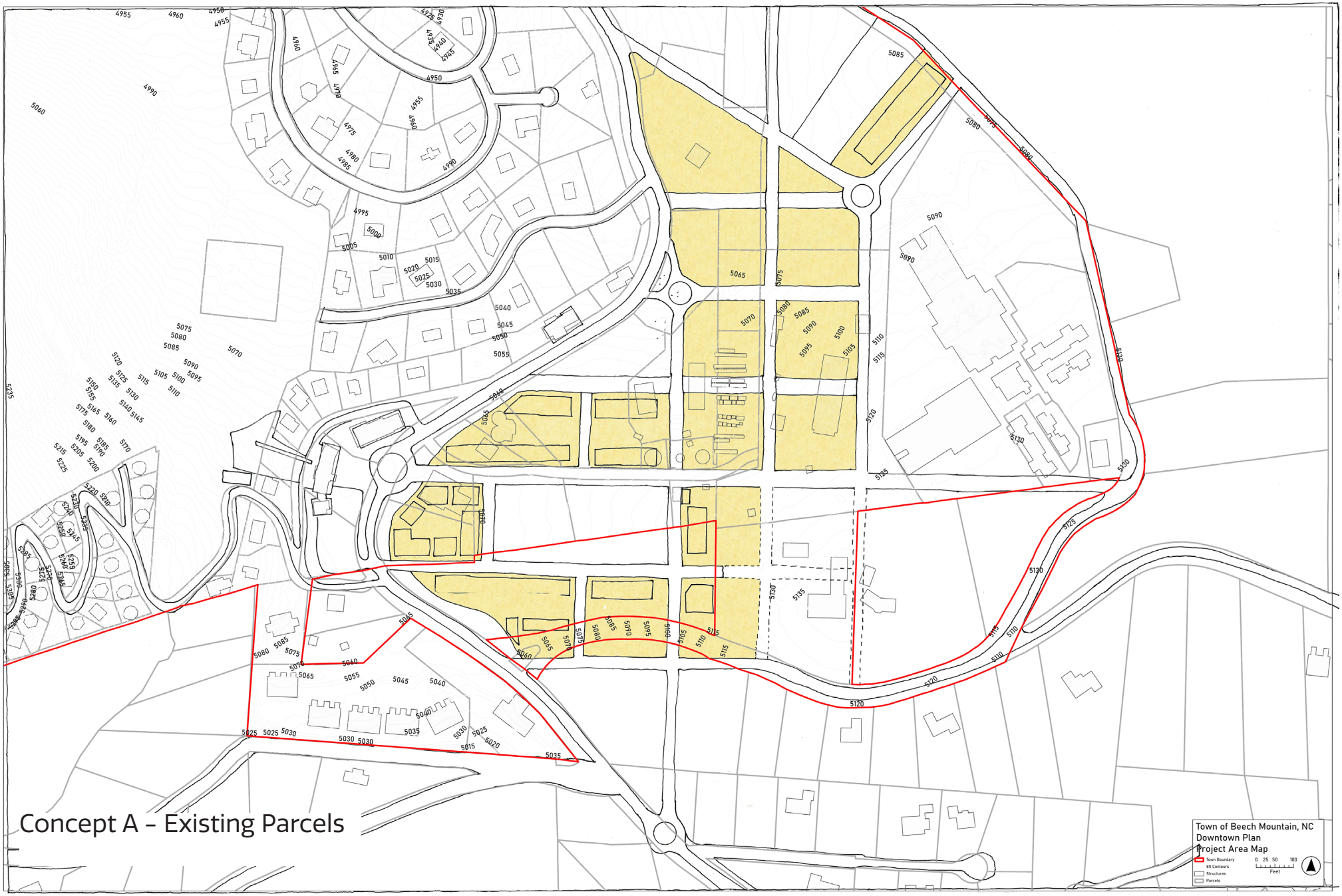
Concept A – Roadways, Alleys, and Trails

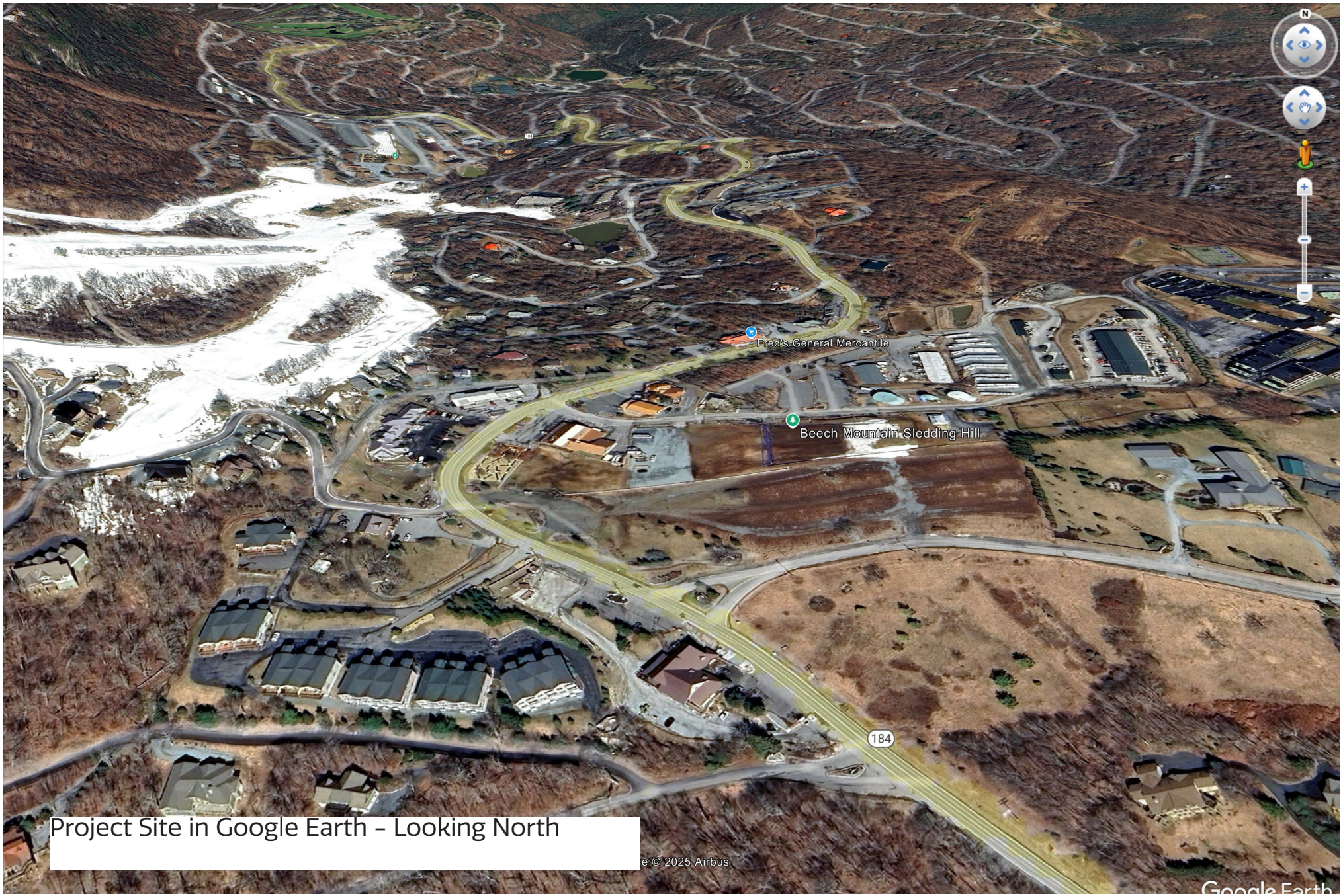

Concept A – Greenspace


Concept A – Developable Area



Concept A – Civic Buildings + 5 Minute Walk Radius


Concept A – Existing Parcels
Town of Beech Mountain, NC
Downtown Plan
Project Area Map
Town Boundary
5ft Contours
Structures
Parcels
0 25 50 100
Feet



Project Site in Google Earth – Looking North



Concept A – Google Earth Overlay



Concept B – Illustrative Plan



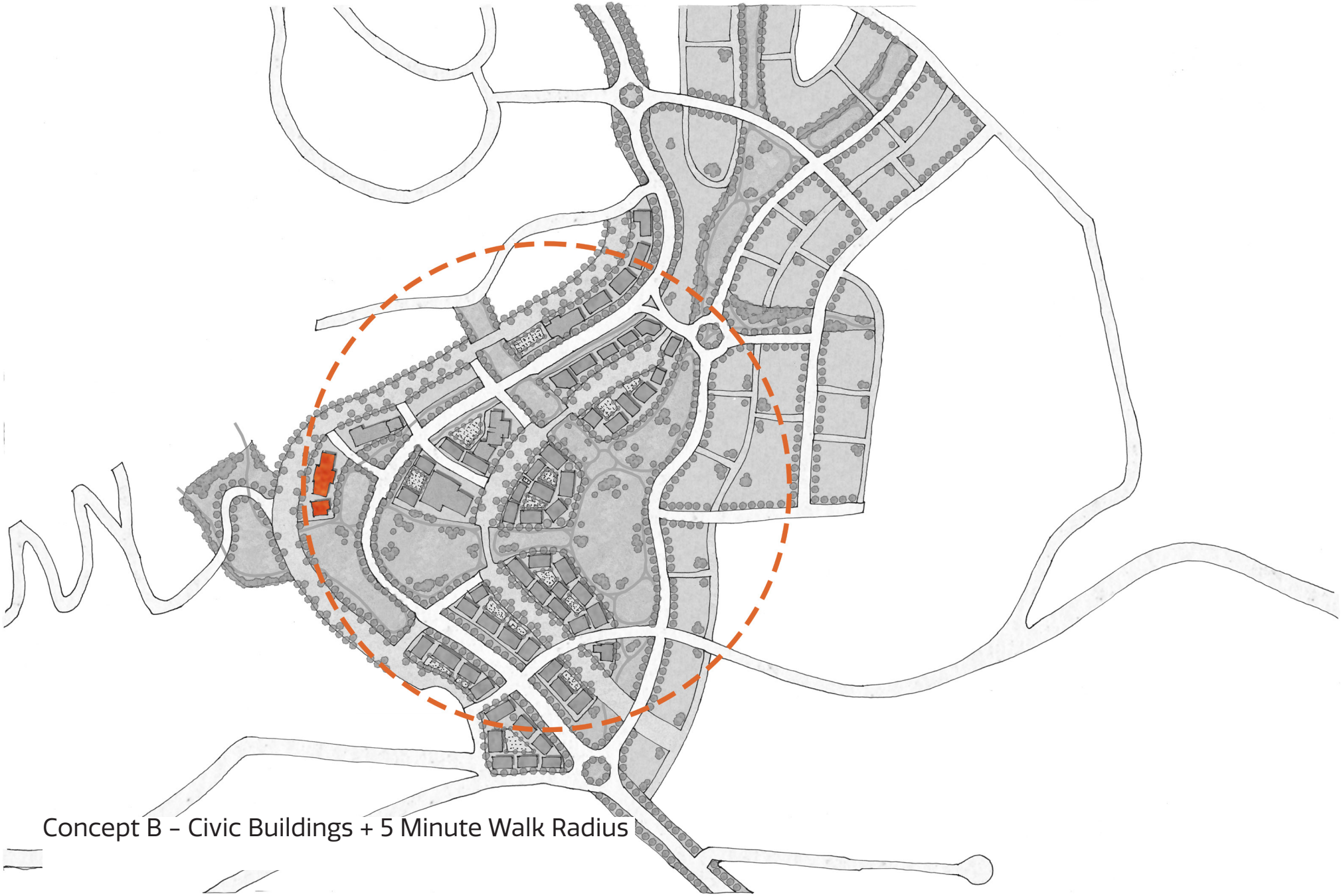
Concept B – Roadways, Alleys, and Trails



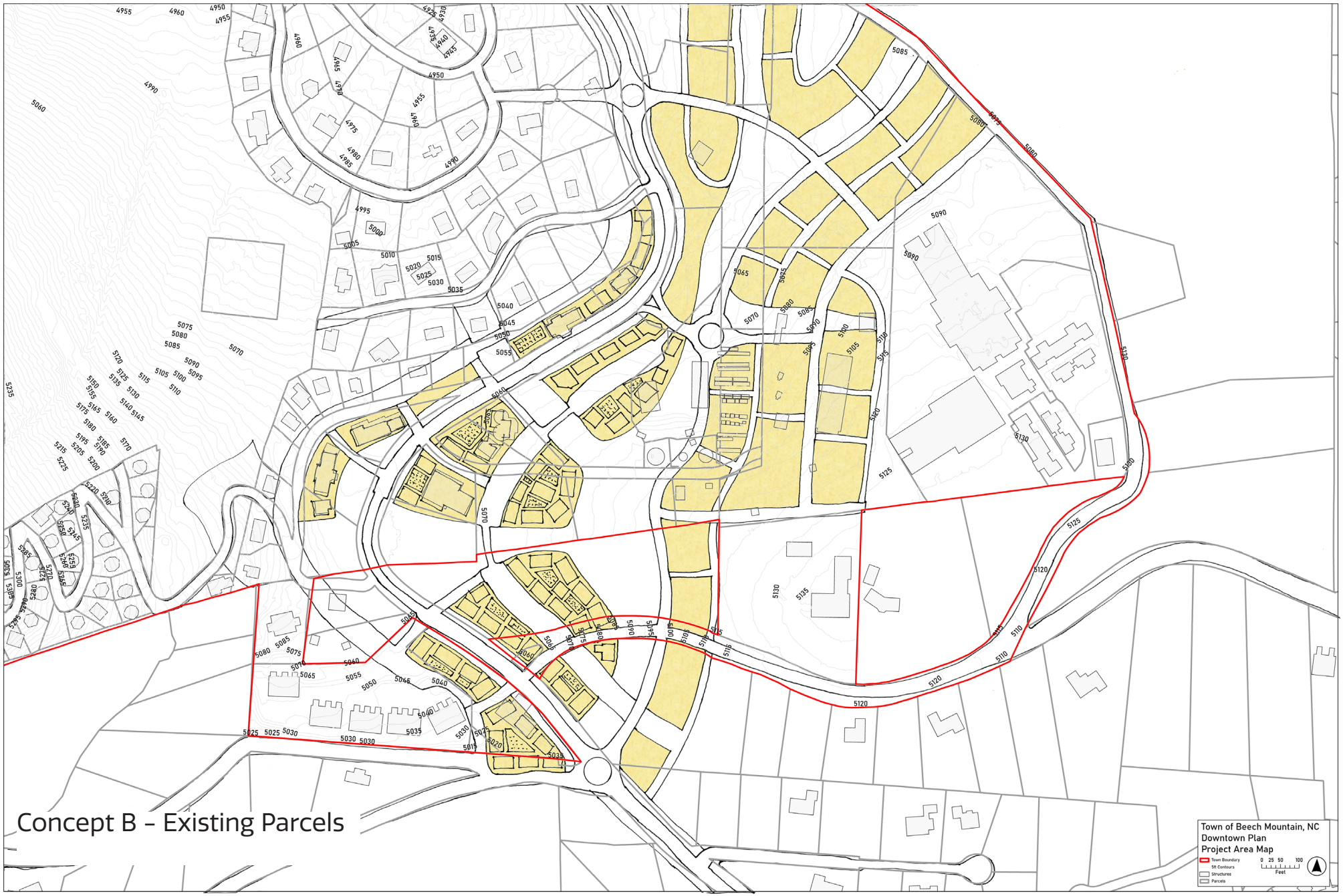
Concept B – Greenspace



Concept B – Developable Area

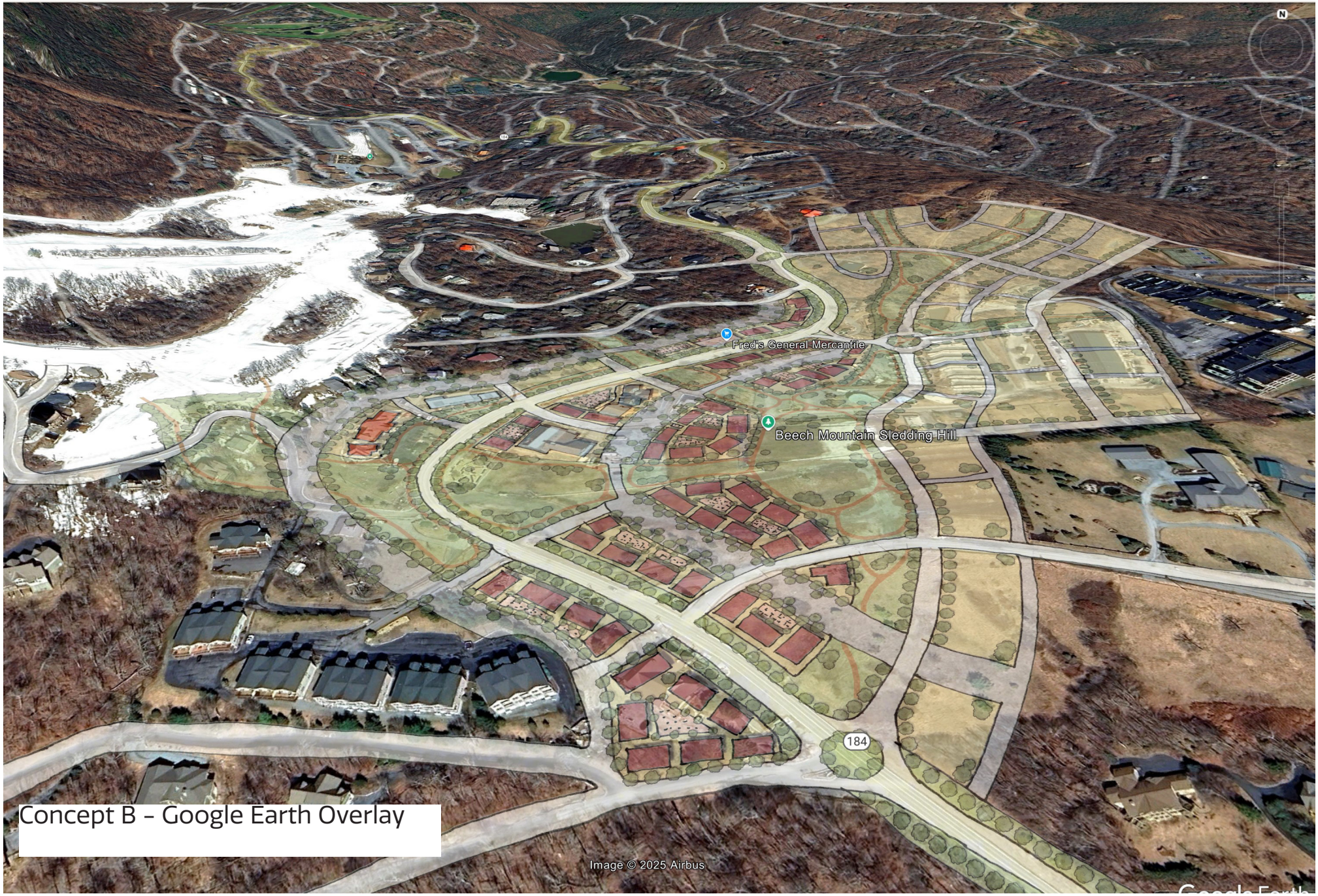


Concept B – Civic Buildings + 5 Minute Walk Radius


Concept B – Existing Parcels
Town of Beech Mountain, NC
Downtown Plan
Project Area Map
Town Boundary
5ft Contours
Structures
Parcels
0 25 50 100
Feet



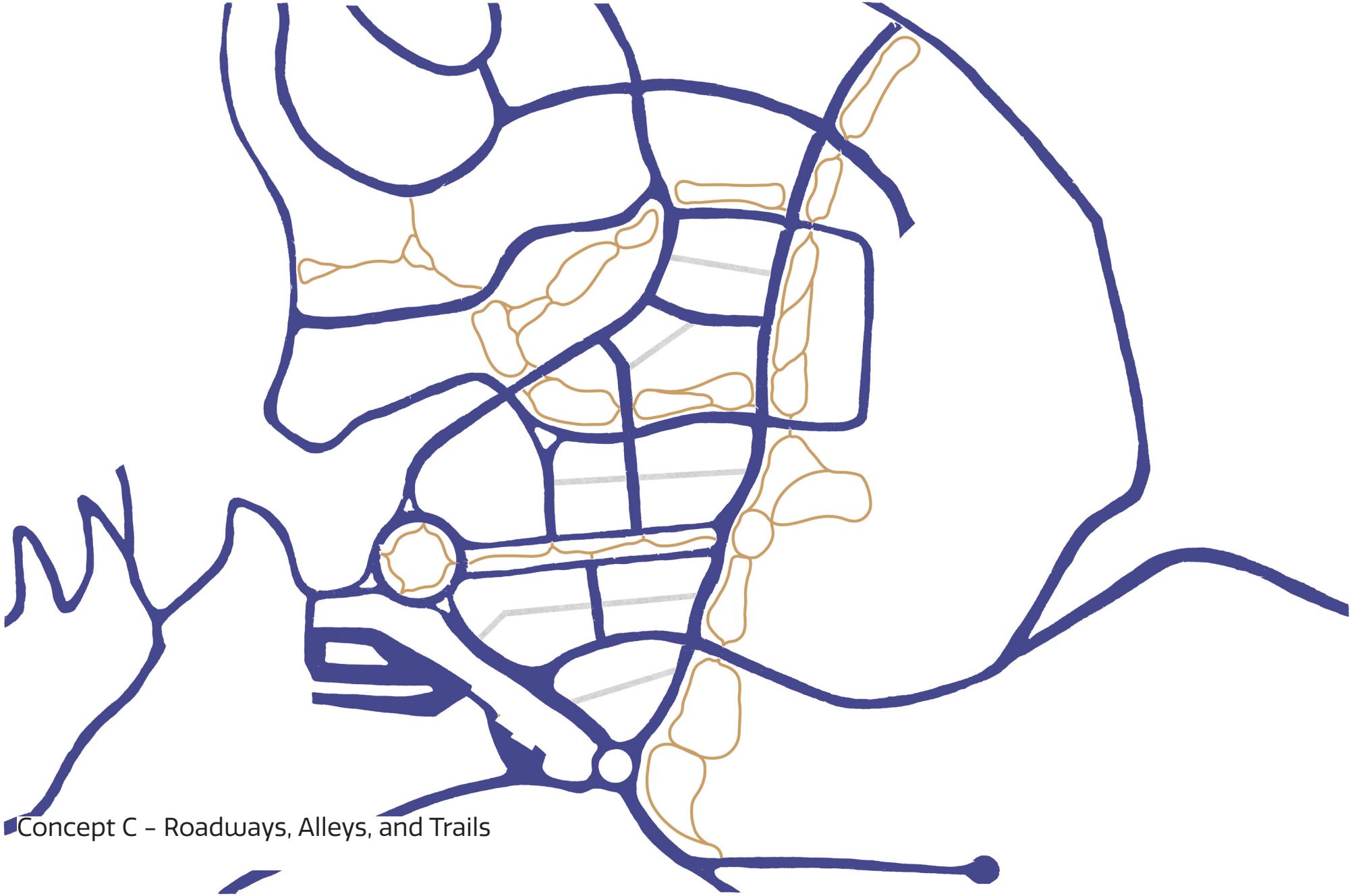
Project Site in Google Earth – Looking North



Concept B – Google Earth Overlay



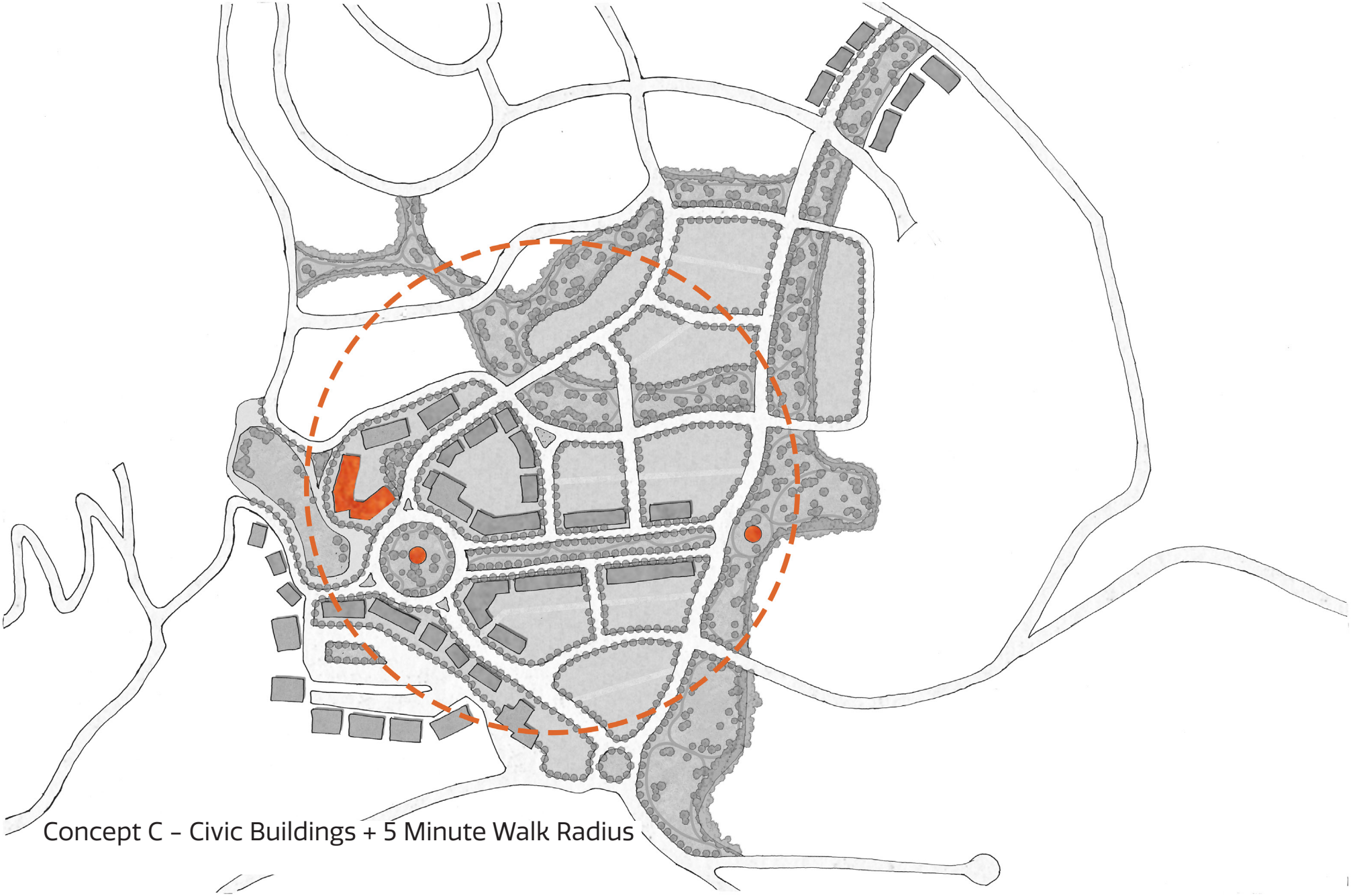
Concept C – Illustrative Plan



Concept C – Roadways, Alleys, and Trails


Concept C – Greenspace


Concept C – Developable Area



Concept C – Civic Buildings + 5 Minute Walk Radius


Concept C – Existing Parcels
Town of Beech Mountain, NC
Downtown Plan
Project Area Map
Town Boundary
5ft Contours
Structures
Parcels
0 25 50 100
Feet



Project Site in Google Earth – Looking North



Concept C – Google Earth Overlay





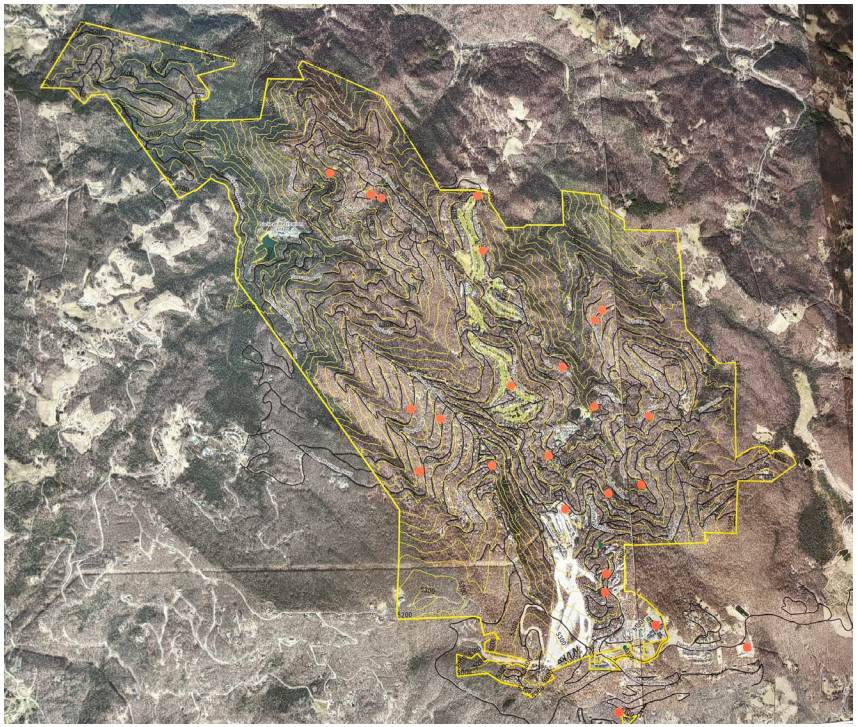
Chapter 7:

Design Charrette 2

7.1 Charrette Summary

During the second of the two design charrettes, public input was collected on the three concept plans. Some major comments and takeaways included:

- Keep the sledding hill as a connection to the town's character
- Use a grid street pattern to create an established downtown network
- Avoid certain areas of private property that owners identified would not agree to sell
- Change IS Coming: Either make a plan for managed growth, or the growth manages us
- An actionable plan
- A cooperative plan
- Economically, at a minimum this development must support itself
- Momentum for change





Left: Where We Live Map, local attendees were encouraged to mark where they live on the mountain

Right: Photo from a public presentation















Various photos from presentations and workshop sessions

7.2 Two Refocused Plans

Taking public input into consideration, the planning and design team refined the three plan concepts down into two options, a more traditional plan and a picturesque one. The traditional plan option emphasized a grid street network in the main downtown center as in the previous Concept A and kept many existing features of Beech Mountain like the sledding hill and the restaurants along Beech Mountain Parkway. The Picturesque plan included the large traffic circle and town park proposed in the previous Concept C and a network of expansive green spaces and trails as proposed in Concept B. Both of these new plan options also narrowed the project area to focus on the new proposed downtown core where public works is currently located and to exclude some private properties.



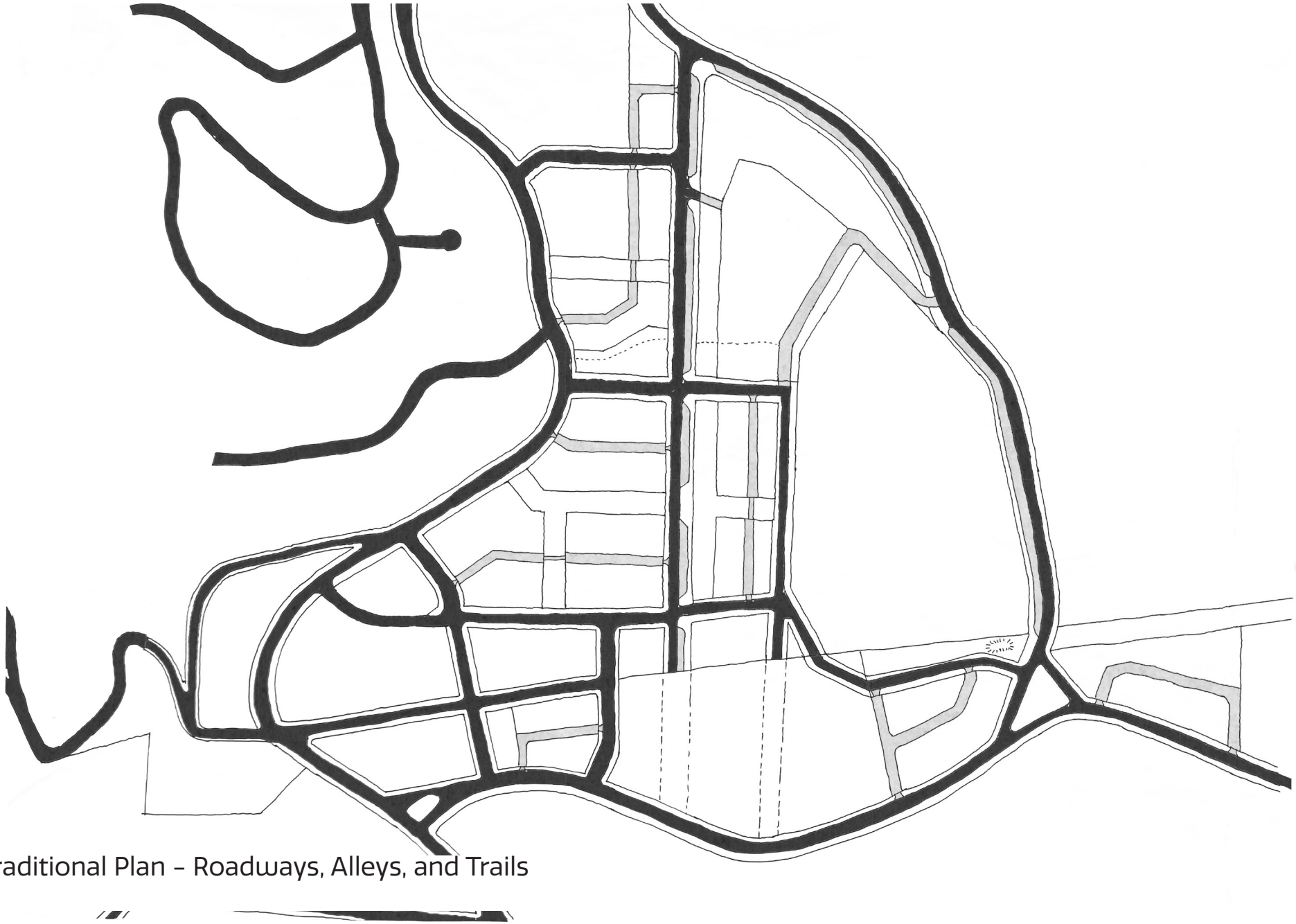
The Traditional Plan



The Picturesque Plan



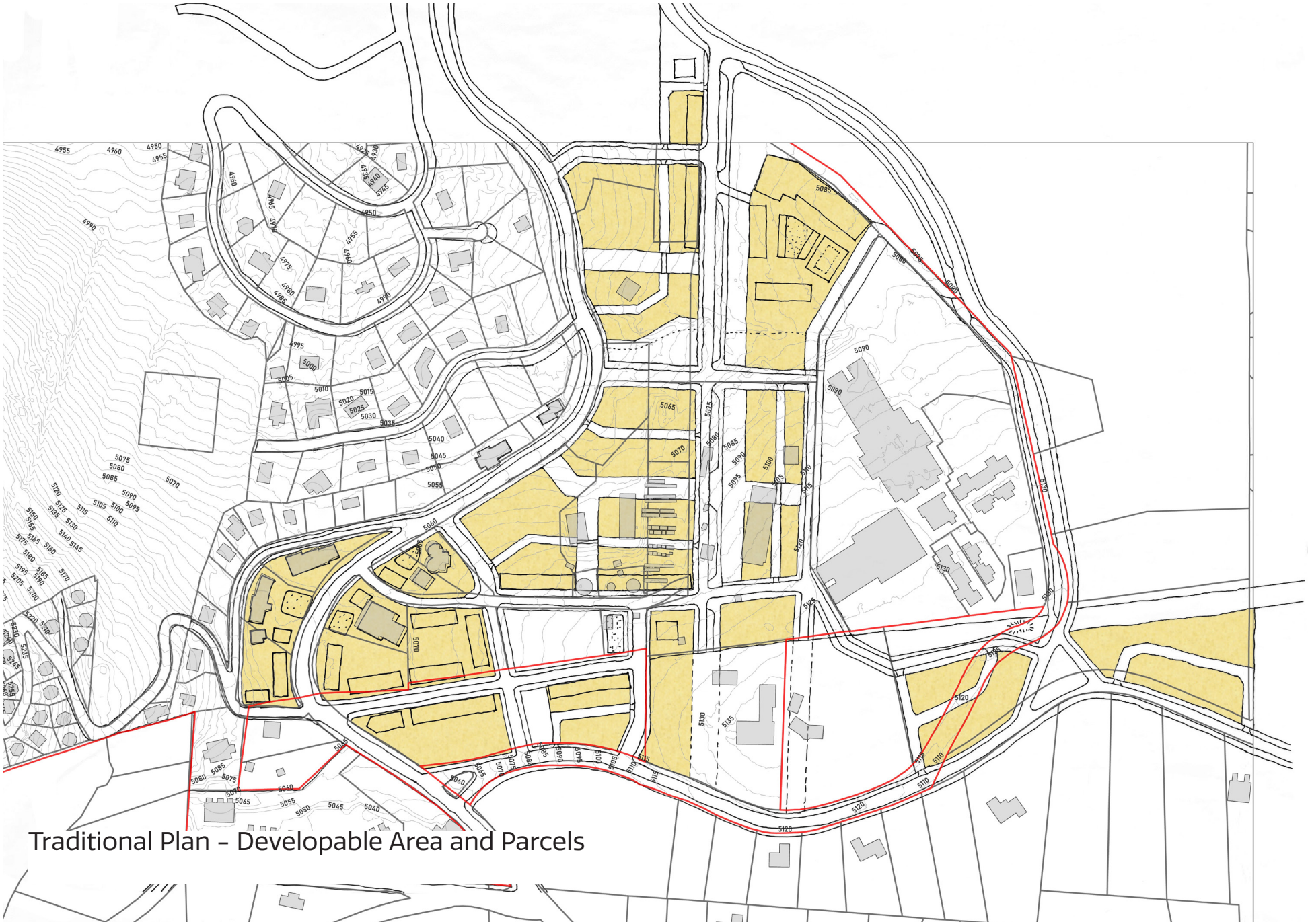
Traditional Plan



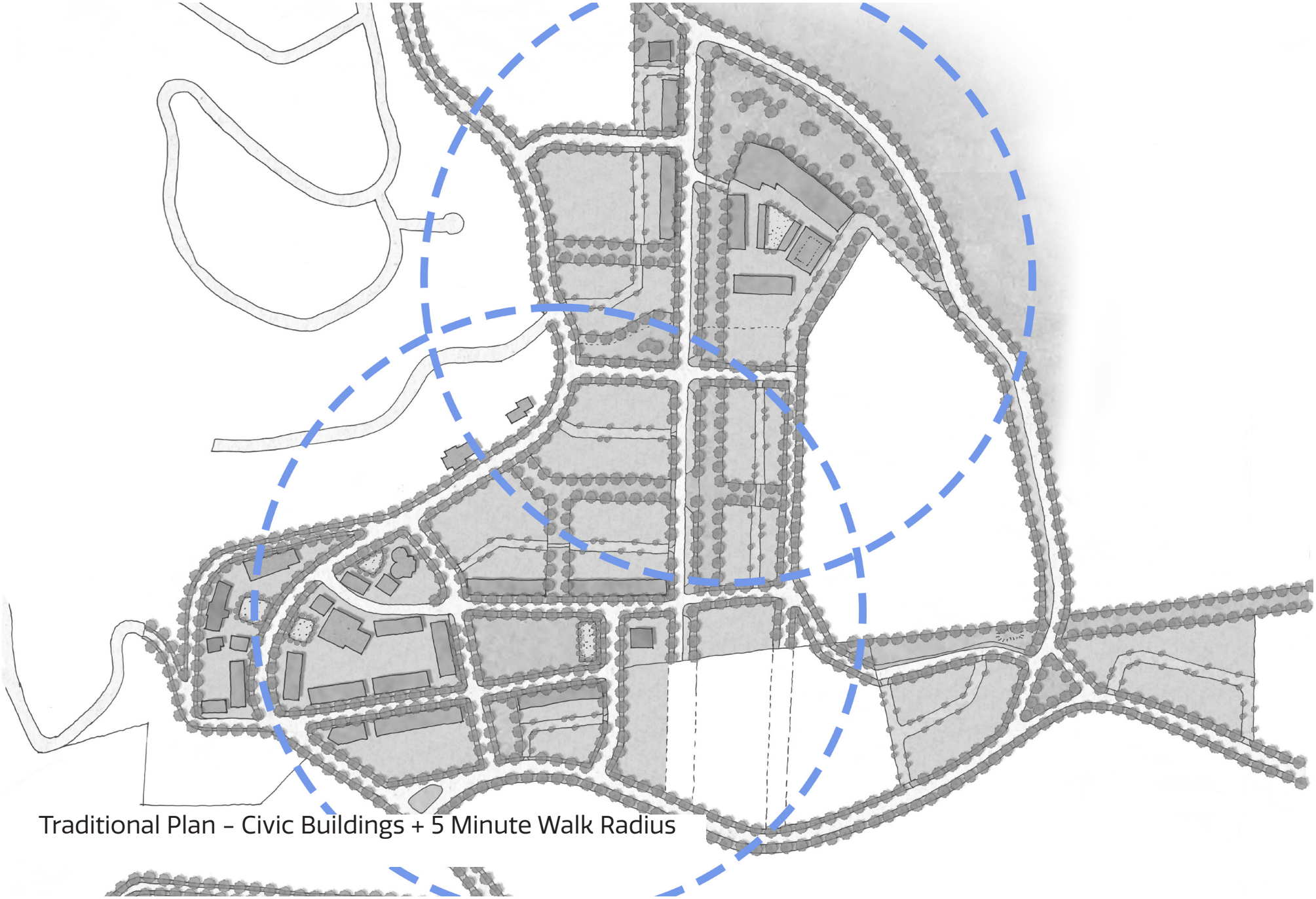
Traditional Plan – Roadways, Alleys, and Trails



Traditional Plan – Greenspace



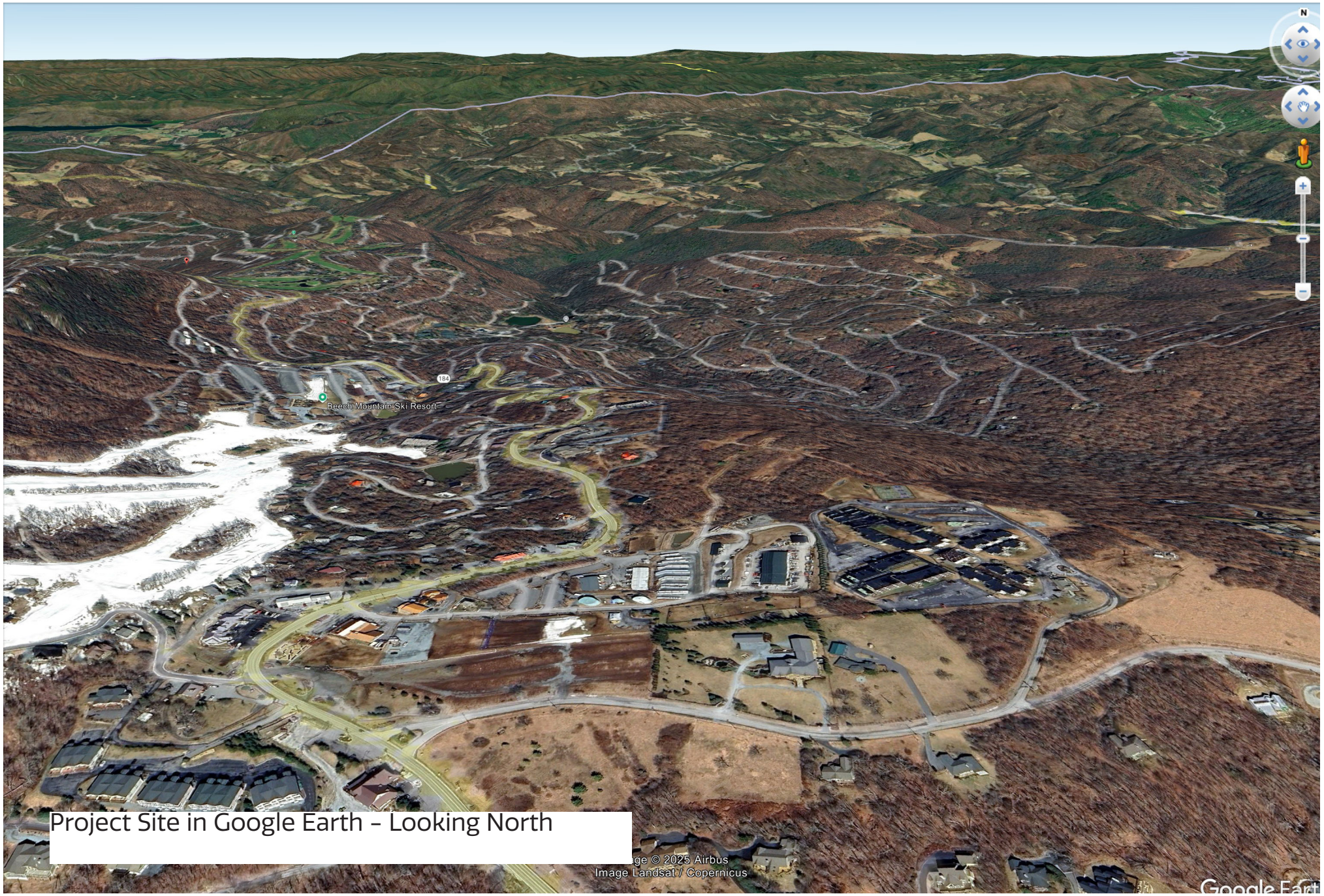
Traditional Plan – Developable Area and Parcels



Traditional Plan – Civic Buildings + 5 Minute Walk Radius



Traditional Plan – Rendering



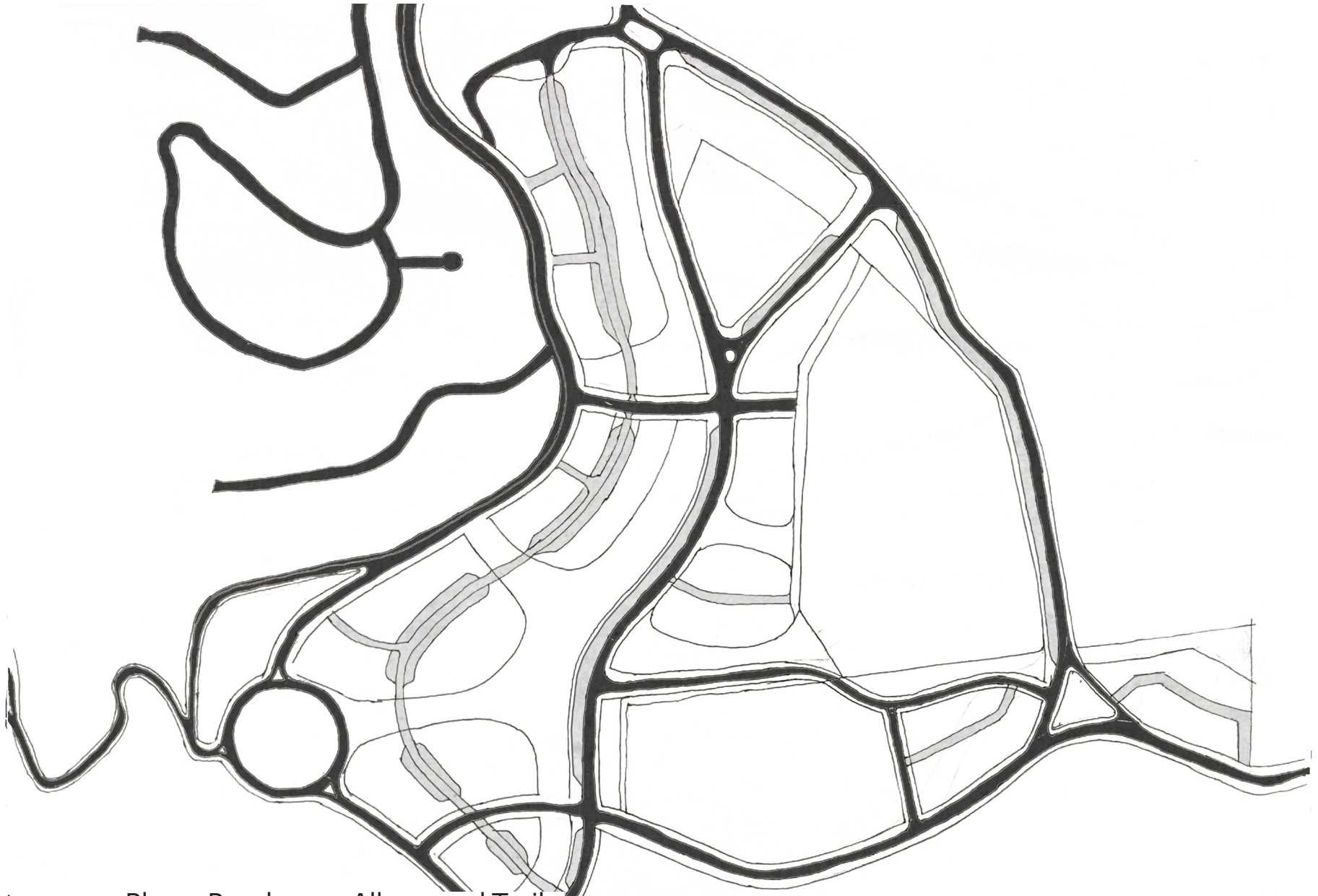
Project Site in Google Earth – Looking North



Traditional Plan – Google Earth Overlay



Picturesque Plan



Picturesque Plan – Roadways, Alleys, and Trails



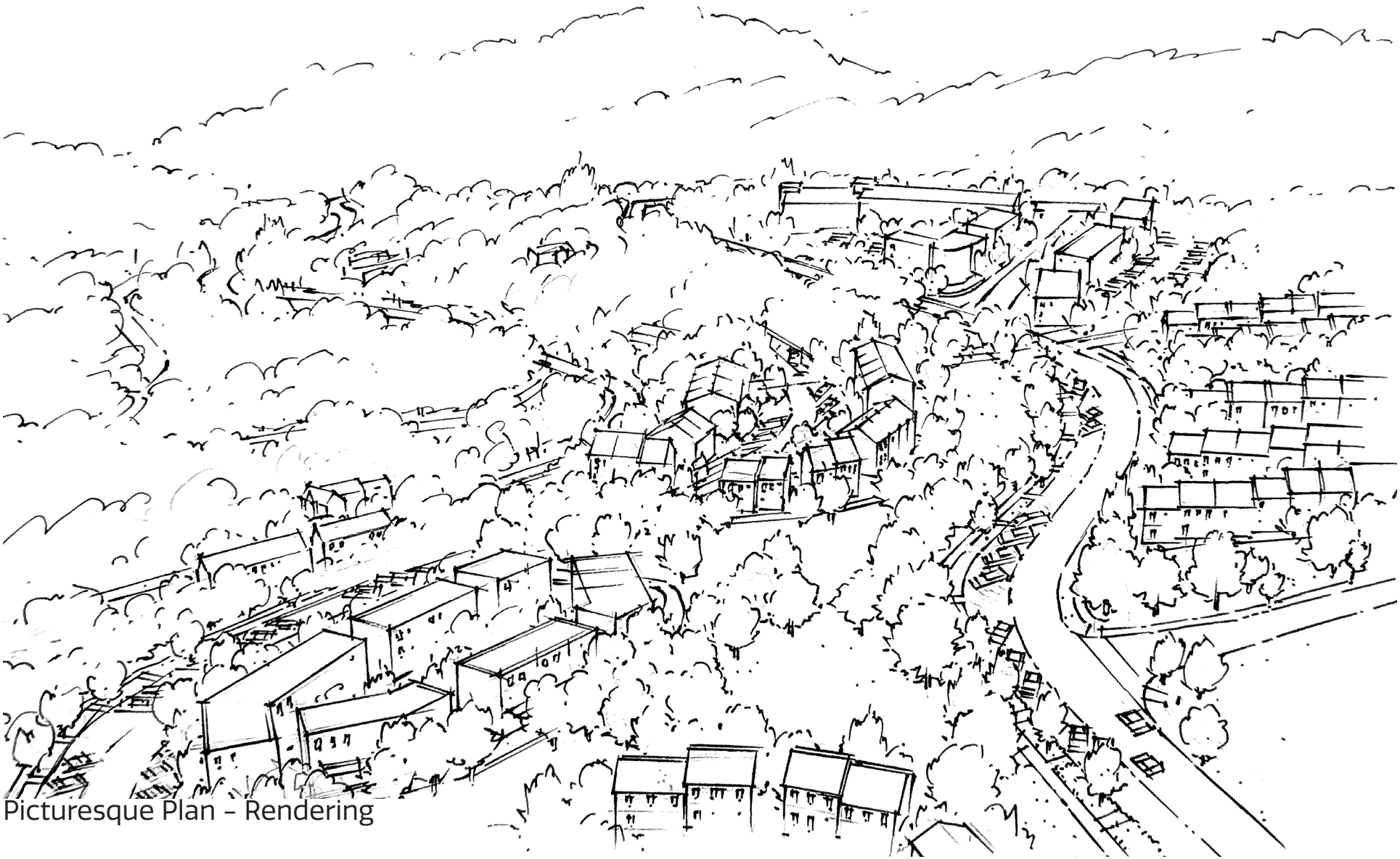
Picturesque Plan – Greenspace



Picturesque Plan – Developable Area and Parcels



Picturesque Plan – Civic Buildings + 5 Minute Walk Radius



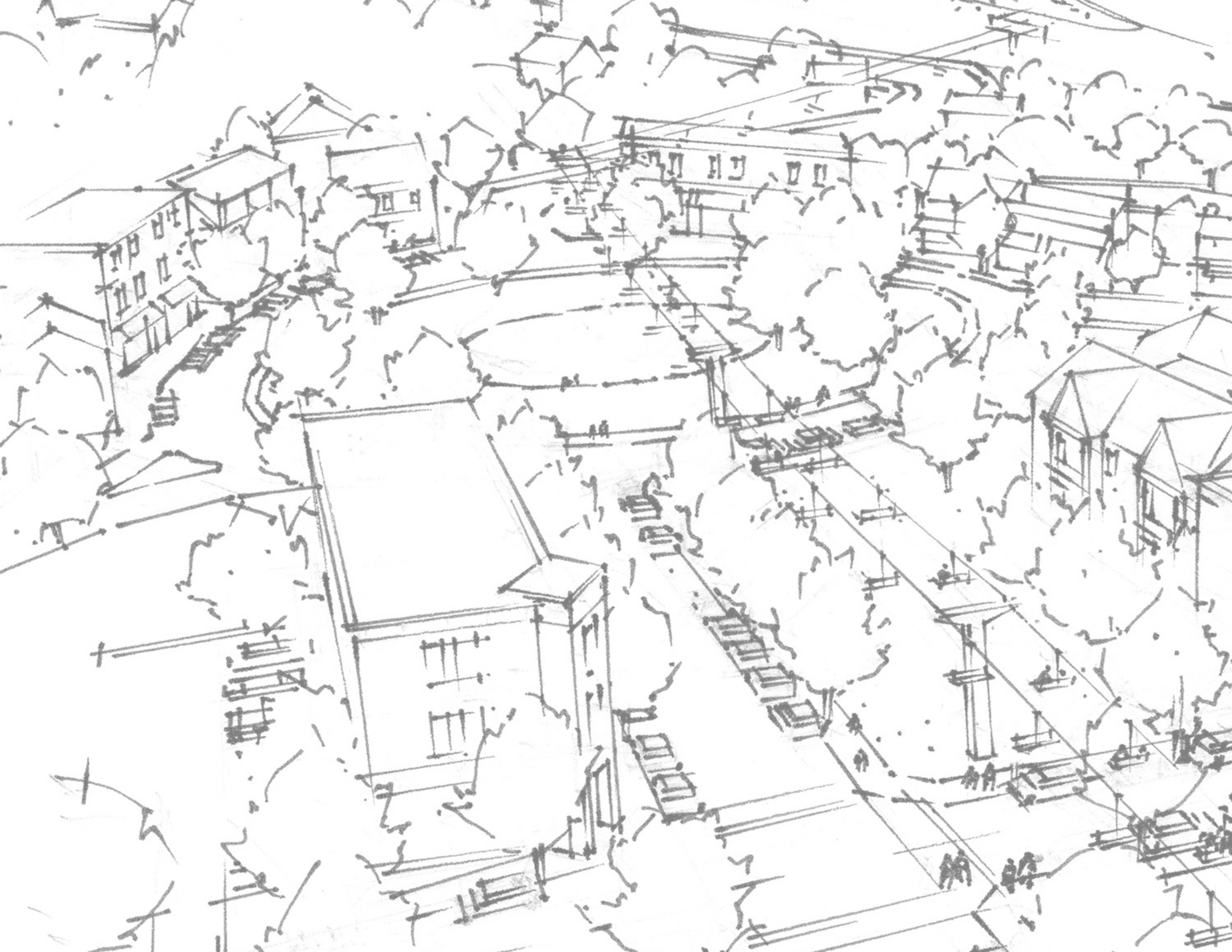
Picturesque Plan - Rendering

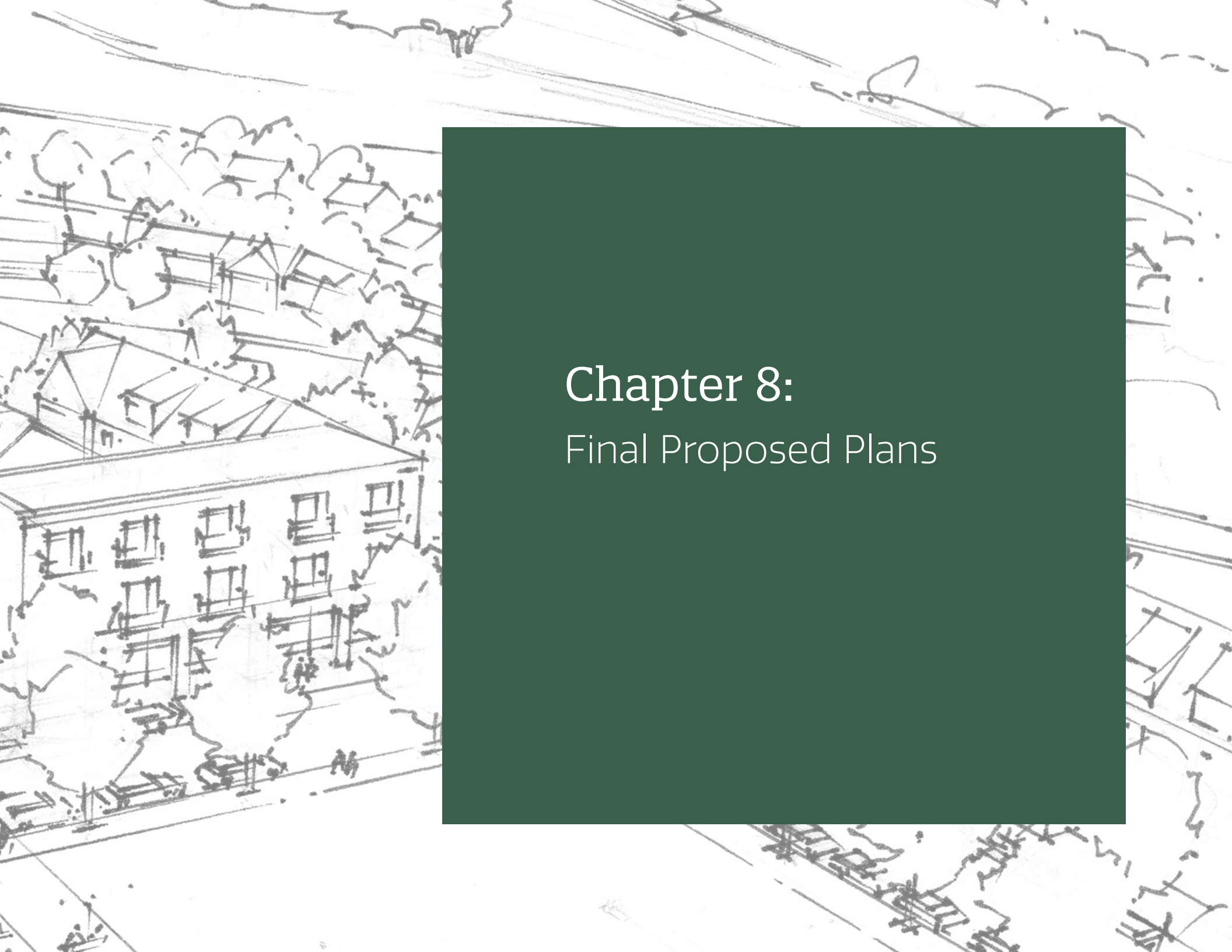


Project Site in Google Earth – Looking North



Picturesque Plan – Google Earth Overlay





Chapter 8:

Final Proposed Plans

8.1 Plan Overview and Narrative

As Town Manager Bob Pudney proclaimed early in the planning process, Beech Mountain needs a plan for managed growth before growth manages the town. The Town of Beech Mountain Commercial District Master Planning Project defines two plans that limit the impacts of inevitable growth and development, bringing new businesses and housing while keeping the area beautiful and protecting local ecosystems. These plans were designed with lots of community input and the principles of New Urbanism in mind, which provides a design framework that ensures development respects, honors, and protects the beauty of the mountain and nearby viewsheds. It seamlessly integrates commercial, residential, and public green spaces to help promote active lifestyles, accessibility, and preservation of local ecosystems – minimizing the visual and environmental impacts that traditional developments would have. Utilizing the Light Imprint technique of hydrological analysis results in more ecological, organic, and cost-effective urbanist designs. It avoids significant degradation of the environment and local ecosystems by utilizing natural drainage patterns and interconnected greenways; applying specialized techniques for paving, channeling, filtration, and storage across the rural to urban transect, ultimately reducing engineering costs. When asked about the strengths of Beech Mountain, residents overwhelmingly identified with its "small town feel". These plans will help preserve and enhance that feeling.

New Urbanist plans emphasize connectivity as much as they prioritize the environment. The whole town center was designed with a walkable scale in mind, and either end can be reached within a five-minute walk from the center. Both plans add roads to create alternative routes through town and organize development and transportation through a grid system, ensuring all roads go somewhere. Rather than focusing on sheer throughput, road designs in this plan invite people to slow down and enjoy all that Beech Mountain has to offer. In addition to new roads, new greenways and alleys criss-crossing the town are also introduced to allow pedestrians, cyclists, and skiers to get around more safely and efficiently.

This plan also introduces a ski lift that operates from the center of town, over Beech Mountain Parkway, and ends up on the resort's ski slopes. A ski lift at the center of town has been a wish since the resort's earliest development, and would complement the connectivity initiatives.

The master plan helps beautify the mountain, too. Throughout public engagement, residents identified the town dump and public works facilities as negative aspects of the downtown area. The proposed plans remove the most blighting conditions in the town, replacing them with open spaces for visitors and beautiful mixed-use centers that allow people to live and shop in the same place.

There are some key differences between the proposed plans: the Traditional Plan, which showcases a design that emphasizes connections via a coordinated grid system, organizing the mountaintop into blocks; and the Town Circle plan, which takes the grid system laid out in the previous plan and adds a traffic circle as a welcome to the town, which adds additional public space, creating a welcoming focal point for visitors entering the town. In the center of the circle, a park centered on an ice skating rink invites people to spend time there. This helps bridge the gap between the town and the ski resort, helping to harmonize the resort and town experiences.

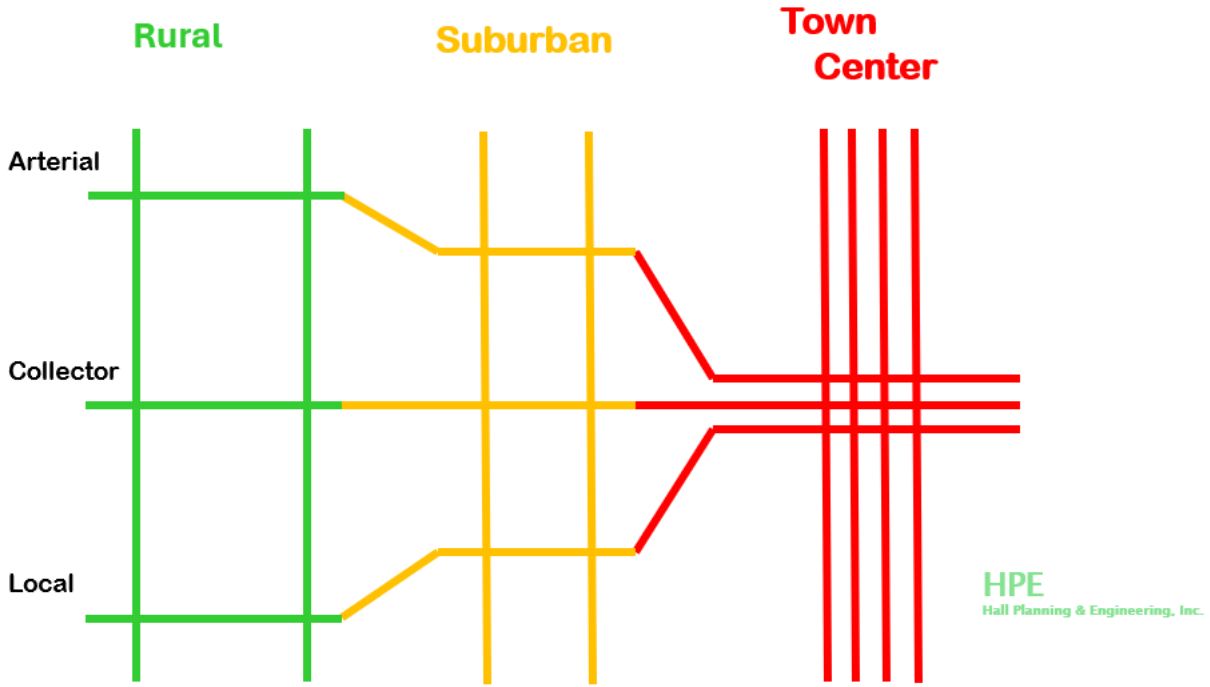
Shown below is a chart outlining maximum potential residential development under current Beech Mountain Zoning. The purpose of this study is to analyze what could currently be developed/redeveloped as a comparison to the planned residential and commercial development outlined in this report. Similar charts detail proposed residential and commercial development follow each plan in the next section.

Parcel	Acres	Total Sqft	Anything there currently?	Zoning	Watershed?	SIA Sqft	Residential allowed?	Max density under zoning code	Max units under zoning	Units single/multifamily	Total Sqft single/multifamily	Dev Sqft (assume 3 floors)	sqft parking single/multifamily	Mixed-use res units	Mixed-use sqft res	Mixed use sqft commercial	mixed use residential parking	mixed use commercial parking	sqft parking mixed use	Developed sqft (cannot exceed SIA)	Total residential units
185905282485	4.24	184694.4	No	Avery County	No	N/A	Yes	1 unit/22,000sqft	8	8	7200	2700	3520	0	0	0	0		0	6220	8
185905292206	2.22	96703.2	Town parking lot	CS	Yes	67692.24	Single Family, Mixed-Use	Site Specific, but max 50% res sqft					0	27	24300	24300	11880	28460	40340	64640	27
185905294239	1.06	46173.6	Public Works	PS	Yes	32321.52	No	No	0	0	0	0	0	0	0	0	0		0	0	0
195000206682	1.73	75358.8	No	Avery County	Yes	52751.16	Yes	1 unit/22,000sqft	2	2	1800	900	880	0	0	0	0		0	1780	2
185905184873	0.74	32234.4	Part of Town Hall lot	PS	No	N/A	No	No	0	0	0	0	0	0	0	0	0		0	0	0
185905187835	0.88	38332.8	Mini-golf course, open next to Brick Oven	CS	No	N/A	Single Family, Mixed-Use	Site Specific, but max 50% res sqft			0		0	15	13500	13500	6600	15880	22480	35980	15
185905187968	0.69	30056.4	Brick Oven	CS	Partial	N/A	Single Family, Mixed-Use	Site Specific, but max 50% res sqft		0	0	0	0	12	10800	10800	5280	12580	17860	28660	12
185905189993	1.21	52707.6	Lot behind Brick Oven, staff parking?	CS	No	N/A	Single Family, Mixed-Use	Site Specific, but max 50% res sqft			0		0	22	19800	19800	9680	22480	32160	51960	22
185905195001	0.64	27878.4	Town Hall	PS	Yes	19514.88	No	No	0	0	0	0	0	0	0	0	0		0	0	0
185905195193	0.51	22215.6	Beech Meadows Ski Shop, Chalet Rentals	CS	Yes	15550.92	Single Family, Mixed-Use	Site Specific, but max 50% res sqft			0		0	6	5400	5400	2640	6600	9240	14640	6
185905198069	0.44	19166.4	Next to Whistle Pig, realtor?	CS	Yes	13416.48	Single Family, Mixed-Use	Site Specific, but max 50% res sqft			0		0	5	4500	4500	2200	5500	7700	12200	5
185905199163	0.45	19602	Whistle Pig	CS	Yes	13721.4	Single Family, Mixed-Use	Site Specific, but max 50% res sqft		0	0	0	0	5	4500	4500	2200	5500	7700	12200	5
185905281794	4.667	203294.52	Overflow parking	Avery County	No	N/A	Yes	1 unit/22,000sqft	9	9	8100	2700	3960	0	0	0	0		0	6660	9
185905282963	1.01	43995.6	Sledding Hill	Mostly CS, sliver PS	No	N/A	Single Family, Mixed-Use	Site Specific, but max 50% res sqft			0		0	18	16200	16200	7920	19180	27100	43300	18
185905284954	0.43	18730.8	Dog Park	PS	No	N/A	No	No	0	0	0	0	0	0	0	0	0		0	0	0
185905293057	0.16	6969.6	Public Works	PS	Yes	4878.72	No	No	0	0	0	0	0	0	0	0	0		0	0	0
185905294047	0.2	8712	Public Works	PS	Yes	6098.4	No	No	0	0	0	0	0	0	0	0	0		0	0	0
185905294536	1.02	44431.2	Wynn Memorial Park, Public Works	PS	Yes	31101.84	No	No	0	0	0	0	0	0	0	0	0		0	0	0
185906295571	0.55	23958	Public Works	PS	Yes	16770.6	No	No	0	0	0	0	0	0	0	0	0		0	0	0
185906298401	6.44	280526.4	No	R3A	Yes	196368.48	Single Family, Multifamily	16 bedrooms/acre	96	96	86400	28800	42240	0	0	0	0		0	71040	96
185906387973	6.99	304484.4	No	Avery County	No	N/A	Yes	1 unit/22,000sqft	13	13	11700	3600	5720	0	0	0	0		0	9320	13
195000203276	1.72	74923.2	House on property	Mostly CS, some CS2, s	Yes	52446.24	Single Family, Mixed-Use	Site Specific, but max 50% res sqft			0		0	22	19800	19800	9680	22480	32160	51960	22
185905294829	2.79	121532.4	House on property	Mostly CS, some CS2	Yes	85072.68	Single Family, Mixed-Use	Site Specific, but max 50% res sqft			0		0	35	31500	31500	15400	36640	52040	83540	35
185906295186	1	43560	Storage Units	CS2	Yes	30492	Single Family	1 unit/acre bc watershed	1	1	900		440	0	0	0	0		0	440	1
185906298372	5.89	256568.4	Public Works	PS	Mostly	179597.88	No	No	0	0	0	0	0	0	0	0	0		0	0	0

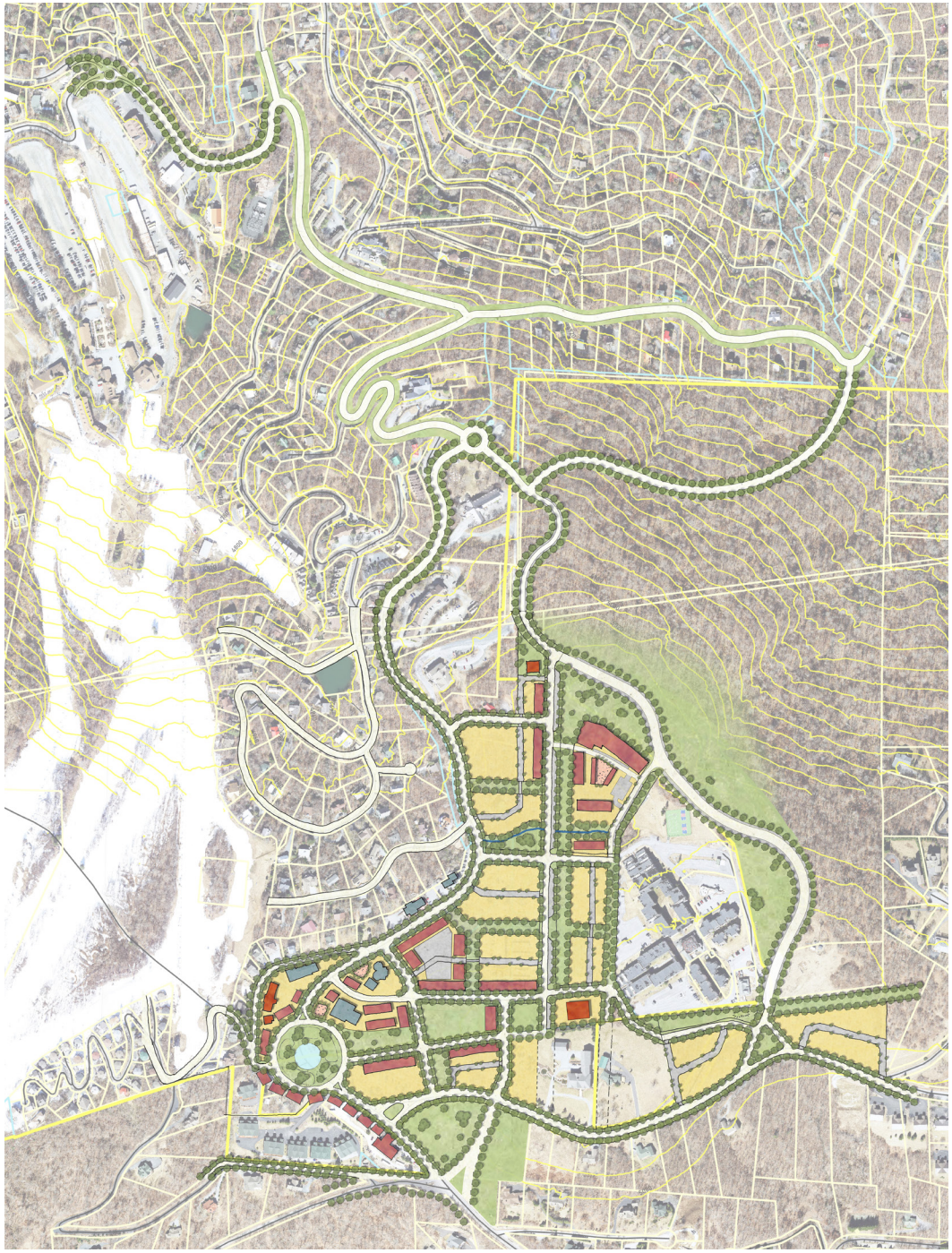
Total New De	296
Sqft residentia	116100
Sqft parking	56760
Sqft commerc	150300

8.2 Street Network and Street Sections

As part of this project and proposal, a new street network has been proposed to create more connectivity in the town and to alleviate congestion in the proposed downtown core. This new network follows current NCDOT context and functional classification using a hierarchy of larger arterial roads like Beech Mountain Parkway down to smaller local streets. Additionally, new conceptional street sections were produced for the downtown plan. These sections include service alleys for businesses and residences, a new proposed parkway with large green verges for plantings and snow/runoff, a residential "yield street" design with parallel parking, a broad downtown street with parking and wide sidewalks, a parkway with angled parking, and a traffic circle with greenspace. The graphic below demonstrates how each street type flows together with density increasing at the town center.



Street hierarchy following NCDOT criteria



Also included in this plan is a new proposed parkway connection through property owned by the Elder family. This new connection to Tamarack Road and the traffic circle will help to better circulate traffic into the new downtown core. This will also provide additional routes for Fire and EMS in case of emergencies. A second traffic circle is also proposed at the entrance to Beech Mountain Resort to alleviate traffic congestion there.

Trip Generation

Estimates for daily trip generation were assembled based on the general development concept sketches. The trip projection estimates were assembled through a combination of data available from the Institute of Transportation Engineers Trip Generation Manual, and for uses not described in the manual engineering judgment was used. Engineering judgment was applied for "mode split" (percentage of trips made by modes other than the automobile) due to the compact mixed use characteristics and general context of types of trips anticipated for those visiting Beech Mountain. Trips associated with local resident development was also factored into the estimates.

Assumptions for types of uses were required to arrive at trip projections. Based on the approximate anticipated development program as shown on the town design concepts, the following uses and densities were used for developing the trip generation estimates.

Type	LU Code	Desciption	quantity	
Commercial Uses	930	Fast Casual Dining	21,000	s.f.
	936	Coffee/Donut Shop without Drivethru	2,000	s.f.
	971	Brewery / Tap Room	4,000	s.f.
	918	Hair Salon	5,000	s.f.
	975	Drinking Place	7,500	s.f.
	712	Small Office Building	15,000	s.f.
	720	Medical/Dental Office	5,000	s.f.
	816	Hardware Store	4,000	s.f.
	----	Convenience Store	6,000	s.f.
	----	Specialty Clothing Goods	11,500	s.f.
	n/a	Boutique / Crafts	34,300	s.f.
Residential / Lodging	221	apartments	127	units
	220	townhomes cottages	212	units
	310	hotel	192	rooms

Land use assumptions

For the commercial uses, except for hardware store, an assumption was made that 50% of the trips would be made by visitors who walk. This means that they are staying in the town and due to the close proximity of the uses they are able to walk versus taking a car to that specific business. There is also credit given for trip chaining and internal capture trips. These are trips (or stops at a business) that are on the route and part of a trip made for other purposes.

Based on the previous chart, we would expect, at high tourist season, that there could be a total of approximately 800 new hourly trips in the town accessing the new businesses and residential uses, however we're assuming that at least 50% of those are non-vehicular. This means 400 new peak hourly trips, totaling 400 car trips, were distributed across the new road connections, to local uses within the town. The other 400 are assumed to be pedestrians. On a daily basis this would equate to approximately 8,000 total trips, however reduced by at least 50% for walking and trip chaining in the commercial district. Thus, on a daily basis, the 4,000 daily vehicular trips will be across the new town center, and in each direction along Beach Mountain Parkway to points beyond the town center. Of the trips traveling into and then leaving the town center, we estimate that they would be distributed evenly with a distribute of 1200 cars traveling to the south and 1,200 to the north, on a daily basis.

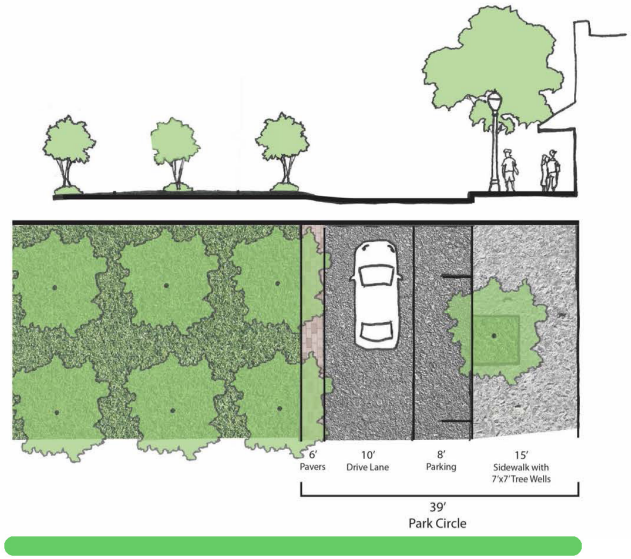
However it should be noted that the percentage of non-automobile trips could be significantly higher than assumed in this "highest traffic" analysis scenario. The town design encourages a walking environment, thus these estimates should be considered conservatively high and a highest case scenario.

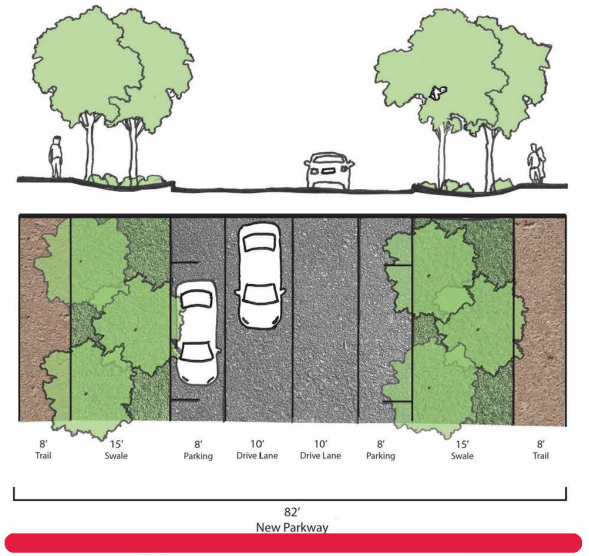
Daily	8,000
Walk	4,000
Car	4,000
PM Peak Hourly	800
Walk	400
Car	400

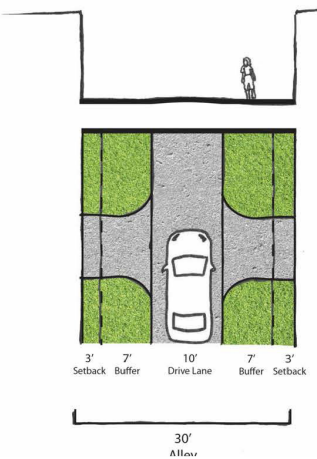
Daily and hourly trips

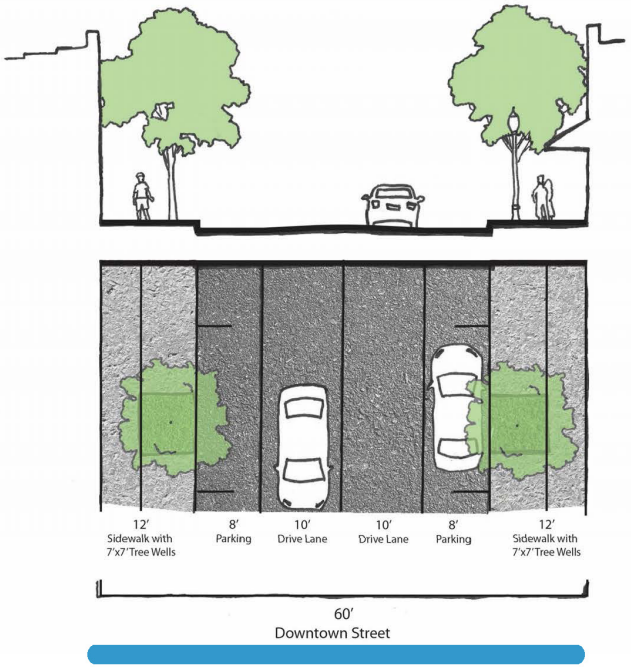
How are trips counted?

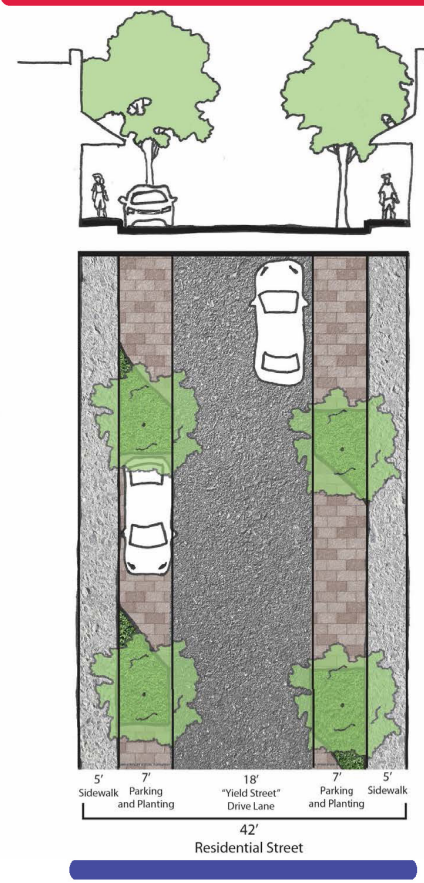
If somebody drives to a store and then returns home, then that is considered two trips – one to the store and the other from the store.

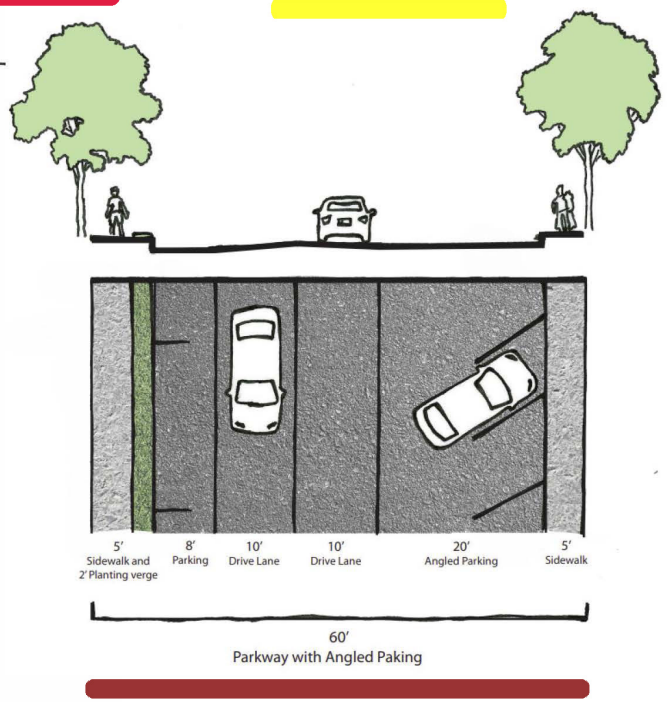

6'
Pavers
10'
Drive Lane
8'
Parking
15'
Sidewalk with
7'x7' Tree Wells
39'
Park Circle

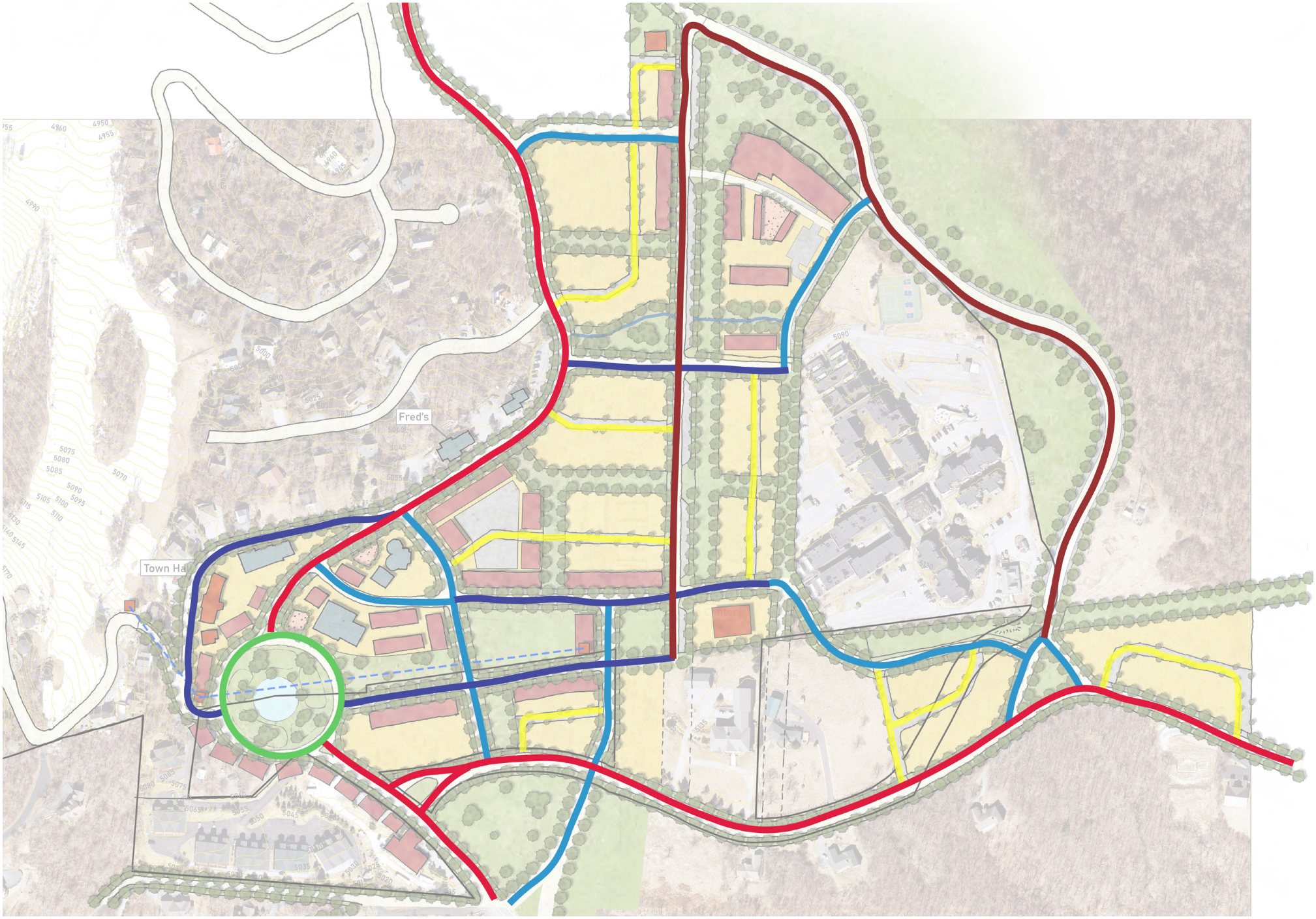

8'
Trail
15'
Swale
8'
Parking
10'
Drive Lane
10'
Drive Lane
8'
Parking
15'
Swale
8'
Trail
82'
New Parkway


3'
Setback
7'
Buffer
10'
Drive Lane
7'
Buffer
3'
Setback
30'


12'
Sidewalk with
7'x7' Tree Wells
8'
Parking
10'
Drive Lane
10'
Drive Lane
8'
Parking
12'
Sidewalk with
7'x7' Tree Wells
60'
Downtown Street


5'
Sidewalk
7'
Parking
and Planting
18'
"Yield Street"
Drive Lane
7'
Parking
and Planting
5'
Sidewalk
42'
Residential Street


5'
Sidewalk and
2' Planting verge
8'
Parking
10'
Drive Lane
10'
Drive Lane
20'
Angled Parking
5'
Sidewalk
60'
Parkway with Angled Paking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Town Ha

8.3 Proposed Final Plans



Traditional Plan



Traditional Plan – Roadways, Alleys, and Trails



Traditional Plan – Greenspace



Traditional Plan – Developable Area



Traditional Plan – Civic Buildings + 5 Minute Walk Radius

Traditional

Block	Total SF	Comm GSF	# Apt	# Townhouse	# Cottage	# Hotel Units	Notes / Other
A	72679	7701	8				2 story Town Hall
B	105910	25845				124	3 story Acardi Hotel / Dining and retail
C	53795	14063	28		10		3 story
D	14030				5		
E	17063	8207	16				3 story
F	30420	2146	2				
G	23502	8347	18				3 story
H	41851	6000	6		3		2 story
I	29552	9900	20				3 story
J	26960				10		
K	35557	2000	2		7		
L	28041	1000	1		7		
M	21854				10		
N	16473				6		
O	51787				14		
P	12940		2	5			
Q	19828			11	11		
R	124050	30135	24	8		68	Walt Hotel
S	19634			12			
T	12357			12			
U	15687			10			
V	8603			10			
W	24007				7		
X	49389				10		Library
Y	18864				7		
Z	38094				12		
AA	46563				15		
AB	31217				10		
Total	990,707	115,344	127	68	144	192	- -
Total DU	339						
# Ac	22.74						
Densities / Ac		5,072	6	3	6	8	
Gross DU/A	15						
Parking Needs		115	127	102	144	232	720
Parking Availability							1290 on street
Non-SF off-street							365
Buckeye Lake Additional							160
TOTAL PARKING							1815

Preliminary calculations for development and parking

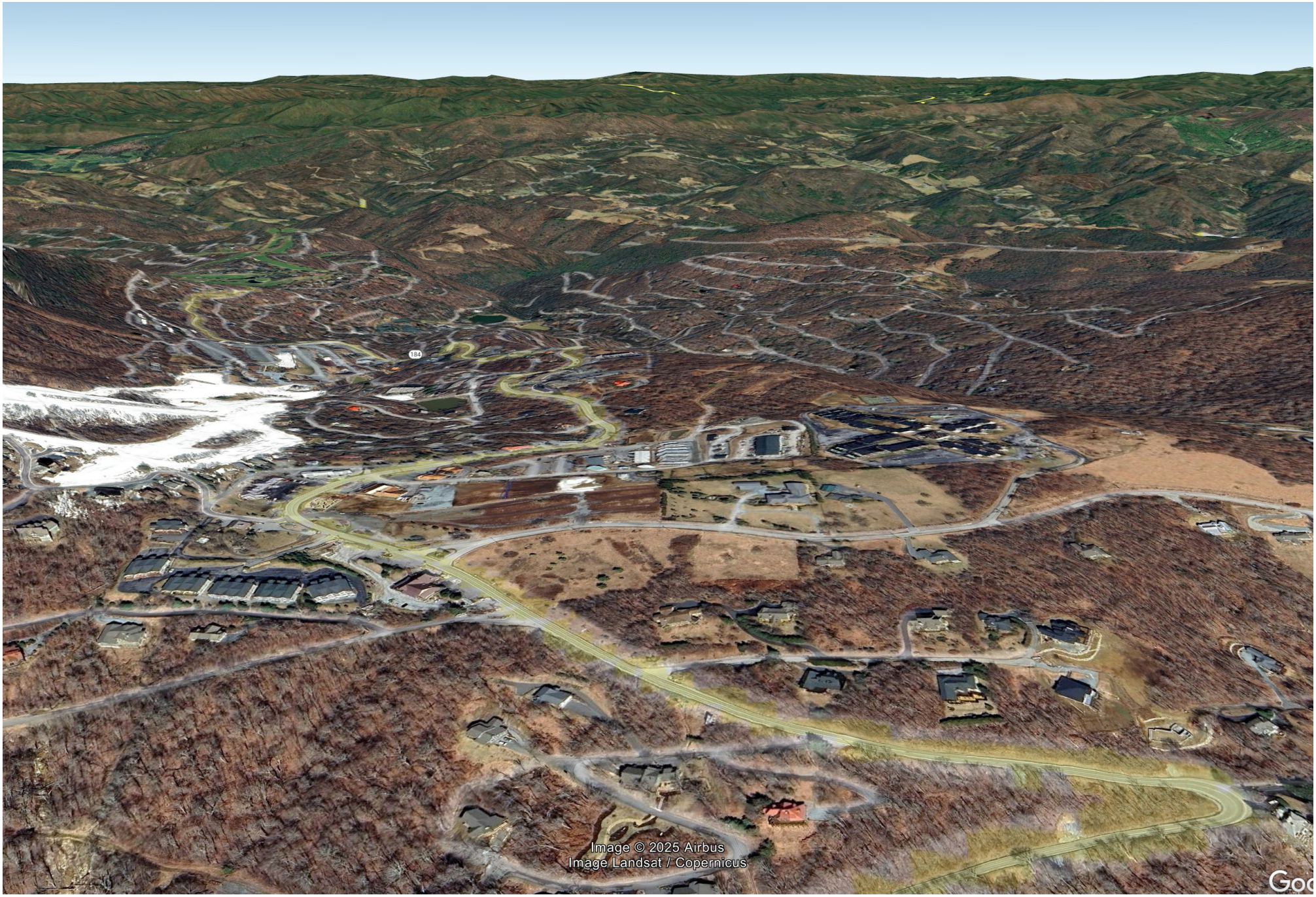
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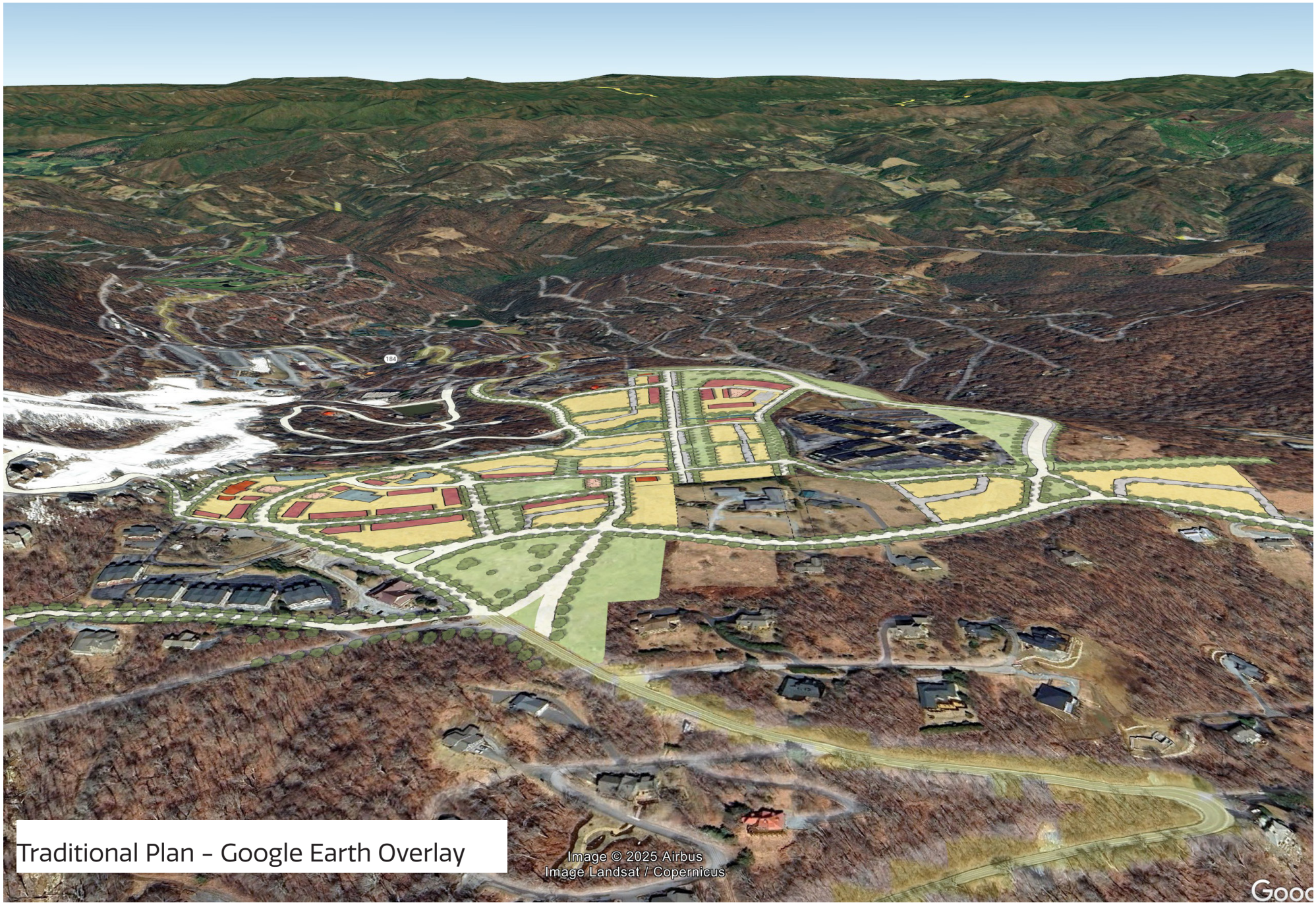
Image © 2025 Airbus
Image Landsat / Copernicus



Traditional Plan – Google Earth Overlay


Image © 2025 Airbus
Image Landsat / Copernicus



Traditional Plan – Google Earth Overlay



Beech Mountain Parkway – Traditional Plan



Town Green – Traditional Plan


Fred's
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Town of Beech Mountain, NC
Downtown Plan
Project Area Map

Town Circle



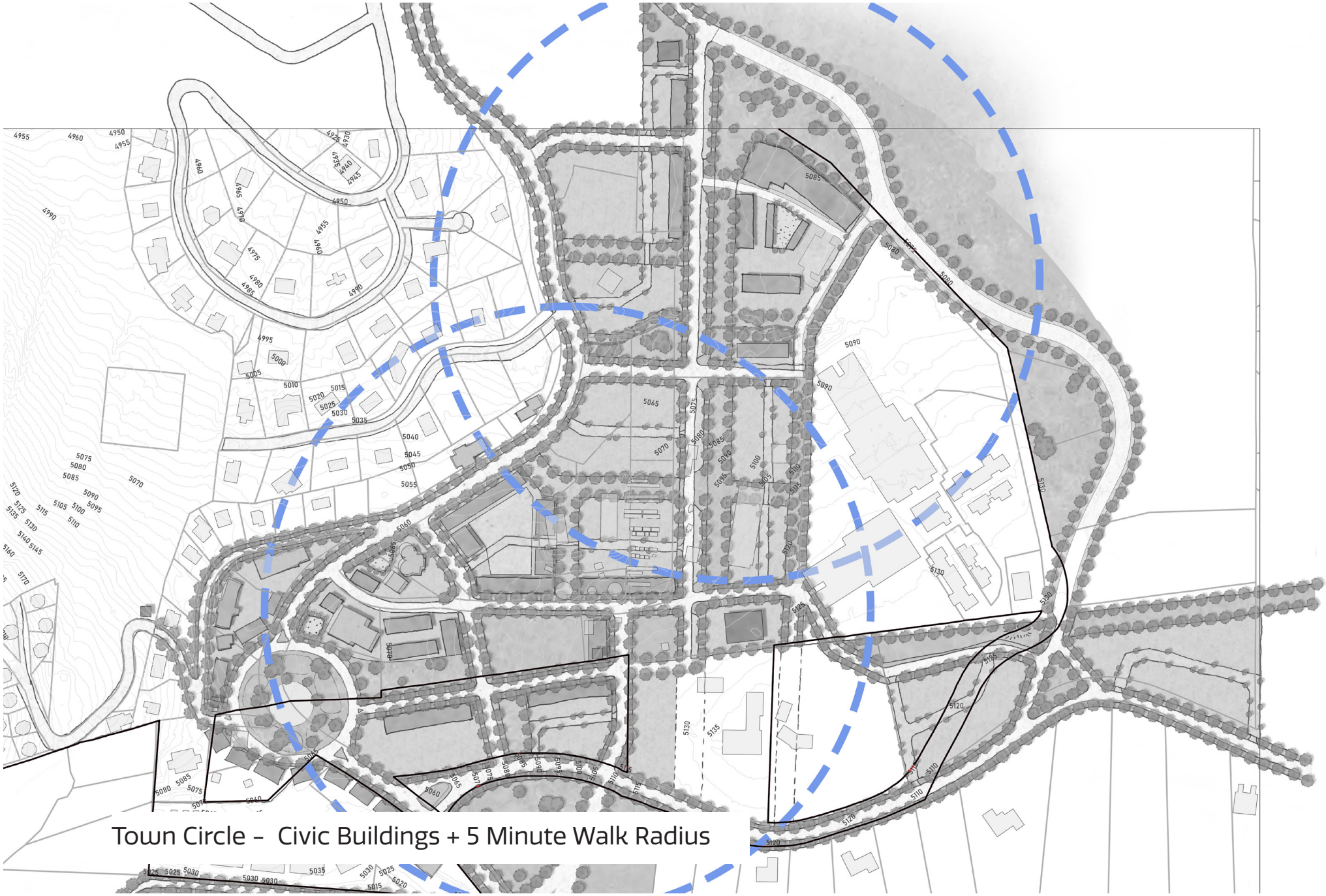
Town Circle – Roadways, Alleys, and Trails



Town Circle – Greenspace



Town Circle – Developable Area



Town Circle – Civic Buildings + 5 Minute Walk Radius

Hybrid (Traditional + Circle)

Block	Total SF	Comm GSF	# Apt	# Townhouse	# Cottage	# Hotel Units	Notes / Other
A	58168	7388	7				2 story Town Hall
B	52919	14255				86	3 story Acardi Hotel / Dining and retail
C	49382	10220			10		3 story
D	14030				5		
E	17063	8207	16				3 story
F	30420	2146	2				
G	23502	8347	18				3 story
H	41851	11309	12	8			2 story
I	29552	9900	10	10			3 story
J	26960				10		
K	35557				9		
L	28041				7		
M	21854				10		
N	16473				6		
O	51787				20		
P	12940			5	3		
Q	19828			11	5		
R	124050	30135	24	8		68	Walt Hotel
S	19634			12			
T	12357			12			
U	15687			10			
V	8603			10			
W	24007						
X	31552				10		Library
Y	18864				7		
Z	38094				12		
AA	46563				15		
AB	31217				10		
Total	900,955	101,907	89	86	139	154	- -
Total DU	314						
# Ac	20.68						
Densities / Ac		4,927	4	4	7	7	
Gross DU/A	15						
Parking Needs		102	89	129	139	194	653
Parking Availability							1288 on street
Non-SF off-street							365
Buckeye Lake Additional							160
TOTAL PARKING							1813

Preliminary calculations for development and parking

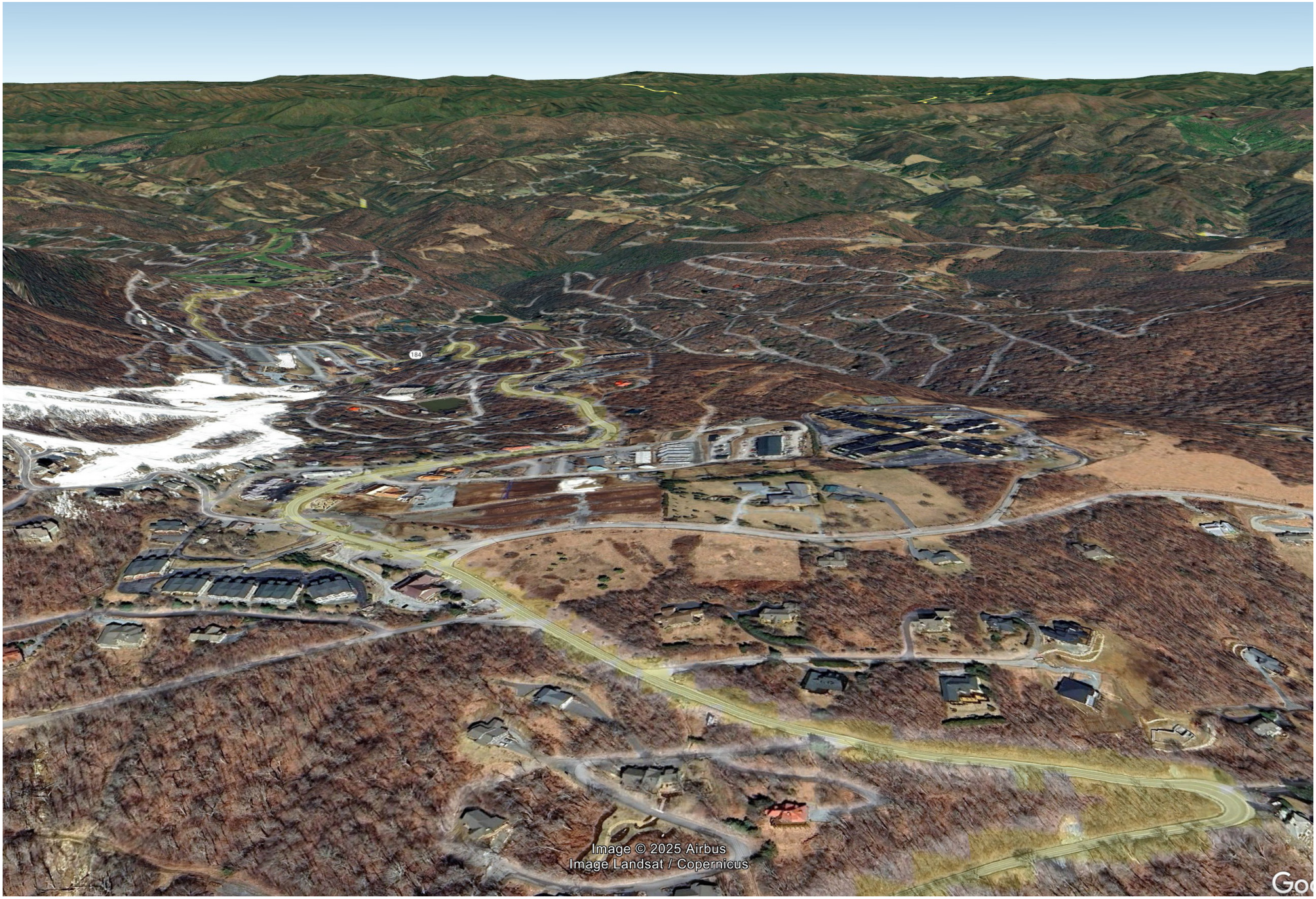

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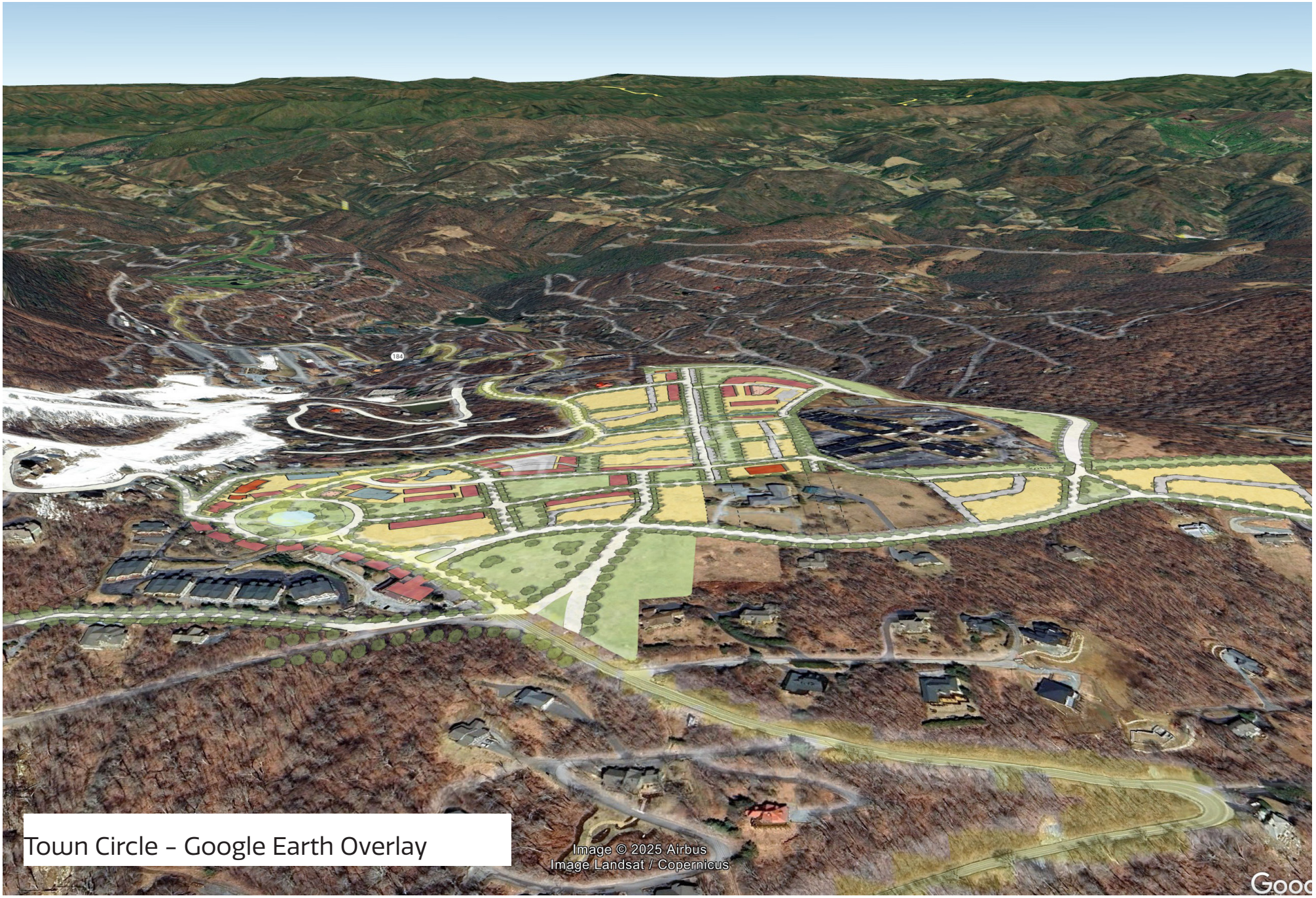
Image © 2025 Airbus
Image Landsat / Copernicus



Town Circle – Google Earth Overlay


Image © 2025 Airbus
Image Landsat / Copernicus



Town Circle – Google Earth Overlay



Town Circle



Town Circle with a Proposed Ski Lift



Greenway – Both Plans



Housing Styles – Both Plans