



# FLORIDA DEVELOPMENT

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*EGR495 ARCHITECTURE STUDIO 1*

Presented and Designed by :  
Macey C. Coll

**2025**

<https://mcollstudio.wixsite.com/mcollstudio>



# Meet the Architect

I am a junior Education major at Elizabethtown College with a minor in Architectural Studies, class of 2027.

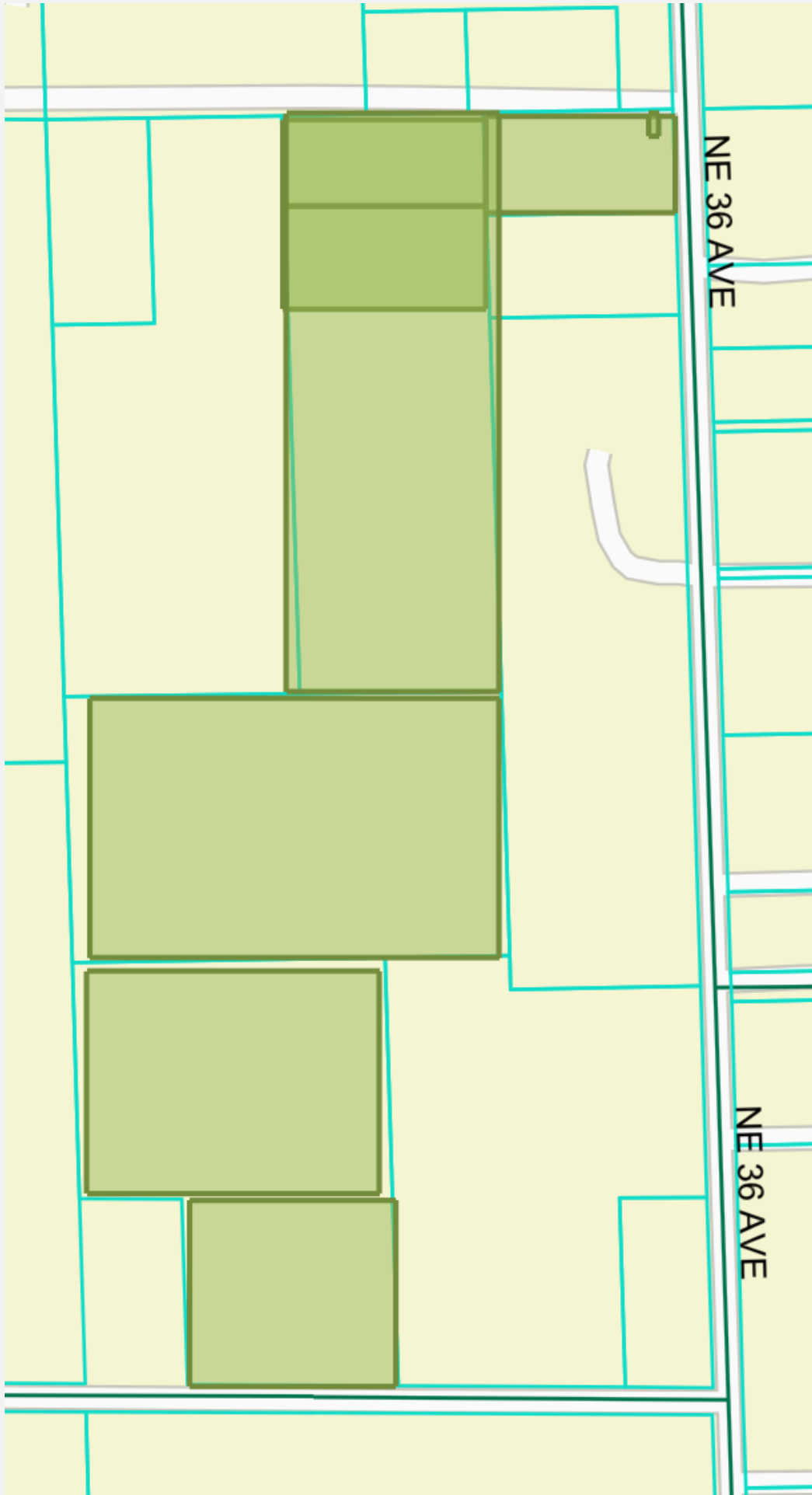
My interest in architecture and construction began with watching my grandfather and father build and repair things. As I got older, I started helping them and quickly fell in love with creating, designing, and building spaces where people can make lasting memories.



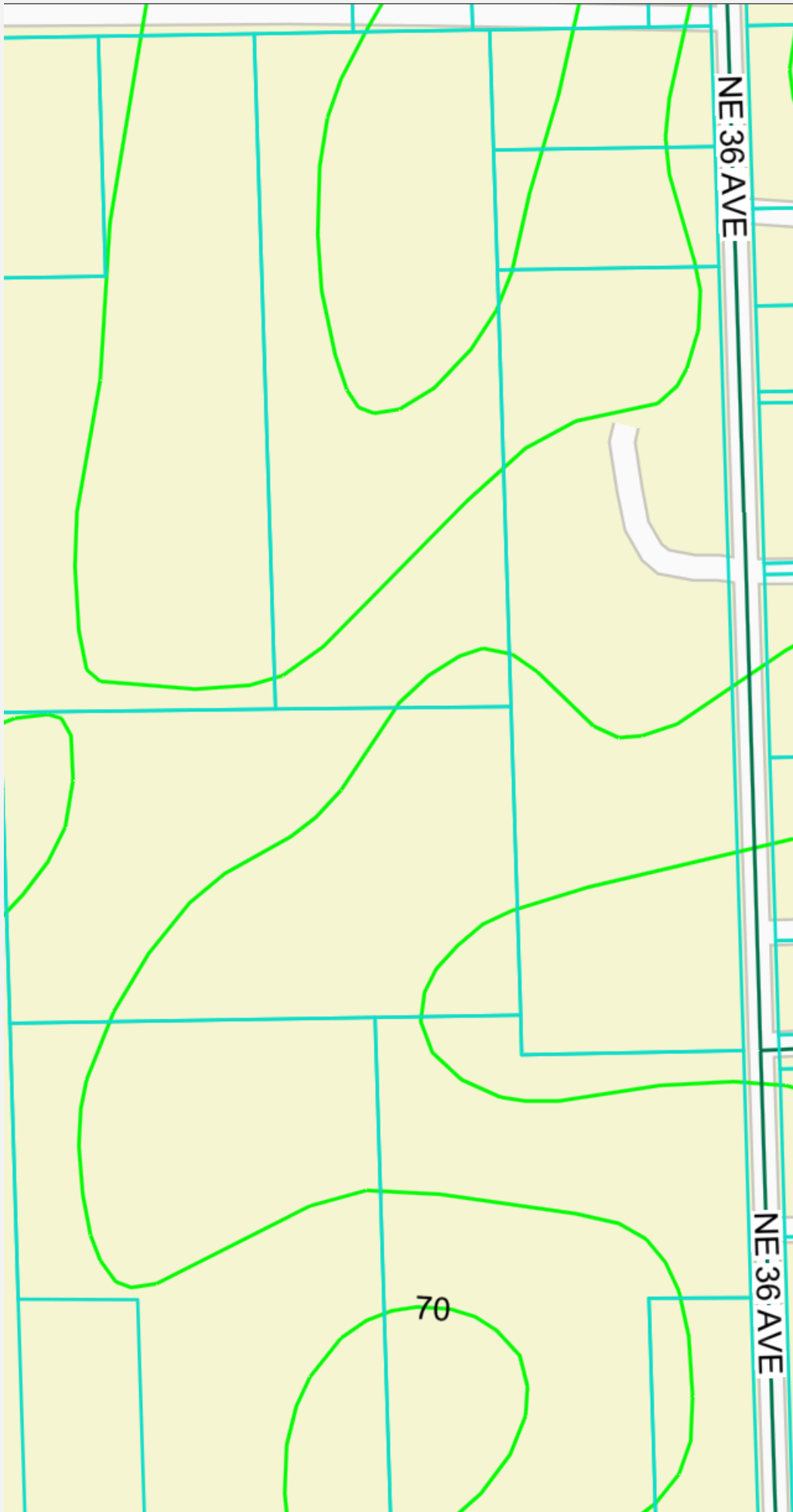
While my primary focus is education, studying architecture has given me a deeper understanding of how environments influence learning, community, and everyday life. Through my coursework, I've developed skills in perspective drawing and model-making, and my studies have helped me explore how space and form impact human behavior and well-being.

## Executive Summary

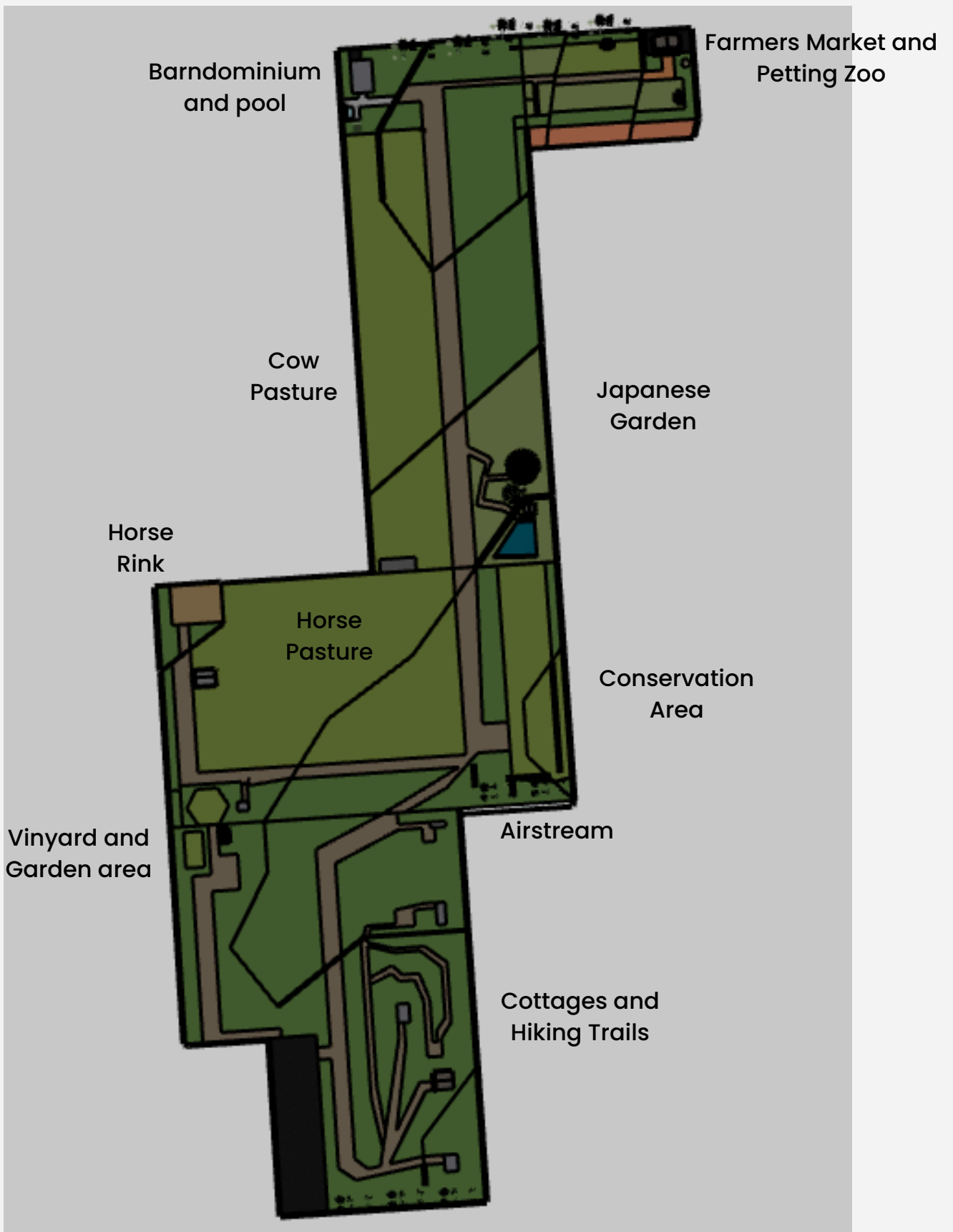
*The proposed development for the Florida Agri-Business Contest transforms this 50-acre property in Anthony, FL, into a cohesive, multi-use location that balances agricultural growth, modern living, and agri-tourism. The site plan successfully integrates key infrastructure with upscale amenities unique to the client's interests. Architecturally, the design blends contemporary and rustic to create a unique country vernacular. This plan minimizes the environmental impact by limiting the earthwork needed and is fully compliant with all Marion County Zoning constraints.*



Parcels highlighted in green



Parcels with Topography

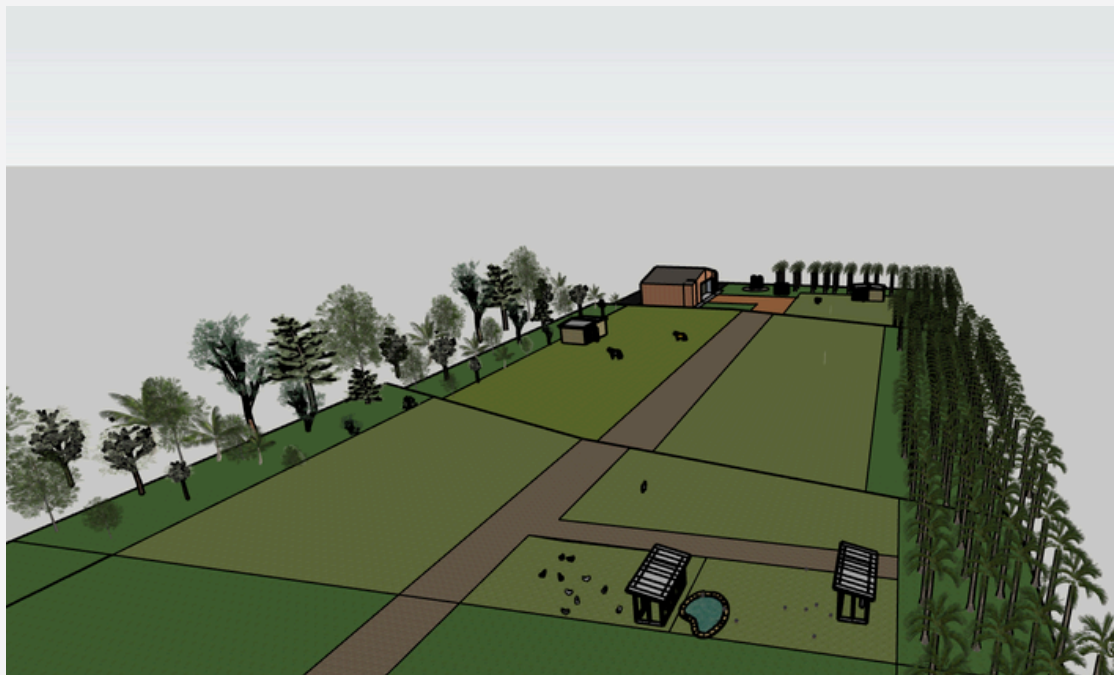


Site plan with foot prints and Topography

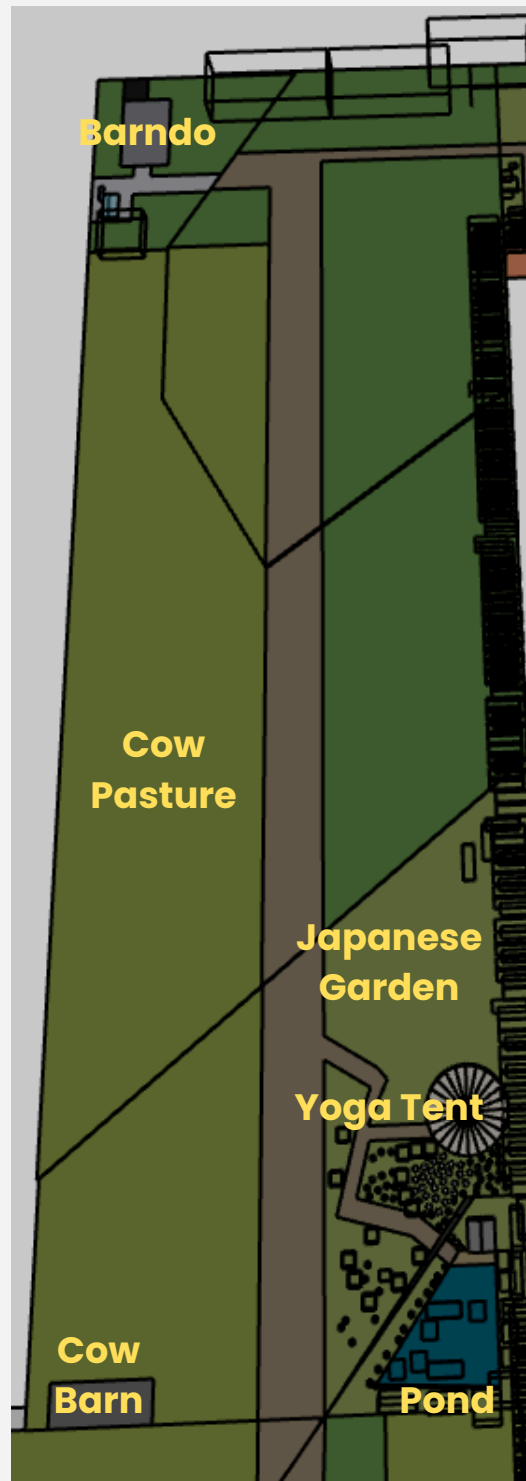
## Arial View of Petting Zoo and Farmers Market



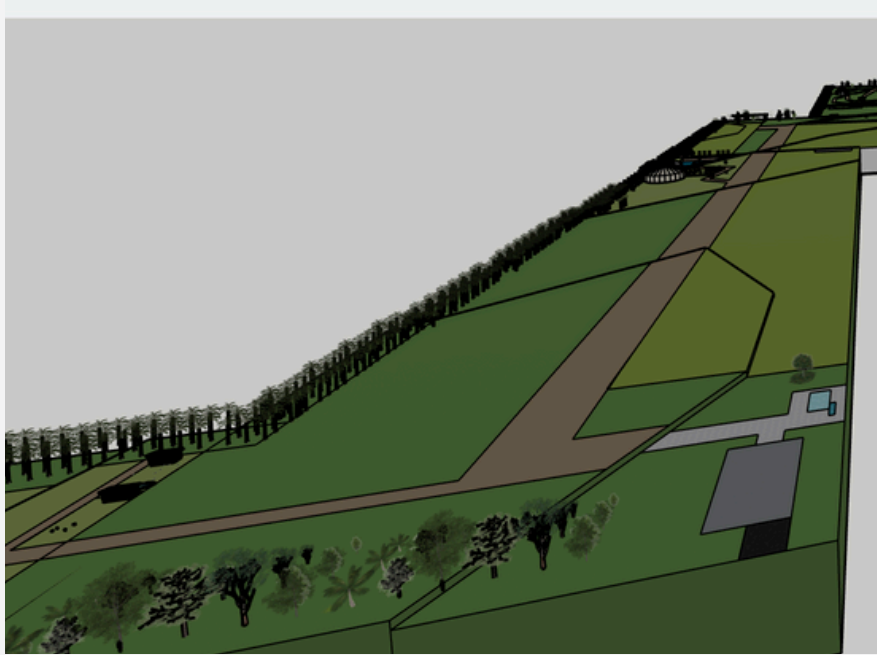
## Perspective Views of Farmer's Market and Petting Zoo



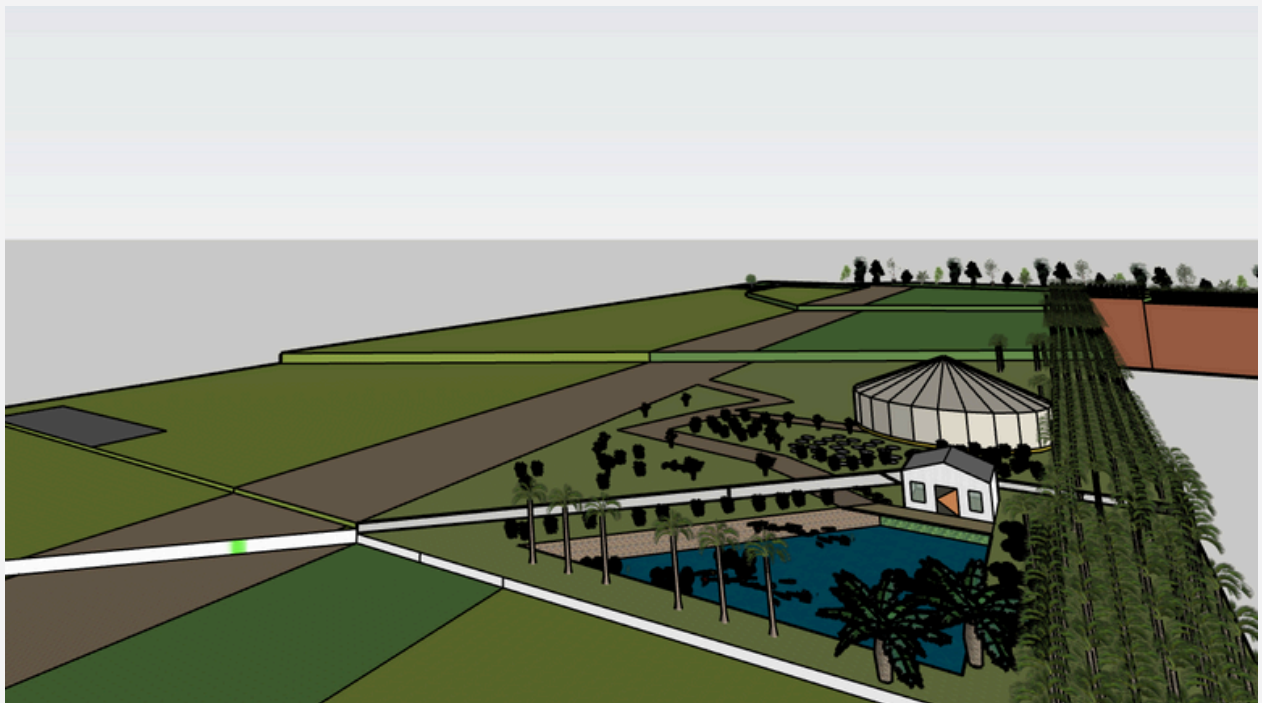
## Arial View of Parcel containing Barndominium, Cow pasture, and Japanese Garden



## Perspective Views of Parcel containing Barndominium, Cow pasture, and Japanese Garden

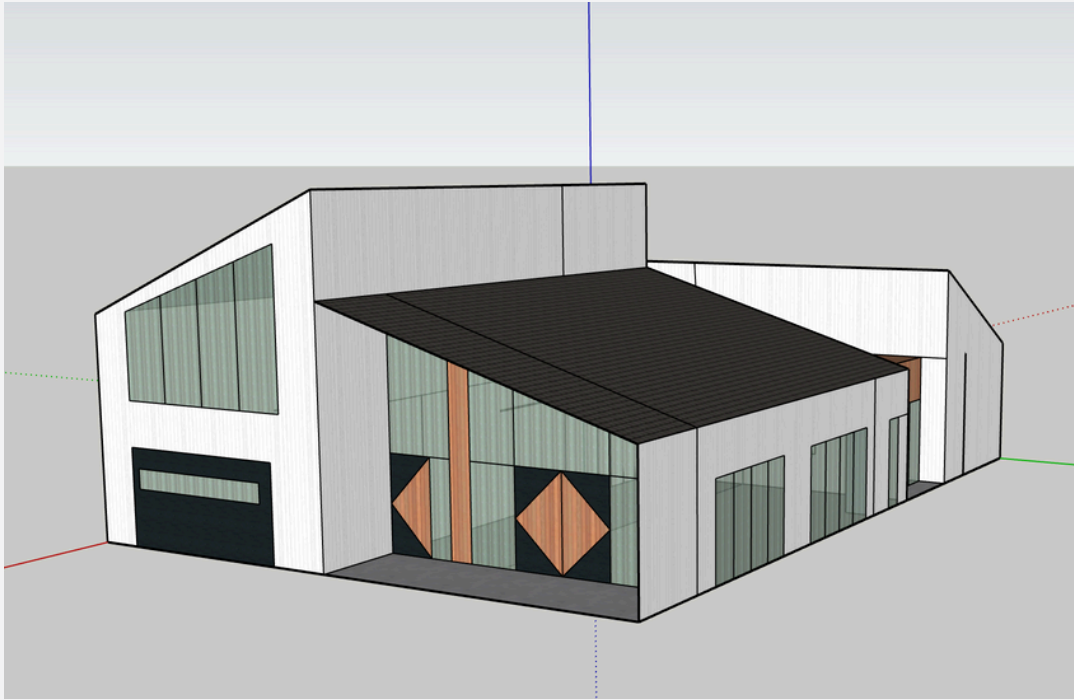


Barndominium Side (Far right corner of property)

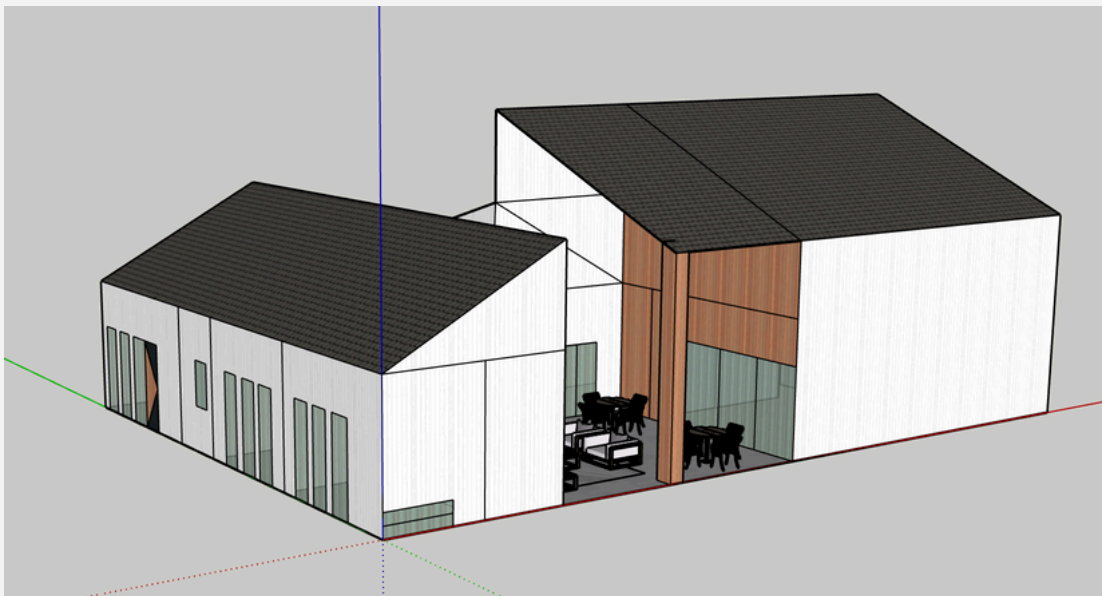


Japanese Garden Side (Back left corner of parcel)

## Perspective Views of Barndominium

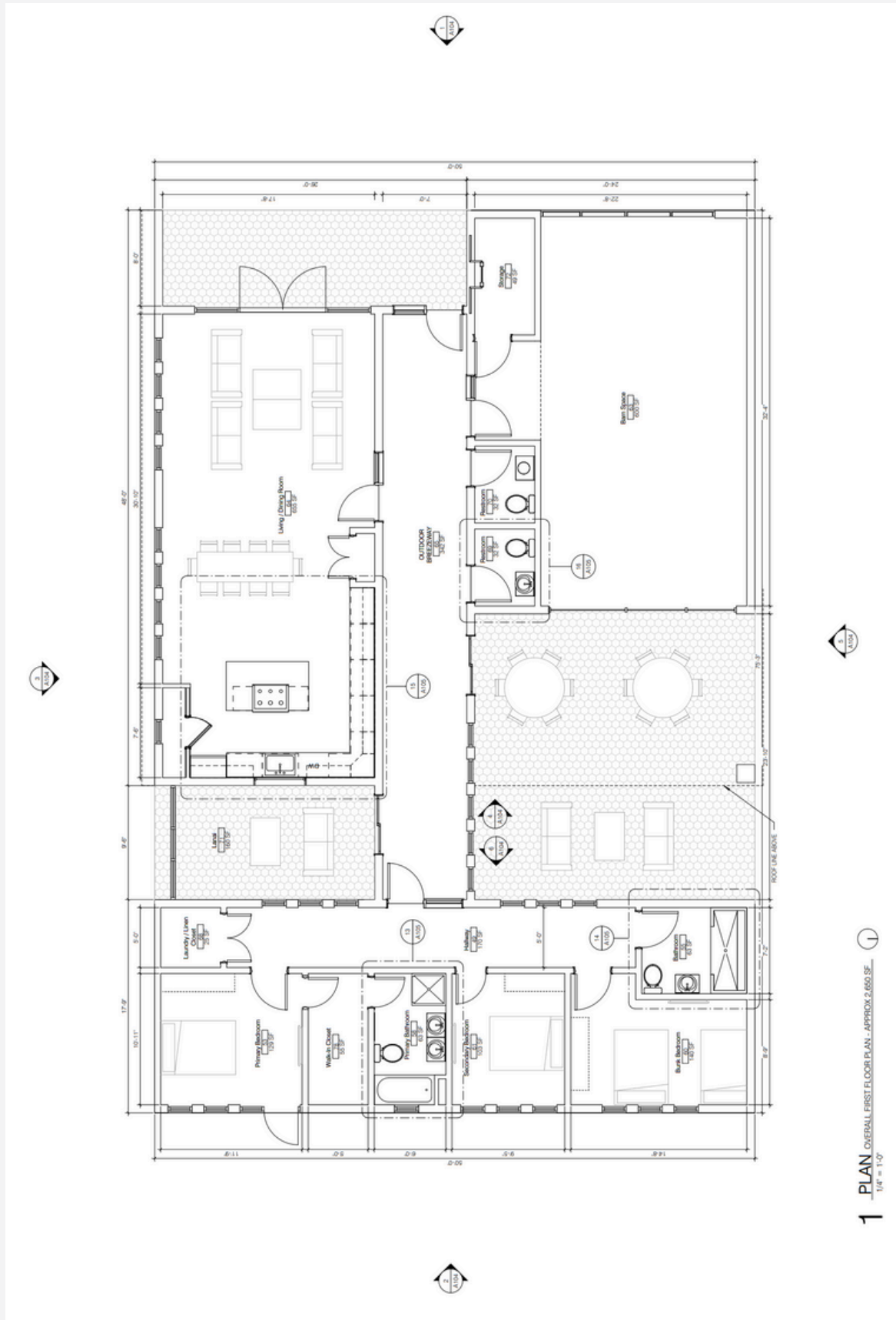


Front

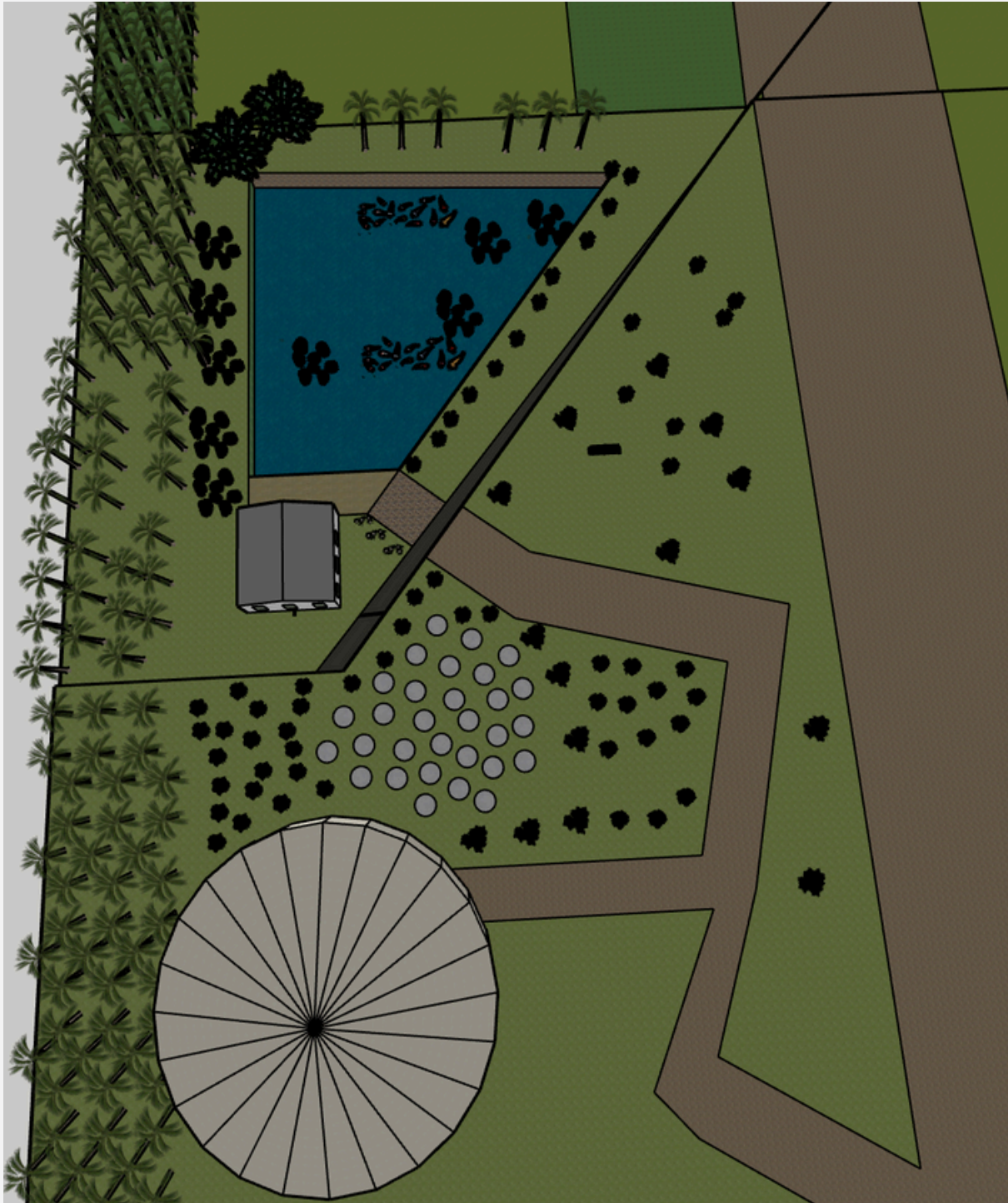


Back

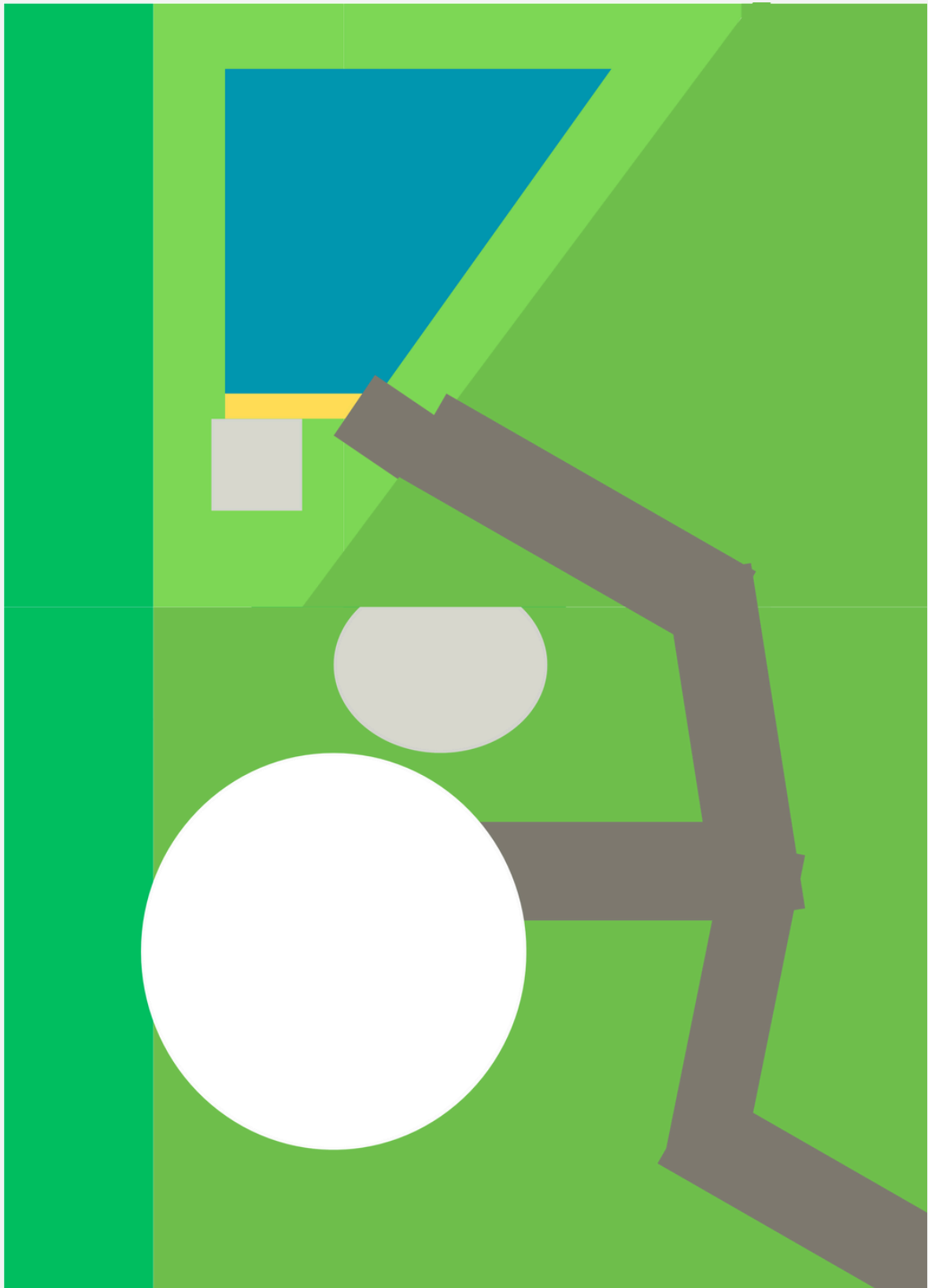
# Barndominium Floor Plan



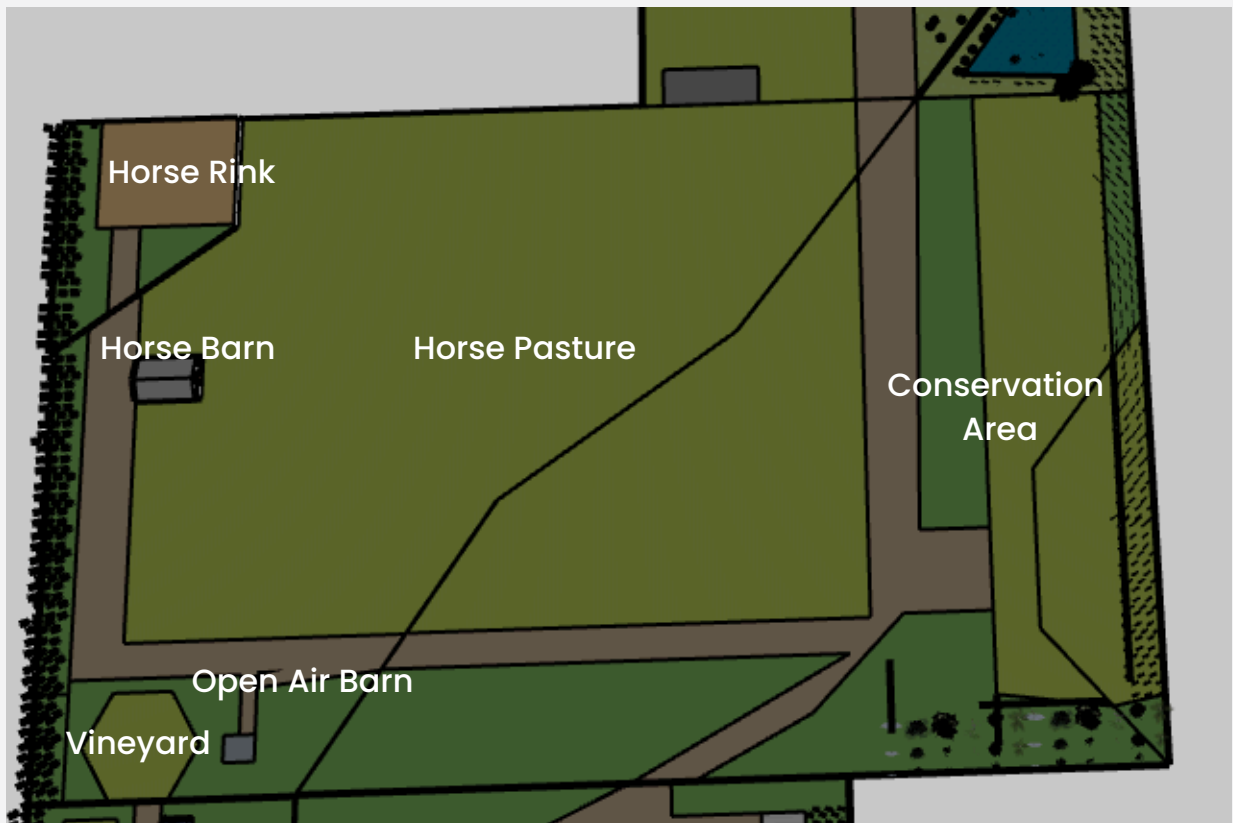
## Arial View of Japanese Garden



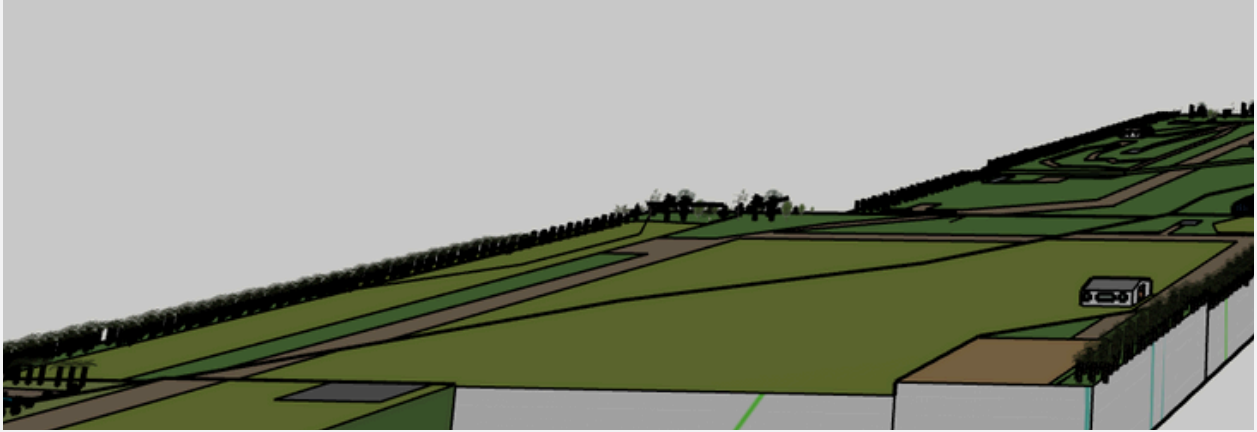
## Site plan of Japanese Garden



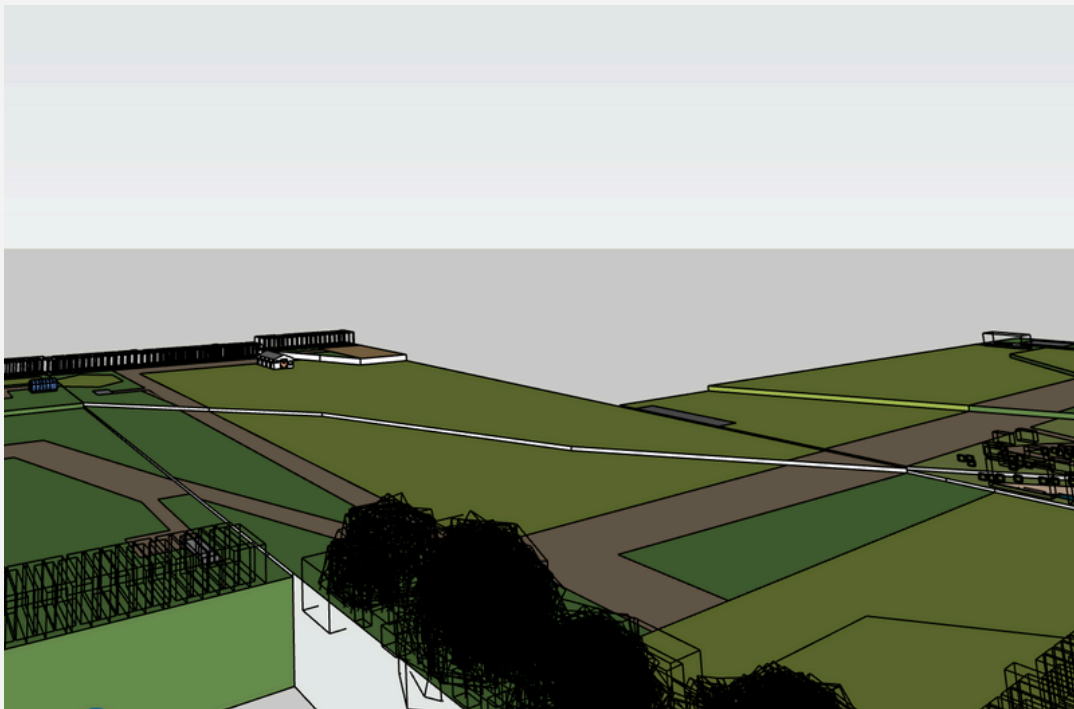
Arial View of Parcel containing Horse Pasture,  
Horse Rink, Vineyard, Open-air barn and  
Conservation Area



## Perspective Views of Parcel containing Horse Pasture, Horse Rink, Vineyard, Open Air Barn and Conservation Area



Horse Rink Side (right corner of parcel)



Conservation Side (Back left corner of parcel)

## Perspective Views of Horse Barn

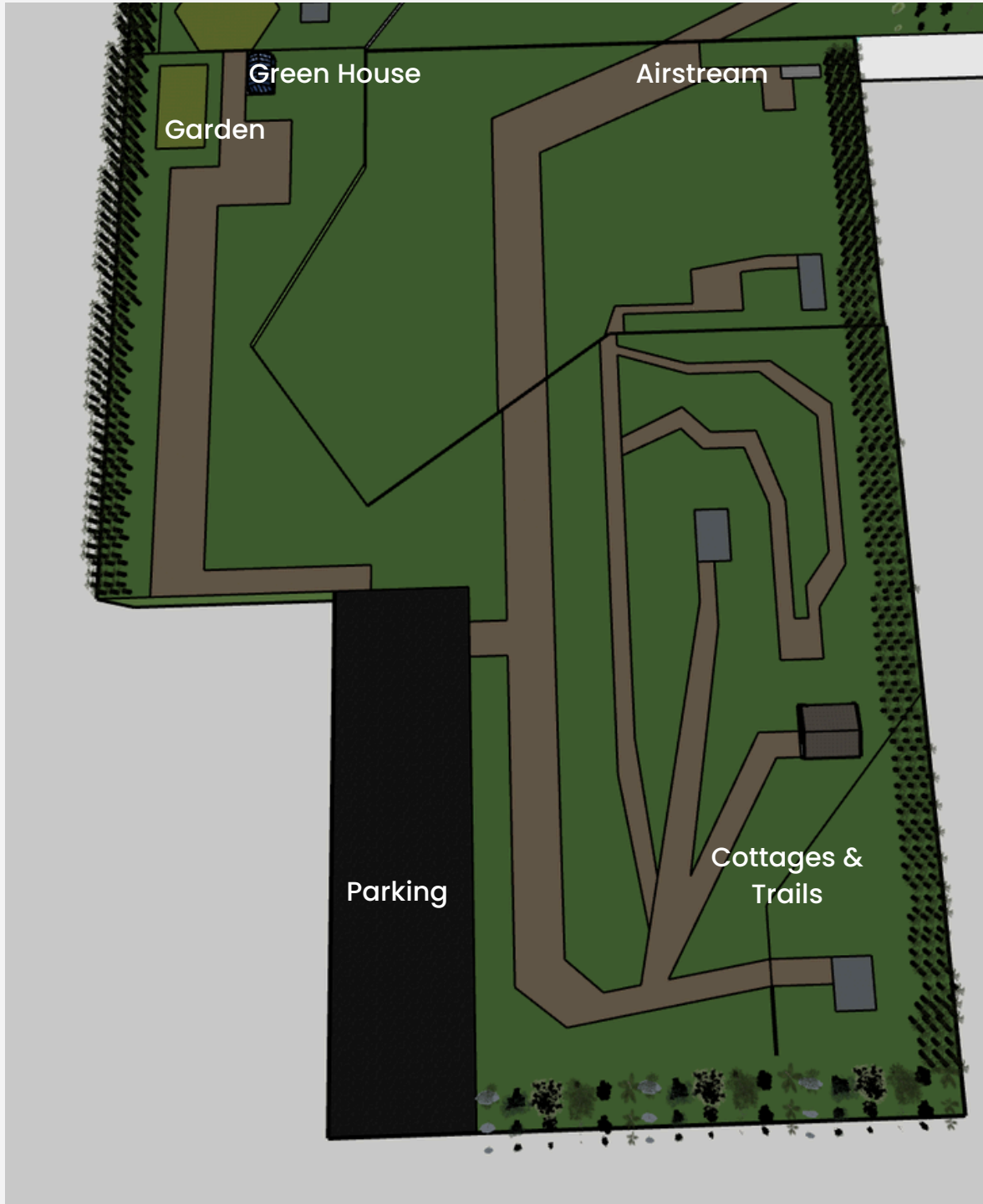


Horse Barn Floor Plan

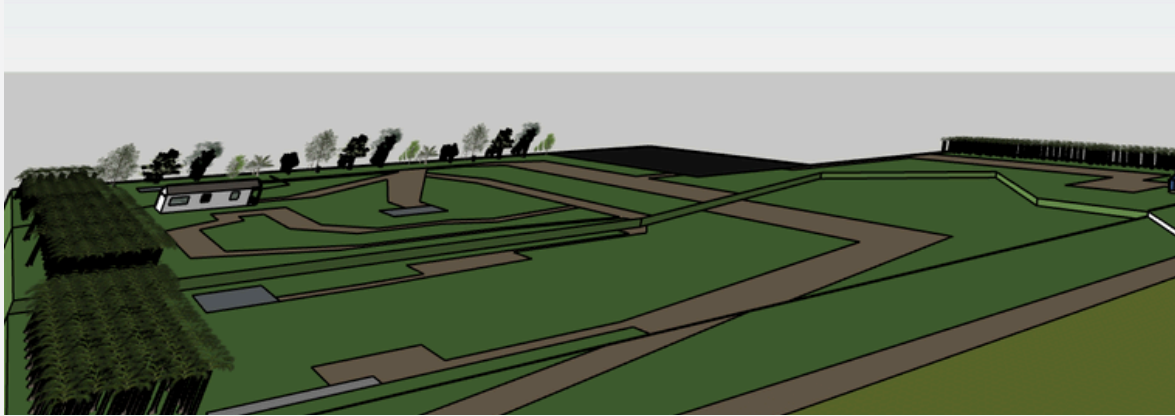
Stalls



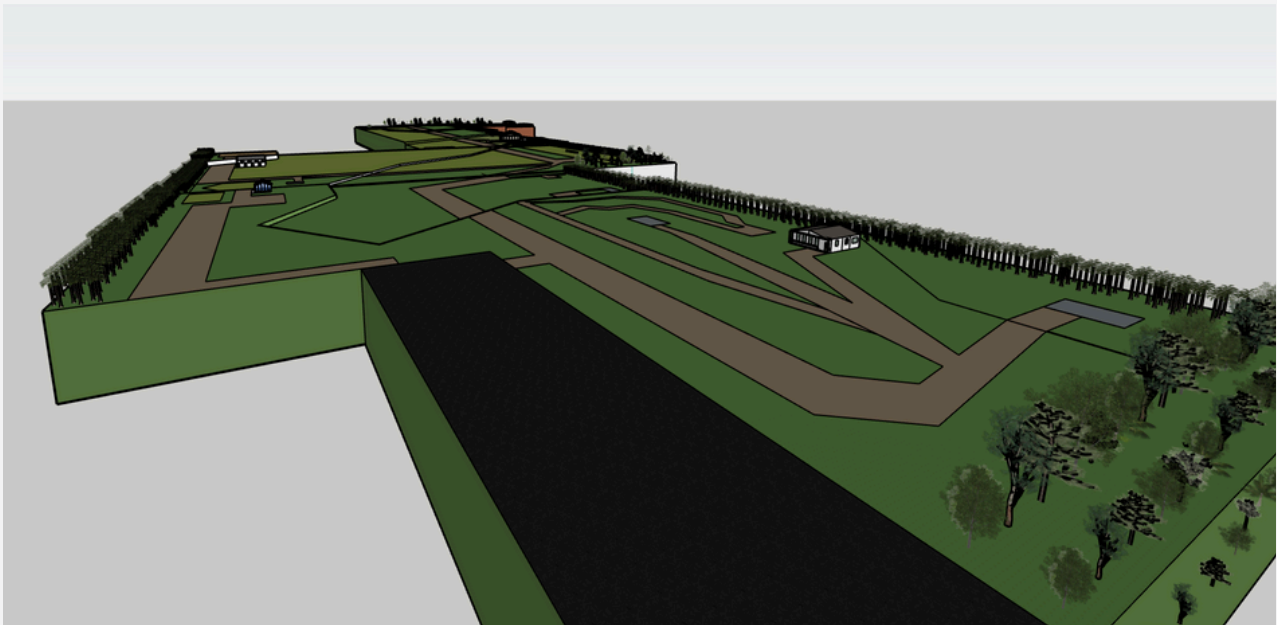
Arial View of Parcel containing Garden,  
Greenhouse, Airstream, Cottages, Trails, and  
Parking



## Perspective Views of Parcel containing Garden, Greenhouse, Airstream, Cottages, Trails, and Parking

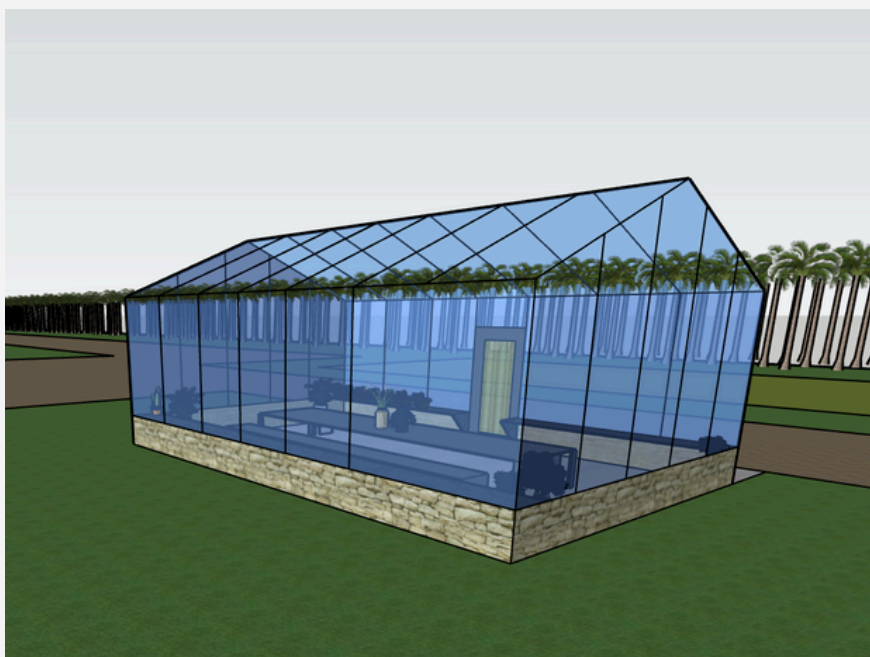
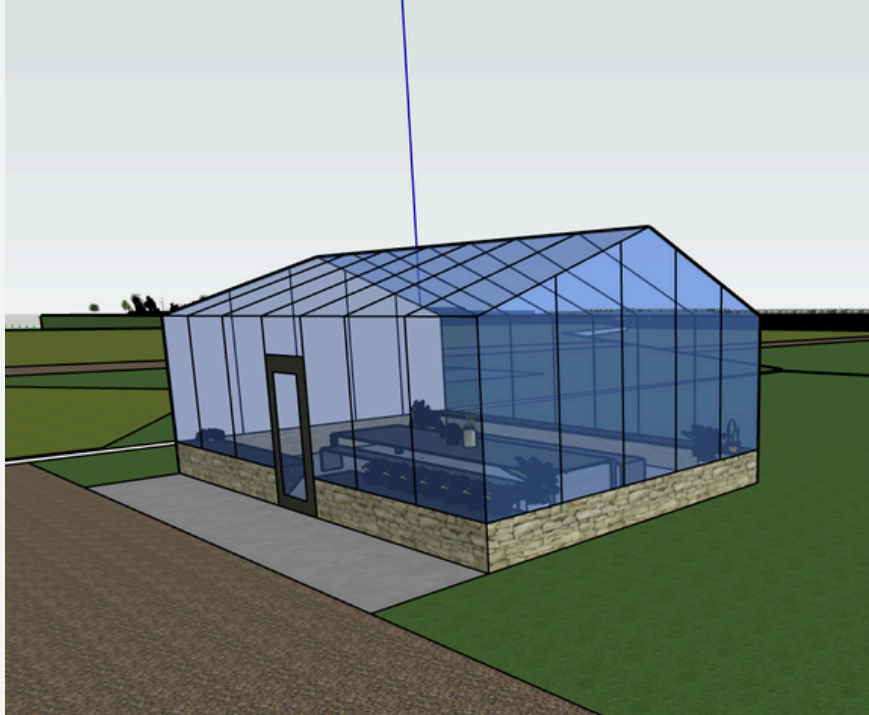


Airstream Side (Front Left Corner of Parcel)

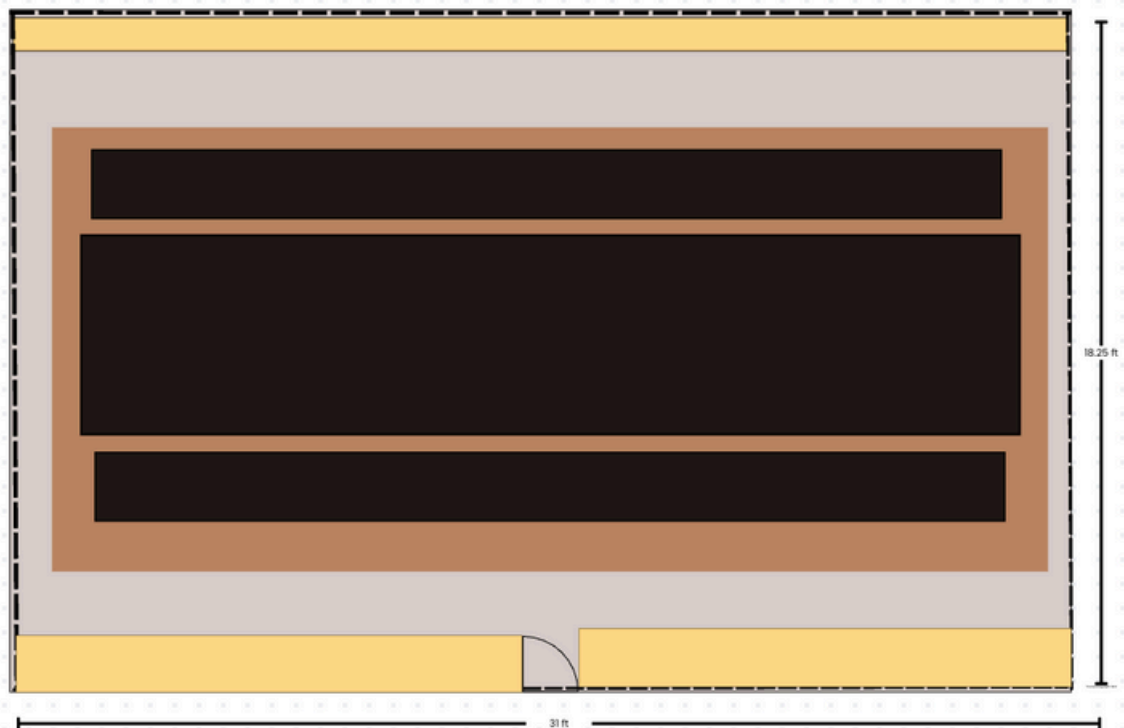


Parking Side (Back Right corner of parcel)

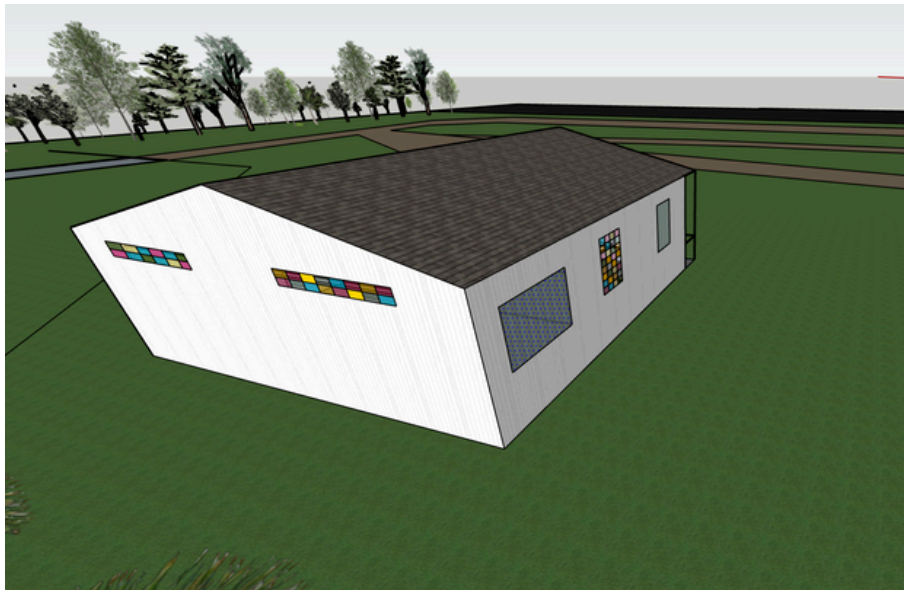
## Perspective views of Greenhouse



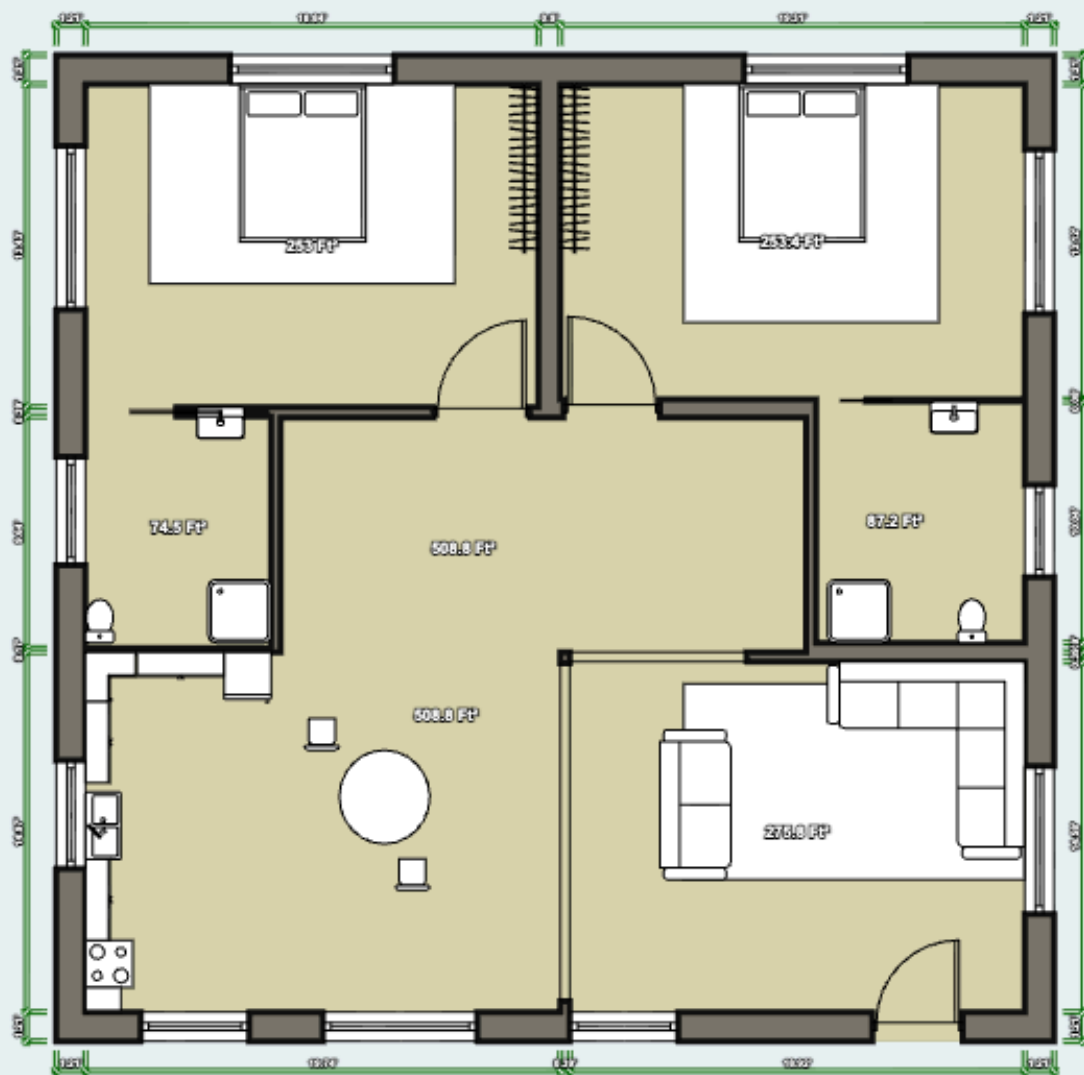
## GREENHOUSE INTERIOR FLOOR PLAN



## Perspective views of Cottage



## Cottage Floor Plan



## Development Plan/ LEED Charatte Proposal

This design is rooted in the respect for the existing Architectural, Cultural, and Natural vernacular of Anthony, Florida, and the wider Marion County Area. The design pays homage to an agrarian vernacular inspired by traditional agricultural and equestrian structures in Florida. This is seen through exposed wood framing and siding, durable metal roofing, and overhangs. The barns on this property serve as monumental anchors, providing a new mix of rustic and modern with open floor plans, extensive natural light, and a unique use of forms and lines. Furthermore, this ensures functionality and comfort for the clients while still respecting the historical context of the surrounding area.

This property is located in an area recognized as the "Horse Capital of the World" and has deep roots in agricultural importance. The addition of the 4-stall horse barn, horse rink, as well as various other pastures honors this equestrian importance. The addition of a large vineyard, crop garden, as well as a greenhouse and farmer's market honors the area's agricultural importance.

This design is driven by minimally intervening with the nature vernacular. Trees are left alone 25 ft from the property line. Trees are added back in with room for the clients to add more trees and natural plants as they choose. When designing the site, the buildings are all strategically placed to sit on the original terrain, requiring a minimal volume of net cut/fill needed. We are striving to honor the existing topography and drainage patterns. The dedication of a corner of the property will serve as a Forest conservation area and wildlife management area. Trees and natural plants will be added back into this area, as well as a natural habitat. This area will serve not only to conserve the existing habitats and natural elements, but also as an educational resource.

To ensure long-term success, precision, sustainability, and further education, I propose strategic partnerships with two leading academic institutions. The first institution I propose collaboration with is the University of Florida - Gainesville, with a specific concentration on sustainable agriculture. Partnering with the university's agricultural and environmental studies students will ensure efficient agricultural production and support the "farm-to-table" operations of the greenhouse. These students can also serve as advisors and assistants in the care and maintenance of the vineyard and conservation areas. In order to ensure a productive and sustainable property, skilled advice is important. Partnering with the local University of Florida is vital to live out this sustainability mission. The second institution to partner with is Elizabethtown College. The engineering department will serve as consultants on the technical feasibility and design of the septic systems and site drainage. The business department can assist in developing an optimal financial model for the agri-tourism features, such as cottages, event venues, and the petting zoo.

## Excavation and Site Work Analysis

The primary goal of this site plan was to practice low-impact development by minimizing the disturbance of the natural vernacular. By strategically placing infrastructure on the gentlest slopes, the design avoids major cut-and-fill operations. Based on the analysis of the topography, this project requires minimal, localized earthwork primarily for final grading and utility purposes. The total estimated volume of earth movement is estimated to be around 225 cubic yards. This estimate serves to achieve a precise level surface for the horse rink and building pads, excavation of utility trenches for power and water lines, and creates berms around all five septic drain fields to ensure water is draining away from structures and will not lead to erosion. Although our earthwork movement is minimal, the project will still require equipment capable of grading and compacting the earth, which is necessary for foundation preparation and utility trenches. A small excavator will be needed for the trenches for the utility and septic lines, as well as localized digging for foundations and selective tree removal. A grader will be used for the final shaping and leveling of the horse rink and building pads to ensure precise and level bases. A bulldozer will be used for light pushing and spreading of the minimal dirt required for filling, as well as rough grading for roads. A roller compactor will be used for compacting the building pads and trench backfill material.

## Flood and Environmental Potential

### Soil Conditions

This project's foundation must account for the various soil conditions in Marion County. This is typically loose to medium-dense sand. This soil type has an allowable bearing capacity of 1500-200 pounds per square foot for shallow foundations. Given the structural loads of our infrastructure, a licensed and competent Geotechnical Engineer is needed to perform a site investigation and confirm the specific bearing capacity of the soil for this property. This ensures the buildings will have appropriate foundations and prevents long-term settlement and foundation issues.

### Flood Risk

Based on preliminary flood mapping for Anthony, Florida, the parcel falls outside of serious flood risk. However, since the site is relatively flat, drainage measures are needed. All floor elevations will be at least 1ft above the natural grade. Earthwork will also include creating berms and swales to channel stormwater away from all structures to prevent localized flooding and erosion. There is a small corner of the property located where the conservation area that has a higher rate of flooding. This area will be used for a wetland area and will not have any structures located near the area.

### Pollution

Before breaking ground, a mandatory review will confirm the parcel is not located within the vicinity of any superfund or hazardous waste sites. This is crucial because of the agricultural focus of the property.

# Zoning and Permitting

## • DIVISION 2. - ZONING CLASSIFICATION<sup>2</sup>

### Footnotes:

--- (2) ---Editor's note--- Ord. No. 17-08, § 2(Exh. A), adopted April 11, 2017, amended Art. 4, Div. 2 in its entirety to read as herein set out. Former Art. 4, Div. 2, §§ 4.2.1---4.2.7, pertained to similar subject matter, and derived from Ord. No. 13-20, § 2, adopted July 11, 2013.

### • Sec. 4.2.1. - Zoning classifications.

- A. Intent and purpose of. In order to regulate the location, height, bulk and size of buildings and other structures; the percentage of the lot, tract, or parcel which may be occupied; the size of lots, tracts or parcels, courts and green spaces; the density and distribution of population; the location and uses of land, buildings and structures for trade, industry, residential, recreation, public activities or other purposes in the unincorporated area of Marion County shall be zoned according to the subsequent sections

(Ord. No. 17-08, § 2(Exh. A), 4-11-2017)

### • Sec. 4.2.2. - General requirements for all agricultural classifications.

- A. Contained in the following sections are the allowed land uses, building and lot standards (including minimum setbacks), other general requirements, and permitted uses specified for all agricultural zoning classifications.

B. Where the setback requirements set forth herein preclude development of the parcel or tract; and where the parcel or tract could be developed in conformance with the zoning code in effect prior to the adoption of this Code; the prior requirements shall prevail.

#### C. Special requirements for all agricultural zoning classifications:

(1) All setbacks shall be measured from the foundation or wall; however, eaves, roof overhangs, pilasters, chimneys and fireplaces may protrude two and one-half feet into a required setback

(2) No structure or building may be erected, placed upon or extend over any easement unless approved in writing by the person or entity holding said easement

(3) Outdoor ground and building lighting shall not cast direct light on adjacent properties.

(4) The sale, either retail or wholesale, of hay, either locally grown or imported from outside the State of Florida, is allowed as an accessory use on a working farm, as defined in CH 604.50 FS, where hay is already produced and sold. This provision is not permitted in the A-3 zoning classification.

(5) On A-1 zone parcels residential complexes for agricultural employees are allowed as an accessory use and may be clustered provided central water and sewage facilities are provided. Dwelling units may be conventional construction, or manufactured housing.

(6) On legal non-conforming lots or parcels of one acre or less in size or lots up to nine and nine-tenths acres in size, the density per acre limitation for horses, mules, donkeys, sheep, cattle, goats, swine, beefalo and other large farm animals is as follows:

(a) The minimum square footage of contiguous open pasture area, not including the dwelling and the garage (either attached or detached) shall be 9,000 square feet for the first animal and 6,000 square feet for each additional animal.

(b) The total number of such animals that may be kept shall not exceed four per acre except offspring, which may be kept until weaned.

#### (7) Requirements of the Storage of Manure:

(a) Manure shall not be allowed to accumulate causing a nuisance or hazard to the health, welfare, or safety of humans or animals.

(b) The outside storage of manure in piles (two cubic yards or greater) shall not be permitted within 100 feet of any lot line and/or any residence.

(c) Compliance with Article 5 Springs Protection Zone standards.

#### D. Permitted Uses:

Accessory use aircraft hangars in approved fly-in communities shall be permitted and include a maximum height of 30 feet.

Beekeeping Operations

Pigeon lofts meeting the requirements of Sec. 4.3.20

Pot-bellied pigs as pets

Silos, not exceeding 100 feet in height

Single-family guest cottage/apartment Refer to Sec. 4.3.18

Yard sales (up to three per year)

E. Owners of properties located on waterbodies considered "non-ESQZ" waterbodies may elect to designate the yard fronting on the waterbody as the new front or rear yard of the property.

(Ord. No. 17-08, § 2(Exh. A), 4-11-2017)

### • Sec. 4.2.3. - General Agriculture (A-1) classification

# Zoning and Permitting

A. Intent of classification. The General Agriculture classification is intended to preserve agriculture as the primary use. This classification in the Urban Area may be used for agriculture until it is rezoned to another permitted classification.

## B. Permitted Uses:

Single-family dwellings

Manufactured buildings (DCA approved residential units)

Manufactured homes

Commercial vehicles utilized for transporting agricultural products raised or produced on the A-1 property of the vehicle owner may be parked on the A-1 zoned property; otherwise see Section 4.3.21.A. and B. for additional options on properties consisting of 5 acres or greater.

General farming, agricultural uses such as aquaculture, fish hatcheries, agricultural crop production including sod farms, agricultural production of livestock and forestry, including horses, cattle or the keeping and raising of raptures such as ostriches and emus

Greenhouse and plant nursery including both retail and wholesale, provided the products sold are raised on premises

Hay sales, refer to Sec. 4.2.2.C (4)

Single family, guest cottage, apartment. Refer to Sec. 4.3.18

Ornamental horticulture, floriculture, and nursery products retail, wholesale

Poultry farms, hatcheries

Public park, or other public recreational use or building

Racetrack, non-motorized, non-commercial for training only

Silviculture

Veterinary office, clinic, or hospital, no outside kennels permitted

## C. Special Uses (requiring permit):

Airport, private

Aviaries

Bed and breakfast inn

Cemetery, mausoleum (private)

Church, Places of worship

Dude ranch, riding academy

Feedlots, cattle, hog, lamb, etc.

Gas meter facility and supply lines, high-pressure, except where such permits are pre-empted by state and federal regulations

Kennel

Landfill, construction, and demolition

Motorized Vehicle Racetrack or Practice Facilities shall be defined as: Motorized Vehicle Racetrack or Practice Facility: a place where ATV's, Motocross Bikes, Go Carts, Off Road Vehicles, or any similar vehicles, gather to compete against each other or against time on a tract of land or course constructed or designed for such purpose; A place to train, develop form, techniques or other skills related to competition

Nursery school

Parking of commercial vehicles, see Sec. 4.3.21

Shooting range

School, accredited public, private, parochial

Sewage treatment plants with an inflow exceeding 5,000 gallons per day

Specialty animals

Sprayfields or other type of effluent disposal area when application rate exceeds 5,000 gallons per day, if allowed by law

Storage of explosives

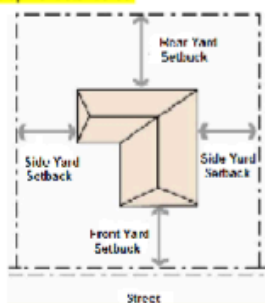
Transportation services solely related to the transport of horses and livestock

Treatment facility for wastewater residuals

Veterinary office, clinic, or hospital, outside kennels permitted

Water wellfields

## D. Development Standards:



Maximum Density Permitted: 1 du/10 acres, unless qualifies for the density exceptions provisions in Sec. 4.3.2.

Minimum Lot Area: 10 acres

Minimum Lot Width: 150 feet

Maximum Building Height: 50 feet

Maximum Floor Area Ratio: None

## E. Setbacks Minimums:

Front Setback: 25 feet

Side Setback: 25 feet

Rear Setback: 25 feet

## Zoning and Permitting

### F. Accessory Buildings:

Front Setback: 25 feet

Side Setback: 25 feet

Rear Setback: 25 feet

### G. Accessory Building Housing for Livestock:

Front Setback: 75 feet

Side Setback: 25 feet

Rear Setback: 25 feet

### H. Accessory Building Housing for Poultry:

Front Setback: 100 feet

Side Setback: 25 feet

Rear Setback: 25 feet

### I. Pool Enclosures:

Front Setback: 25 feet

Side Setback: 25 feet

Rear Setback: 10 feet

(Ord. No. 17-08, § 2(Exh. A), 4-11-2017)

## Zoning and Permitting

### A-1 Compliance:

The primary uses of this property (vineyard, gardens, cattle pasture, horse facilities) are explicitly permitted and encouraged under A-1 zoning.

The total acreage (50 acres) easily meets all minimum lot size, setback, and density requirements.

### Special Permits:

A-1 zoning is for agricultural purposes, but the clients want an event venue and rental cottages. These are tourism items and require a Conditional Use Permit (CUP) or a Special Exception from the Marion County Planning Commission for the short-term rental cottages and the event venue/Greenhouse Dining Room.

### Septic System:

Since there is no public sewer access, all five plumbing structures, Barndominium, 4 Cottages, and Farmer's market building (by petting zoo) must utilize independent, on-site Septic Systems. The design reserves the necessary drain field space and setbacks as mandated by the Florida Health Department and local code.

## Alignment with Master Plans

The proposed development is not only compliant with zoning requirements but also supports several key goals and policies outlined in the Marion County Comprehensive Plan. The primary intent of the plan is to protect the county's rural identity and conserve farmland. This project aligns by dedicating most of the 50-acre parcel to agricultural uses, thereby retaining the site's rural character. The plan also seeks to balance conservation with economic viability. This project achieves this through multi-use developments. This diversification stimulates the economy, supports job creation, and leverages the natural vernacular to attract tourists. The project also demonstrates growth by seeking the necessary special permits for the commercial components. Lastly, the designs focus on minimal earthwork and the creation of a wetland and conservation area, which directly aligns with the comprehensive plan, which aims to protect water quality and conserve natural resources.

## Demographics

Marion County is recognized as the "Horse Capital of the World". The county receives around 1.9 million tourists a year. The tax revenue from tourists is continually showing record-breaking growth. The typical tourist has an average household income of \$95,000. The project caters to these tourists by providing 4 modern cottages as well as our farm-to-table greenhouse featuring fresh home-grown produce. Marion County is one of the fastest-growing metros in the nation. This means there is a labor force ready for work and a growing local market. This project has the potential to add new jobs to the hospitality and agritourism sectors.