EXHIBITS CONTAINED IN BINDER

1. **Patterns for Placemaking**
2. **Wetland Delineation Report**
3. **Economic Impact Analysis**
4. **Traffic Impact Analysis**

Jubilee
patterns for placemaking

A Design Guide for Site Planning and Architecture

Jubilee

Pattern Book

Santa Rosa County, Florida

SMITH
PLANNING
GROUP

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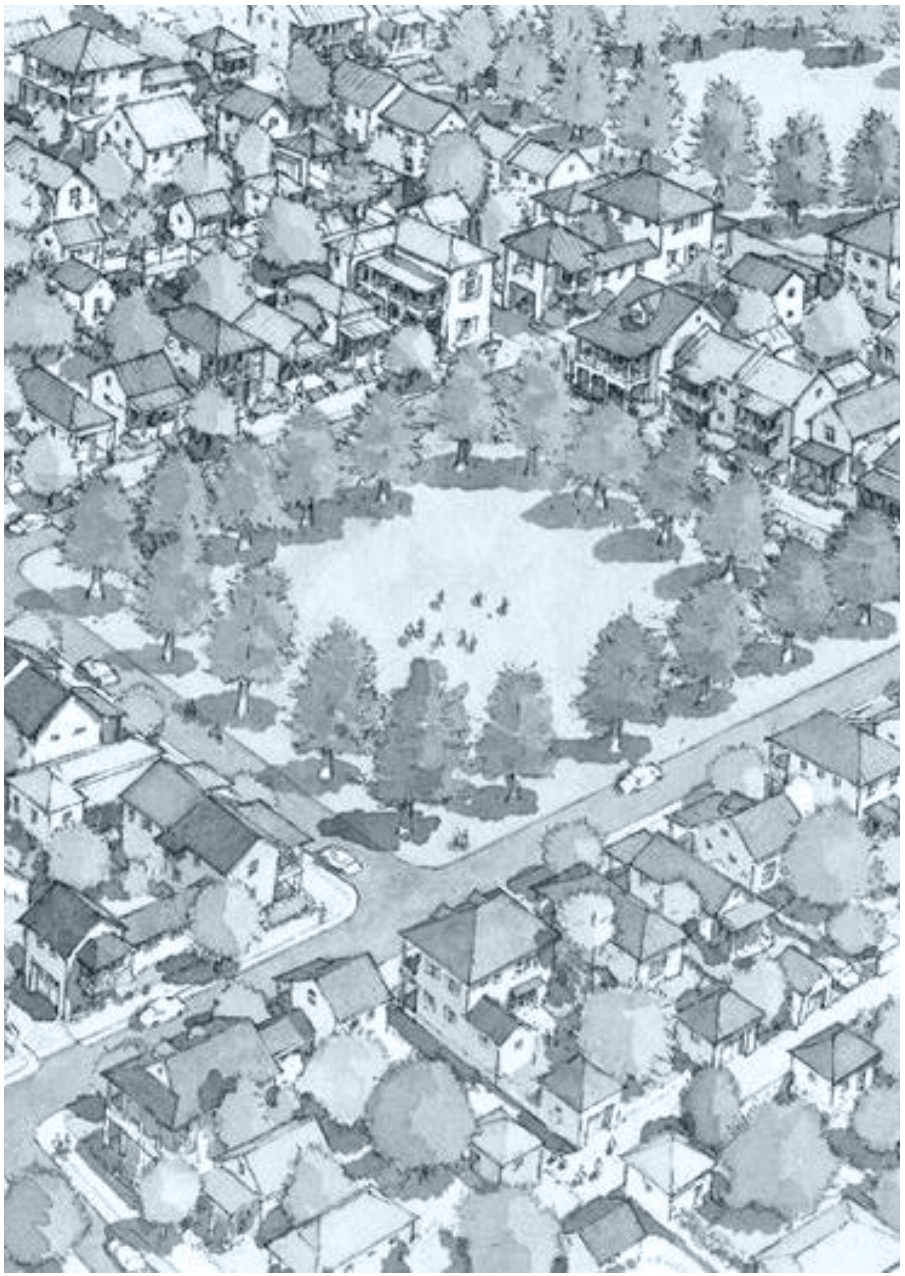
Introduction

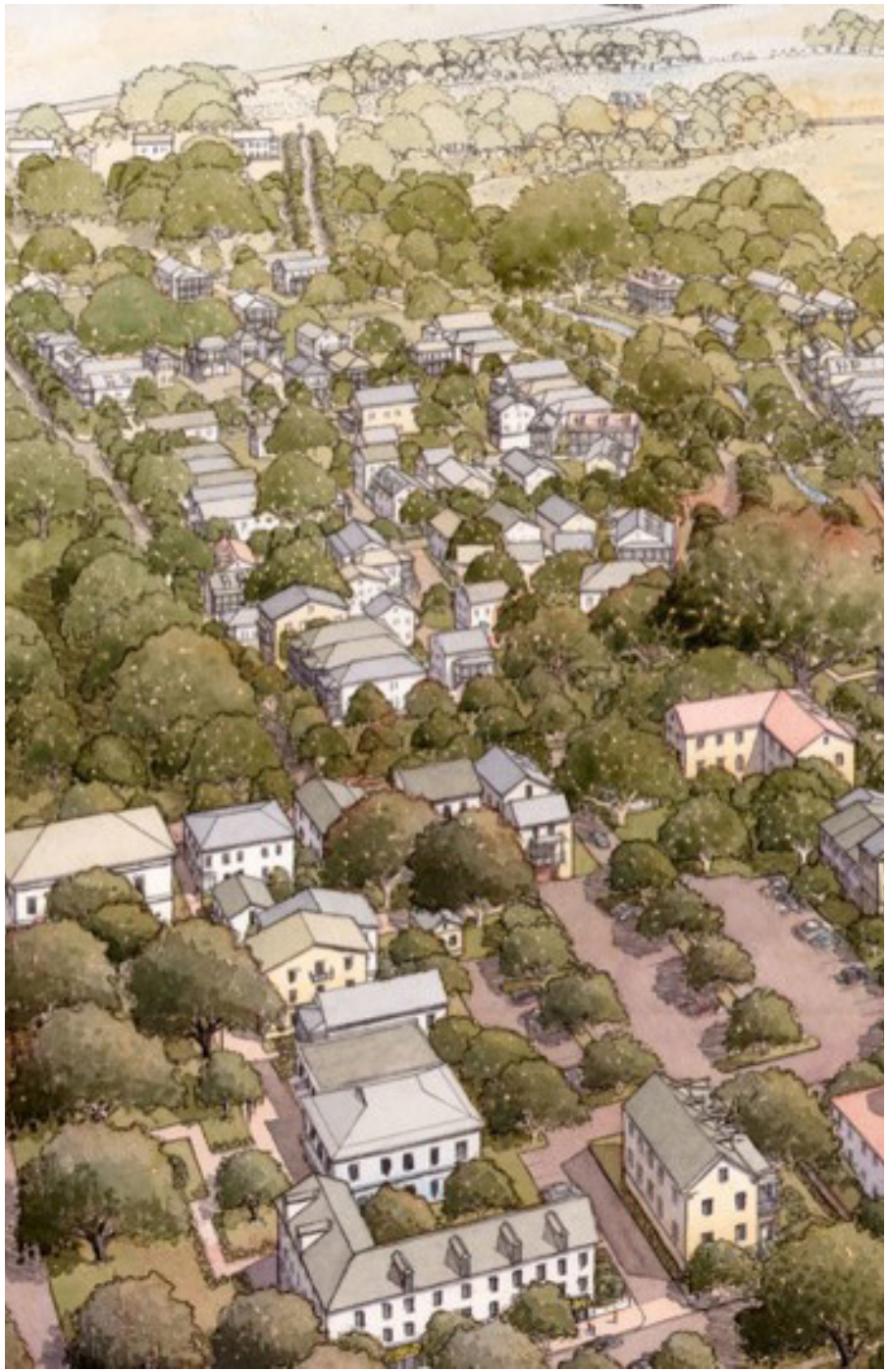


Guiding Principles

The guiding principles used to shape Jubilee were inspired by the best practices and principles from New Urbanism and Traditional Neighborhood Developments. Many of these principles draw upon the strengths of cities and villages built centuries ago, long before the automobile age. Research continues to find patterns and principles that explain what makes a successful and sustainable community. Human-scaled, village-styled developments continue to be some of the most popular places to live and visit. These densely developed communities also incorporate a diversity of public spaces and amenities, with a well-connected network of walkable streets and paths. Incorporating these best practices can help build alternative neighborhoods to the common sprawling developments seen across the country.

The long-term benefits of forward-thinking planning and design practices are often well worth the effort, additional cost, and coordination. Outdated zoning ordinances can prove an initial challenge, but the success of one well-designed community can serve as a catalyst for promoting better neighborhood planning in the surrounding region for years to come.

The following principles help shape Jubilee into becoming the most sustainable community it can be in ways both ecologically, socially and economically. These principles ensure that Jubilee becomes a lively destination for residents and visitors alike, remains well-rooted in its historical and local context and promotes a healthy lifestyle through connectivity at various scales.



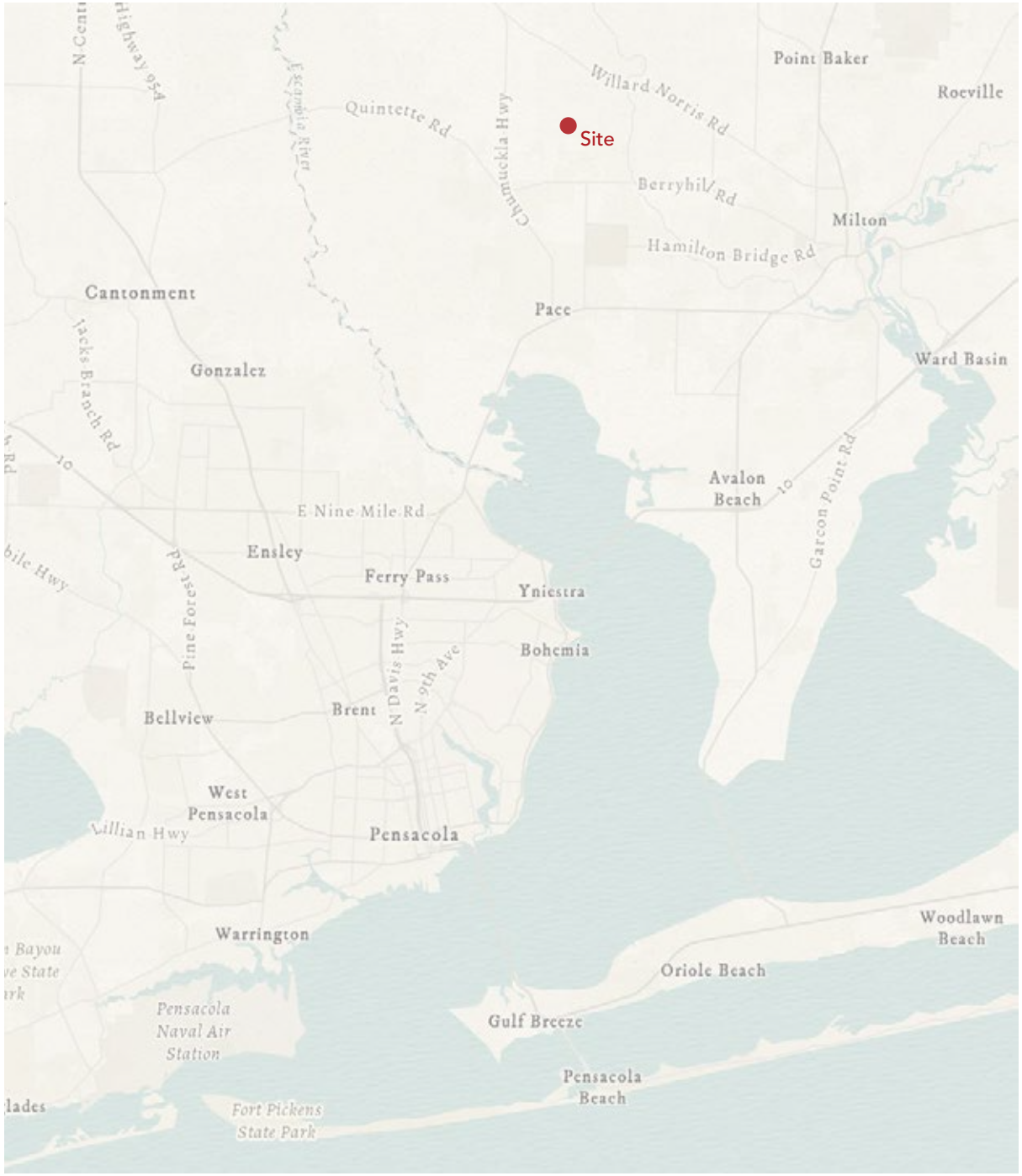
Purpose (How to Use This Book)

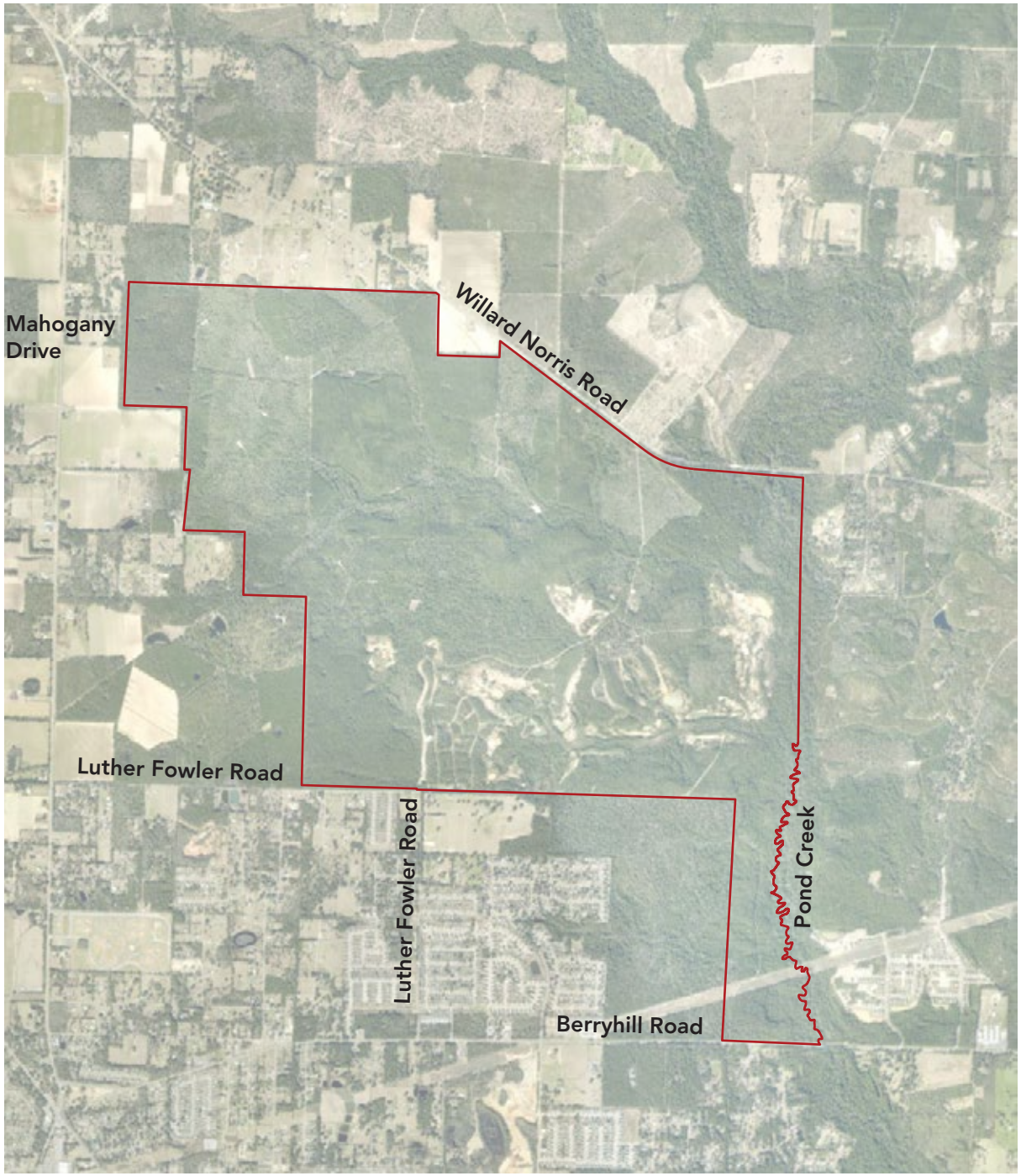
This pattern book establishes a set of unified guidelines and patterns to assist builders, architects, designers, and property owners in the development of Jubilee as a place of architectural quality and character. Timeless principles of site planning and architecture essential to placemaking are outlined here, both for the creation of a cohesive community and the thoughtful design of individual lots. Though not intended to be fully comprehensive, the combination of narratives and illustrations articulate the preferred approaches, limitations, and prohibited methods of design as a set of recommendations to guide development.

Intention of Guidelines:

Communicate clearly defined methods of development that establishes a quality neighborhood of the desired architectural character.

Preserve the vision and integrity of the design of the community as it evolves.


Site
Point Baker
Roeville
Willard Norris Rd
Quintette Rd
Escambia River
Chumuckla Hwy
Berryhill Rd
Milton
Hamilton Bridge Rd
Cantonment
Pace
Jacks Branch Rd
Gonzalez
Ward Basin
Avalon Beach
E Nine Mile Rd
Garcon Point Rd
Ensley
Ferry Pass
Yniestra
Pine Forest Rd
N Davis Hwy
N 9th Ave
Bohemia
Bellview
Brent
West Pensacola
Pensacola
Warrington
Woodlawn Beach
Oriole Beach
Pensacola Naval Air Station
Gulf Breeze
Pensacola Beach
Fort Pickens State Park



Existing Conditions

Located on the perimeter of expanding suburban development from the Pensacola Bay area, Jubilee is well positioned to offer easy access to regional amenities, while maintaining the quality and pace of small town life. A rich regional history and engaging cultural life paired with the diversity of recreational opportunities play no small part in the area's success as a premier destination within the Florida panhandle.

The property comprises over 2,700 acres, representing one of the largest undeveloped tracts of land in Santa Rosa County. Site access occurs via Luther Fowler Road and Berryhill Road to the south, and Mahogany Drive and Willard Norris Road to the west and north respectively. Pond Creek defines the eastern boundary of the site. Pond Creek is fed by two onsite stream channels, including Hurricane Branch, which bisects the property.

Artist's rendering of the Jubilee Village Center

Artist's rendering of the Jubilee Village Square Street View

Jubilee: A Health and Wellness Community

The promotion of Health and Wellness has always been at the forefront of the vision, planning and design goals for Jubilee. Wellness is multi-dimensional and holistic by its very nature. It can be most effective when one considers all the dimensions – the physical, social, emotional, mental, and spiritual aspects. A person's wellbeing is connected to things beyond themselves, such as their environment, socioeconomics, and civic aspects of their community. Setting in place the environment to facilitate meeting these needs, careful attention has been placed on Jubilee's considerations and planning decisions across twelve unique, amenity-rich neighborhoods. Both active and passive design features enhance residents' physical health and encourage physical activity. Designed amenities, and services encourage exercise, active recreation, active transportation (walking, biking, etc.), and other opportunities to engage in healthy behaviors.

Summary of Housing Types

- Single Family Detached
- Townhomes
- Condominiums/Apartments
- Live/Work
- Mansion Flats

Guidelines

Site Organization

Jubilee is located in Santa Rosa County, Florida, just outside the city of Pace. Planned to be a pattern for future development in the area, the community draws upon traditional planning principles and architectural styles firmly rooted in the historical character and heritage of the region. Elements such as walkable streets, generous common open space, and beautiful architectural craftsmanship promotes a community that is lasting, inviting, safe, and lovable.

The village center and the adjacent neighborhoods covers approximately 470 acres of land. The village center itself contains a mixed-use core of shops, restaurants, apartments or condos, and entertainment venues such as an outdoor amphitheater. At the heart of the village center is a village green with a large pavilion designed in the style of the former Pensacola, Louisville and Nashville Railway station in nearby Pensacola. The neighborhoods immediately adjacent to the village center contain various housing types including townhomes, mansion flats and single-family detached.

Jackson's Park, an oval-shaped park near the center of Jubilee contains a lake and a civic site along its northern edge. The village center, which contains a mixed-use core surrounding a village green, lies to the east. To the north of the village center is a 30-acre health-care campus, strategically located adjacent to the parkway and residential uses within the village. Embedded within the neighborhood south of Jackson's Park is a 15-acre primary school site. The school site surrounded by residential uses, creates an easy walk to school. The entirety of the phase is located along the western side of a parkway stretching between the northern and southern extent of the site. Access is maintained predominantly from Luther Fowler Road and Berryhill Road to the south and Willard Norris Road to the north. Located at the northern entrance is a future 50-acre high school campus and future town center. Future phases will address the design of these and the site's remaining 2,000 acres.

Sidewalks serve as the connective thread for linking the neighborhood and creating a close-knit community. Sidewalks will be provided on both sides of the street and include marked crosswalks to ensure safe, comfortable, and convenient circulation for both young families and the aging population.

Street trees contribute to the comfort, safety, and beauty of streets and should be located within the verge between the street and public sidewalk in order to promote pedestrian and vehicular separation. Species selection should consider spacing that promotes healthy growth, ecological function, and site suitability. Native Oaks and Elms are encouraged for their resilience, shade, and characteristic appearance attributed to a sense of Southern nostalgia.

Front Yard

Contributing to the vibrancy of the neighborhood and promoting social interaction, the porch functions as a transition point between the public and private domain. As a place of social gathering, this 'semi-private' space provides community involvement that enhances the overall sense of security and safety. Porches should be large enough to accommodate social gatherings and comfortable for frequent use. The front yard also serves as an extension of the public domain of the street. As such, front yards should be inviting and welcoming, designed to facilitate and encourage interaction among neighbors.

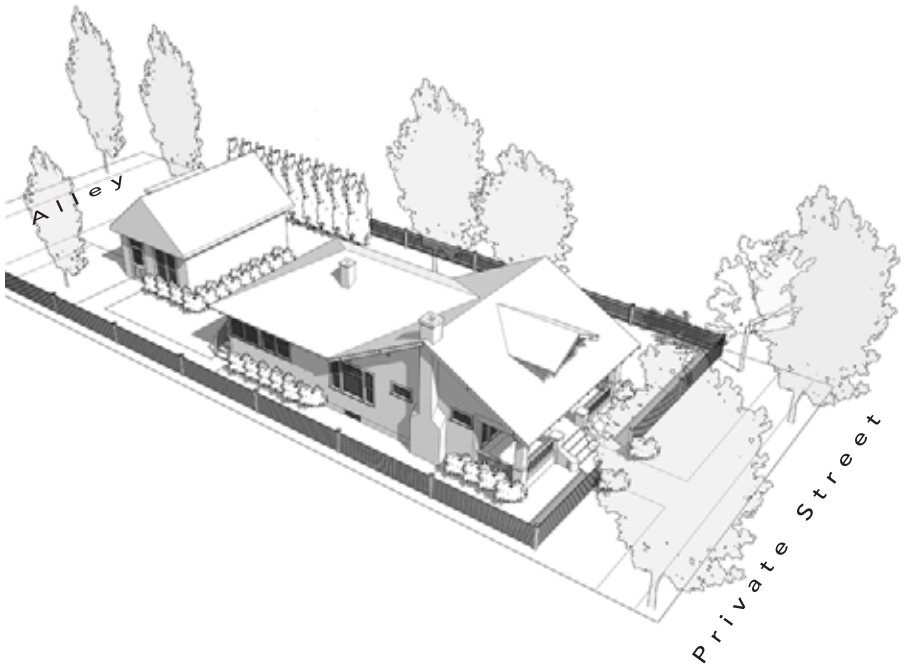
Backyard

The backyard can accommodate private uses that are not suitable to more public yard spaces. Such uses can include but are not limited to pools, playground equipment, sports courts, workspaces, pet enclosures, parking, storage, and vegetable gardens. Careful detail should be given to screen adjacent properties in order to create private enclosures in the backyard.

Alley

The alley consists of a narrow thoroughfare running through the middle of a block that permits vehicular access to the rear of a property. Alleys typically accommodate off-street parking and may be used for utility easements, service access, or trash removal.

At Jubilee, the use of alleys is mandated where topographically feasible in order to restrict automobile activity to the back yard instead of the front yard. This circulation pattern promotes ease of function and enhances pedestrian safety. Additionally, the location of the driveway and garage towards the rear of the lot maintains the inviting pedestrian experience for the public and semi-public spaces throughout the community.



Architectural Styles

Jubilee draws strongly from historic architectural styles and building types of surrounding communities, emphasizing classic design principles and architectural character, and fostering a community that is firmly rooted in place.

Gothic Revival (1840-1880)

History and Character: This style references medieval building forms through steeply-pitched, front- or cross-gabled roof shape, and may have a one-story entry- or full-width porch. The pointed arch is a common feature of Gothic Revival, and may be utilized in windows or front porch trim. Much like the Queen Anne, Gothic Revival is characterized by intricate exterior detailing – a way to feature the new scroll-saw technology of the time. Milled wood trim is often featured along front porches, cornice lines, or through the use of decorative gable-brackets or verge boards (also known as bargeboard, this refers to decorative boards installed within the sides of a gable).

Frame Vernacular (ca. 1850-1890)

History and Character: Frame vernacular refers to a modest wood home which was not designed according to any architectural fashion. Vernacular styles vary regionally, but the predominant regional forms include *Gulf Coast* (or Creole Style) cottages and shotgun houses. These simple structures typically have one or two rooms in width or depth, a full-width front porch, a wood-clad exterior, and double-hung sash windows. They are elevated on masonry-pier foundations and may feature later additions to the rear or sides of the house. Two-story forms typically have a double porch. Homeowners often improved the look of their building through the addition of Victorian-style wood trim along the porch or cornice. When a vernacular home features these details, the style is often referred to as *Folk Victorian* (c. 1870-1910).

Queen Anne (1880-1910)

History and Character: This Victorian style is characterized by a massed, asymmetrical body plan and a variety of exterior textures, colors, and intricate wood details. Common Queen Anne features are gabled roofs, turrets, bay windows, sash windows with multiple panes of glass, chimneys with decorative brick-work, and a front porch which may cover the entry only, or expand to wrap around the side of the house. Exterior finishes may include a mix of wood clapboard and shingles, patterned masonry, or half-timbering. Exterior details often include turned wood support posts and balusters, and lacey, wood scrollwork along the porch, cornice, or gables.

Colonial Revival (1880-1955)

History and Character: Colonial Revival references the early forms of English and Dutch colonial architecture constructed along the Atlantic seaboard. Homes built in this style may have a mix of features drawn from the Georgian, Federal, as well as Dutch or post Medieval English styles. These homes often have a symmetrical front elevation with an accentuated, central door, and may have an entry- of full-width front porch on the first floor. Roofs are most commonly hipped, but may also be front-gabled, side-gabled, or gambrel in the Dutch style. Double-hung sash windows are common, often with multiple panes of glass. Exterior details may include cornice mouldings, pediments above doors and windows, and fanlights or sidelights on doors.

Classical Revival (1895-1950)

History and Character: Much like Colonial Revival, the Classical Revival style typically features a symmetrical front elevation with an elaborated entryway. These homes often feature a dominating full-height porch that does not occupy the full width of the facade, with a roof supported by classical columns (often Ionic or Corinthian). Classical Revival homes typically have double-hung sash windows, often with six or nine panes per sash, and feature exterior detailing in the form of cornices, dentil moldings, or wide frieze bands. Note the Mediterranean-style, tile roof alteration on the second example.

Craftsman (1905-1930)

History and Character: The bungalow was the predominant form for smaller houses built throughout the country between 1905 and 1920. These homes have a massed plan with a low-pitched gabled (sometimes hipped) roof. Bungalows are often one-story and feature porches supported on thick piers or substantial columns. This style has design elements that emphasize the structure, materiality, and texture of the building; they often features elements such as exposed rafter tails and roof beams, widely overhanging roof eaves with brackets or knee-braces, and a variety of exterior finishes including wood clapboard, shingles, brick, stone, or stucco.

Louisiana/French Colonial (1700-1830)

History and Character: Originating in the Mississippi Valley territories with influences from the West Indies, examples of this style survive primarily in the New Orleans area. This style can be viewed in two distinct categories: urban and rural traditions, each of which have distinctive features. Both traditions of the French Colonial respond to the climate of the Gulf Coast by focusing the plan characteristics of the house outward. With a lack of interior stairs or hallways, rooms typically had doorways leading directly outside onto a "gallerie" or Verandah as well as rooms opening directly into one another. The "raised" cottage came about as a response in the bayou areas to keep out moisture, which in turn influenced the riverside plantations that still stand today.

Low Country/Tidewater (1750 -1880)

History and Character: Developed as an adaptation of English Colonial and Acadian styles to the hot coastal environment of the Southeast. Tidewater South developed in conjunction with the prevalent period styles by skilled builders and craftsmen. Extracting popular stylistic elements and using locally available materials and skills, the creators of these houses developed styles that were in the truest sense vernacular. Cultural influences of particular regions extended the diversity of this style ranging from French influences of the Louisiana area to Spanish influences of Florida to the English Of the southern Atlantic seaboard. The principal architectural language of rural settlements, Tidewater is both stately and informal and is an appropriate response to the climate and lifestyle of this region.

Deconstructing a Jubilee House

Most traditional houses are distinguished by a **MAIN BODY** that is always the most important form. Additional space is created through secondary additions to this Main Body. The first step in designing a house is to determine the Main Body Massing Type. This will guide the development of a new house plan or the modifications to an existing house.

In general, additions are treated as **WINGS**. Side wings can be either one or one-and-one-half stories, set back from the front facade of the Main Body. Two-story additions can be added to two-story Main Bodies, but should be set back from the front facade and limited in width to a maximum of one-third the width of the Main Body. Side wings and rear wings can be added in many combinations.

PORCHES are important elements and find expression in almost every architectural style or vocabulary. Setting the appropriate column types, porch cornices, railing, and balustrades is key to establishing the character of the house. The Pattern Book offers options found within a particular style, complete with sample profiles that illustrate the correct dimensions and components.

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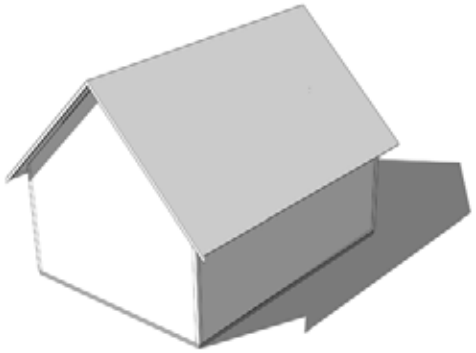
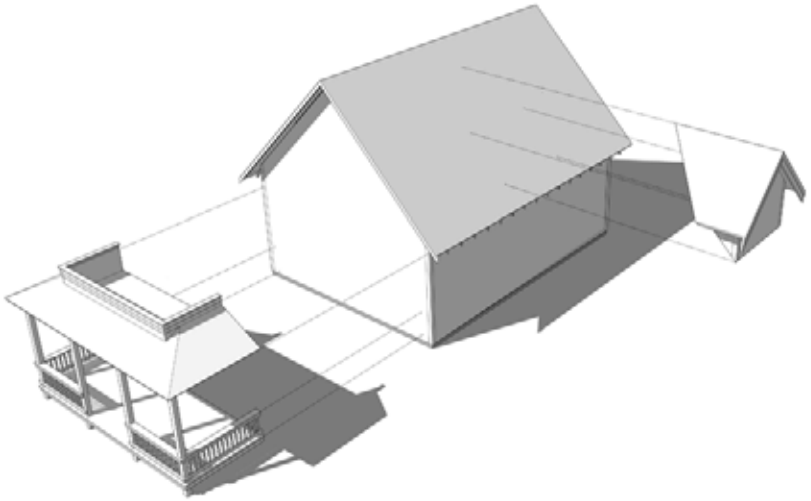


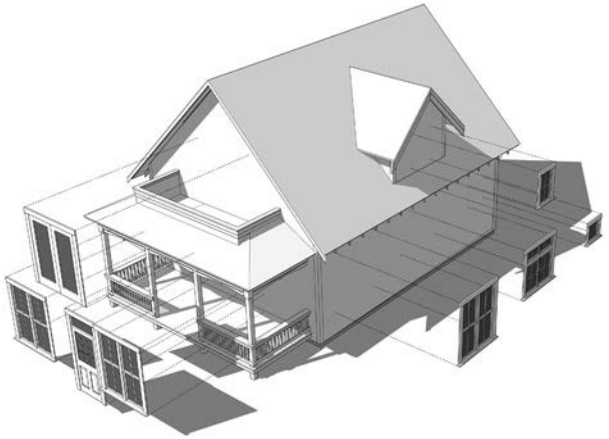
Main Body



Wings and Porches

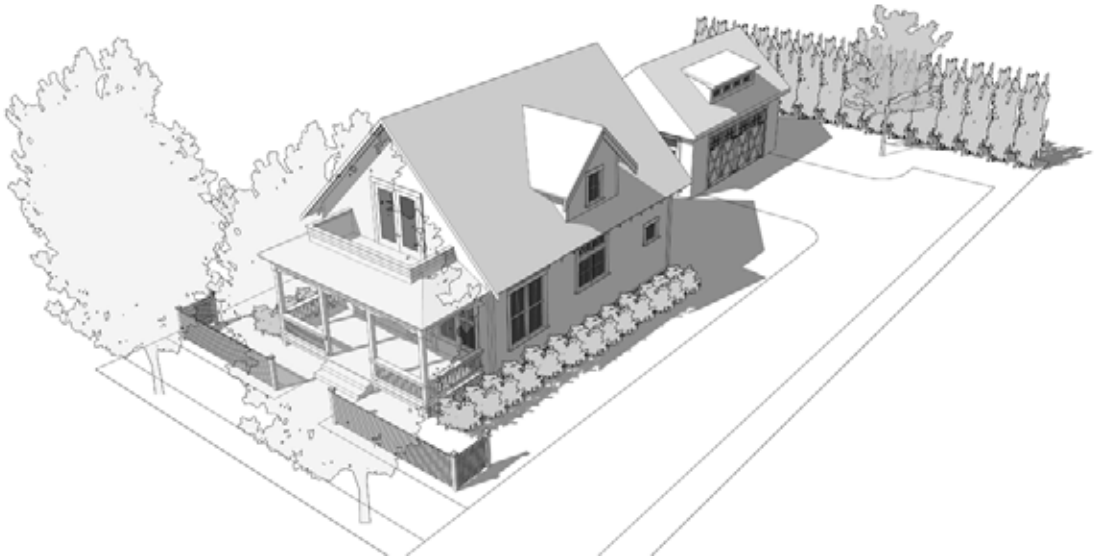
Once the massing and the floor-to-floor heights are determined, various **DOOR AND WINDOW COMPOSITIONS** can be explored. Most styles have very definite patterns used to produce balanced or picturesque compositions with a harmonious and pleasing image. Window proportions, location, and spacing are all important and were well understood by early house builders.

While windows and doors are available today from a wide range of manufacturers and come in almost any shape and size, correctly proportioned and detailed Windows and Doors are critical in reinforcing the style of the house. The Pattern Book illustrates standard window and door types used for each architectural style and special windows and doors used as accents.



Door and Window Compositions

The **FINAL ASSEMBLY** of the various components should produce a house of recognized character and quality no matter what the size. A series of illustrated possibilities within each style section demonstrates the effective application of the Pattern Book guidelines.



Final Assembly

Essential Elements of the Gulf Coast Frame Vernacular

- Deep one and two story porches
- High ceiling with vertically proportioned column bays and wall openings
- French doors and full length windows on the ground floor with tall shutters
- First floors raised above the ground

Massing

A deep front porch is recessed within the volume of the house under one roof.

The one-story houses are raised off the ground three feet and have 16-inch by 20-inch brick piers supporting each column on the front porch. The two-story house is typically a one-story house raised on full-height brick piers. Dormers are added to create a one-and-one-half- or two-and-one-half-story house. Porches can wrap around one or more sides of the house.

Hipped

- Rectangular volume with either a gabled or hipped roof. The pitch is typically 10-in-12.

Side-Gabled with Double Pitch Roof

- Rectangular volume with a side gabled roof. The roof has a pitch of 9-in-12 over the main body and 6-in-12 over the recessed porch.

Side-Gabled

- One-story narrow front rectangular volume with either a hip or gable facing the street. Roof pitch is 8-in-12 to 10-in-12. A full width front porch is added to the volume of the house. An inset porch may also run the full width of the hipped roof volume.

Front-Gabled

- Rectangular or square volume with either a side gabled or hipped roof.
- Side gabled roof has either a constant 10-in-12 pitch or a double pitch roof at the front, and may have a double pitch roof at the rear.
- Hipped roof has a 10-in-12 pitch and the ridge line, if any, runs perpendicular to the front of the house.

Massing Compositions

The strong form of these houses limits the number of ways in which additional wings can be added. Add-on wings should have similar roof pitches and be treated as separate "additions" to the basic form rather than part of a single complex form.

Facade Composition

An informal relationship among the elements enables window spacing, dormer placement, and porch bays to each have their own spacing and dimensions.

Eaves

Simple unadorned eaves are characteristic of the Acadian-Creole style. They can have exposed rafter ends that are shaped. A frieze board is used below the rafters. They can also be flush to the wall or beam at the porch, or slightly projecting with a boxed soffit.

Wall

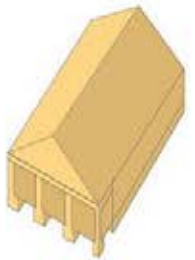
The first floor of an Acadian-Creole house is typically set three feet above the finished grade for a one-story house and one foot above finished grade for a two-story house. For one-story houses, the minimum floor-to-ceiling height is 10 feet. For two-story houses, the minimum floor-to-ceiling height is 10 feet for the first floor and 9 feet for the second floor. Window head heights should be 8 feet above the floor for the first floor windows, and 7 feet to 8 feet for the second floor windows.

Massing and Massing Combinations

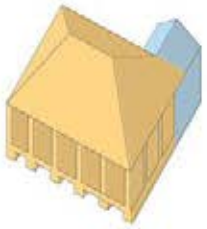
Hipped

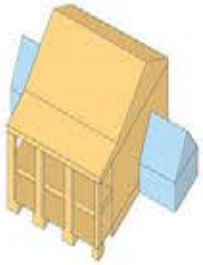
Side-Gabled

Side-Gabled with Double Pitch Roof

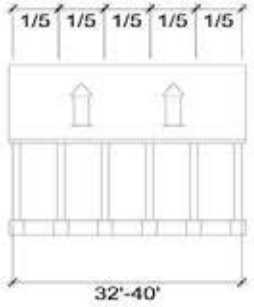


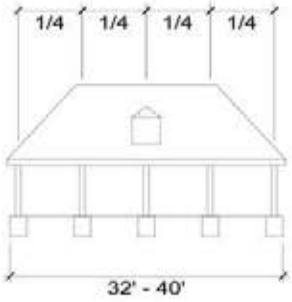
Front-Gabled

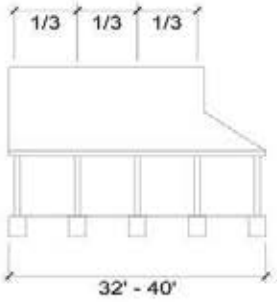


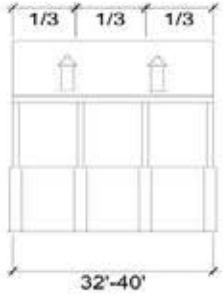


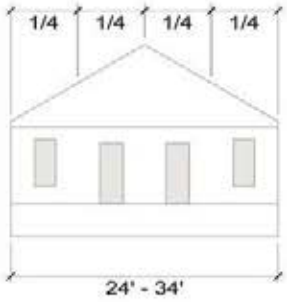
Facade Composition











Standard Windows

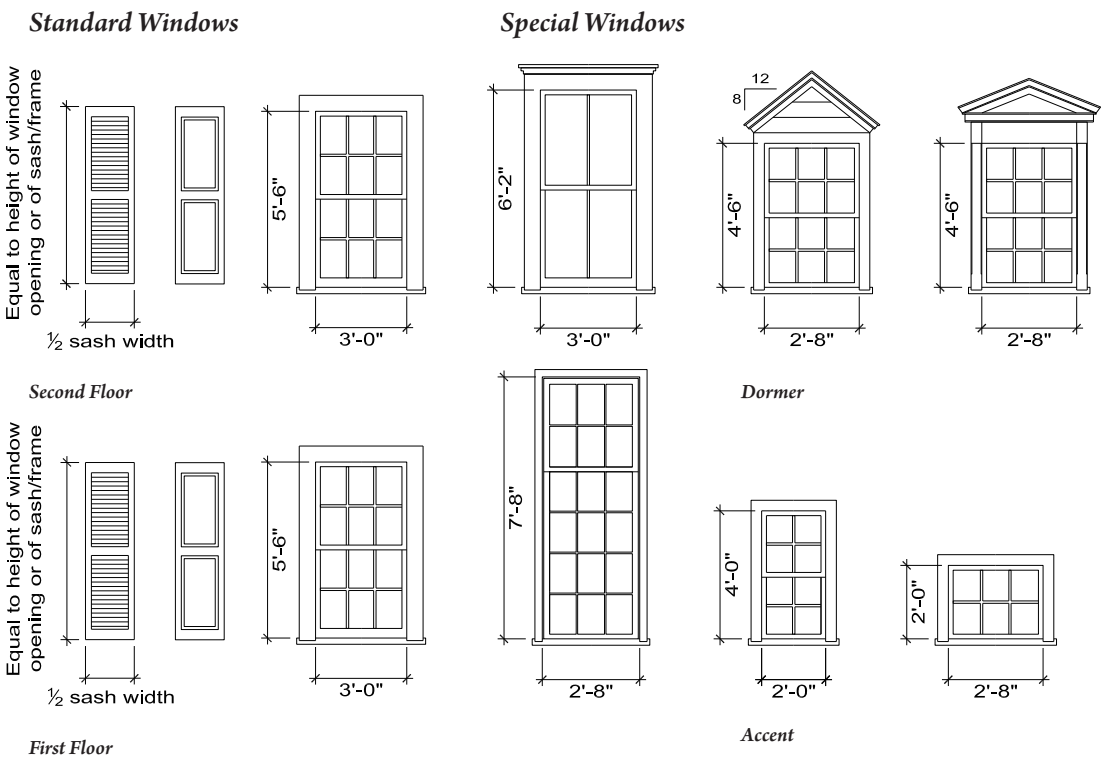
- Windows are typically vertical in proportion with muntin patterns of 6 over 6 or 9 over 9.
- Window panes are square or vertical in proportion.
- First floor windows can have 4 over 4 or 2 over 2 muntin patterns as well.
- Standard windows are double-hung.

Special Windows

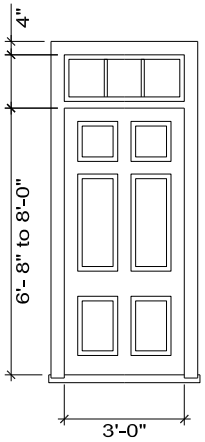
- Special windows are typically small accent windows with 6 panes or in a 4 over 4 muntin pattern.
- A single leaf shutter is often used.
- Dormer windows are multi-paned in the 6 over 6 pattern.

Shutters

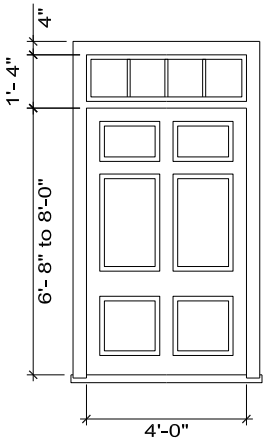
- Louvered and board & batten shutters are common elements for windows and doors.
- Fixed-louver shutters should be turned to drain water toward the wall when open
- Shutters should be exactly one-half the width of the sash they are covering.
- All shutters should be installed with hinges and dogs and mounted with hardware to appear operable.
- Shutter dogs should relate stylistically to the architectural style of the residence. Common stamped S-dog types were only used in the Victorian era and later. Earlier shutter dogs should be wrought, with a finger loop that projects away from the wall.



Simple Doors

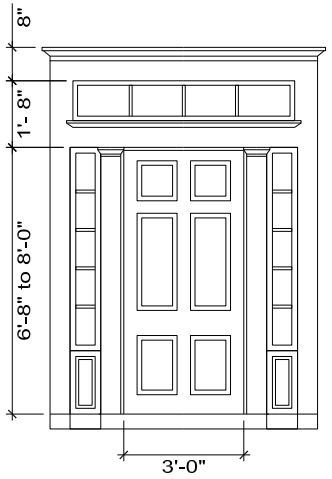


Single Door with Transom

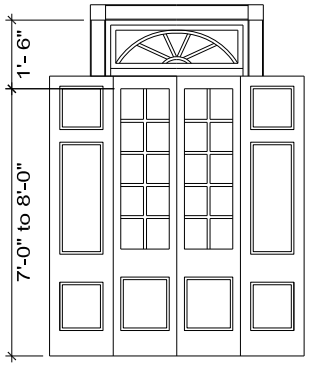


Double Door with Transom

Ornate Doors



Single Door with Transom and Sidelights



Double Door with Transom and Shutters

Doors

- Multi-pane doors are often used in lieu of windows on the first floor under the porch.
- Entry doors are typically 4-, 6- or 8-paneled and include either a transom or a transom and sidelites.

Trim

- Windows and doors typically have 4-inch-wide trim with a backband.
- Classical door surrounds are sometimes used at the front door.
- Stone or wood lintels over windows and doors are common elements clad in brick or stucco.

Porch Roofs & Eaves

- Acadian-Creole porches are symmetrical and run the full length of the facade.
- Columns have a regular spacing of between 8 to 12 feet on center.
- Eaves can be either open rafters or flush with the porch beam.

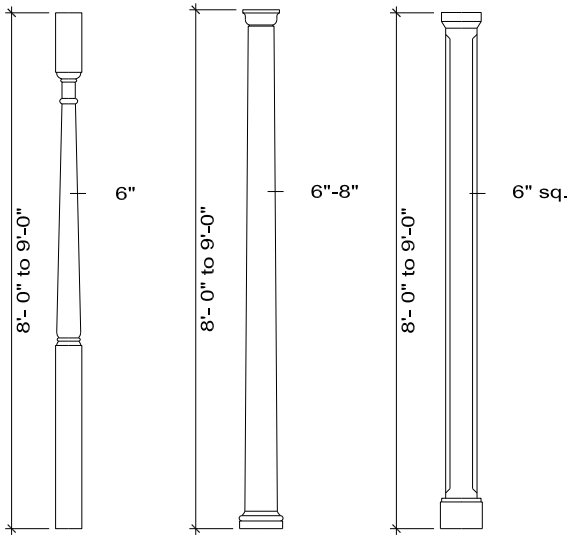
Columns & Railings

- Column types for one-story porches and the second floor of two-story porches include slender round or square Tuscan columns, and chamfered or plain rectangular posts without trim.
- Columns at the first floor of two-story porches are more massive with either no detail, or a minimum capital expression.
- Railings have square balusters spaced no more than 4 inches on center with intermediate posts for railings over 9 feet in length.

Porch Location & Massing

- Side Hall houses have two "Bays" for the front facade length, or three bays for porches that wrap one side.
- Houses 24 to 32 feet wide have three bays for the front facade length, or four or five bays for porches that wrap one or two sides.
- Houses 36 to 40 feet wide have a five bay porch. The porch can extend beyond the main body of the house and wrap one or two sides.
- Porches should have a minimum porch depth of 8 feet. Porches are frame construction set up on masonry piers. The space between piers may remain open without infill.

Column Types



Essential Elements of the Gulf Coast Folk Victorian

- Prominent porch elements
- Cut wood ornament, influenced by natural forms such as leaves and vines, or turned decorative millwork
- Wood clapboard siding
- Vertically proportioned windows and doors

Massing

Side-Gabled

Side-gabled rectangular volume, often with a steeply-pitched, gabled dormer flush to the front

Front-Gabled

This massing typically accommodates a one-story continuous porch with a shed or hipped roof running the full length of the front facade. This is a side gable house with the ridge parallel with the street.

Roof pitches are typically 8- to 10-in-12.

Gable L

Square volume with hipped roof from which a front-facing gabled wing extends.

Roof pitches range from 8-in-12 to 12-in-12.

Front porches are typically two or three bay, hipped porches that tie into the gable "L".

Often in corner houses, the porches wrap one corner and tie into a side wing.

L-Shaped

Two story, side-gabled rectangular volume with roof pitches ranging from 6 in 12 to 10 in 12. One-story shed porches are often placed symmetrically on the front facade. One-story side wings often occur. This massing also accommodates a two-story continuous porch with a shed or hipped roof.

Massing Combinations

Complex forms and larger living spaces may be created by combining side wings and/or rear wings with the main body. Gabled or arched dormers may be added to introduce light into half-story and attic spaces. The architectural character of the attached parts should match that of the main body.

Facade Composition

Victorian facade composition is characterized by a symmetrical and balanced placement of doors and windows. Individual double-hung windows are the most common type. Front doors are generally located in the corner of narrow houses and at the center of wide houses.

Paired or bay windows are often used in the forward gable of the Gable L massing type. Bay windows may be one- or two- stories tall.

Eaves

Two eave types define the Gulf coast Victorian, one is more formal than the other:

- A boxed eave with frieze is the most formal option, with or without brackets. A 12- to 16-inch frieze board either touching or at least 8 inches above the window head trim is common. Eave returns should have metal flashing back to the wall at a maximum slope of 2-in-12.
- A boxed eave with sloped soffit. The rake features an overhang with simple decorative vergeboard.

Wall

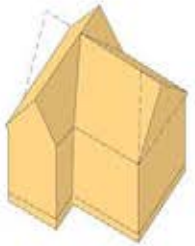
The first floor of the Victorian house is typically set four feet above the finished grade. For one-story houses, the floor-to-ceiling height should be 9 to 10 feet. For two-story houses, the minimum floor-to-ceiling height is 9 feet for the first floor and 8 feet for the second floor. Window head heights should be 8 feet above the floor for first floor windows and 7 feet for second floor windows. These houses have 8-inch-wide skirt boards. Foundation vents are centered under windows when used.

Massing and Massing Combinations

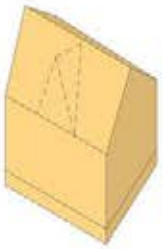
Side-Gabled

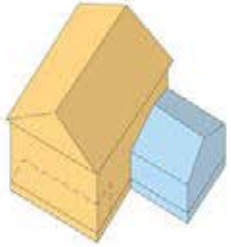
Front-Gabled

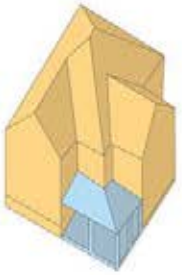
Gable "L"



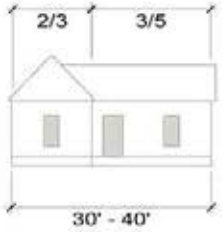
L-Shaped

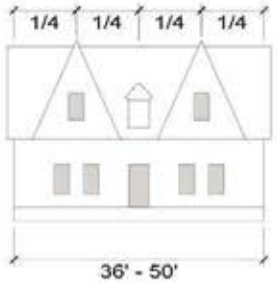






Facade Composition





Standard Windows

- Windows are vertical in proportion and have a 2 over 2 or 4 over 4 muntin pattern.
- Panes are always taller than they are wide. Some houses may have windows with rounded upper sashes.
- Standard windows are double hung.

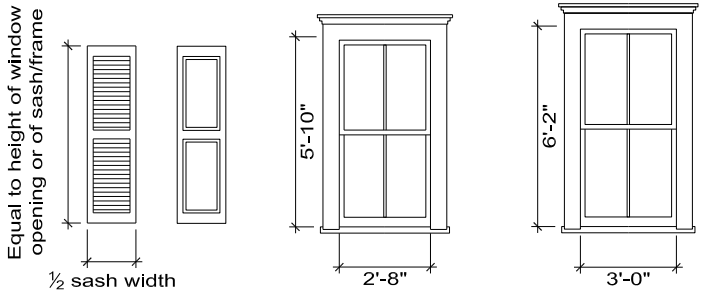
Special Windows

- Gulf coast Victorian houses feature round- top windows, dormers and box and angled bay windows.
- Bay windows must project a minimum of 8 inches from the main structure. Bay windows have a continuous base to the ground; two-story bays are common.

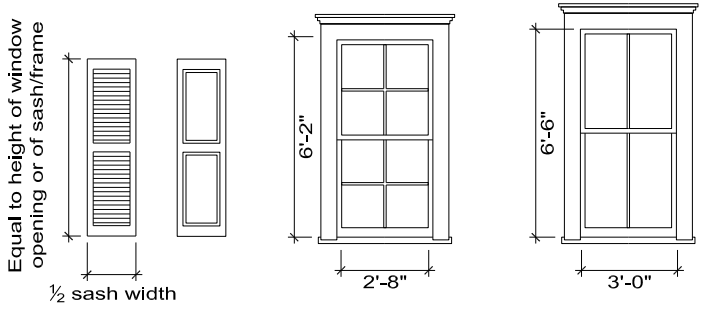
Shutters

- Louvered and paneled shutters are common elements for windows and doors.
- Fixed-louver shutters should be turned to drain water toward the wall when open
- Shutters should be exactly one-half the width of the sash they are covering.
- All shutters should be installed with hinges and dogs and mounted with hardware to appear operable.
- Shutter dogs should relate stylistically to the architectural style of the residence. Common stamped S-dog types were only used in the Victorian era and later. Earlier shutter dogs should be wrought, with a finger loop that projects away from the wall.

Standard Windows

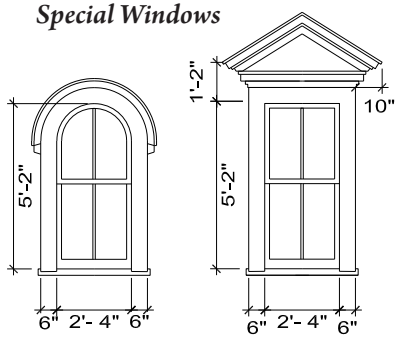


Second Floor

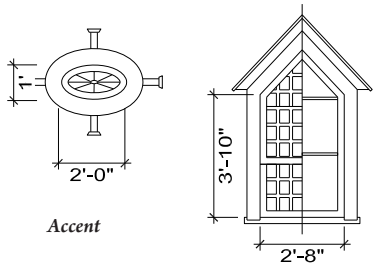


First Floor

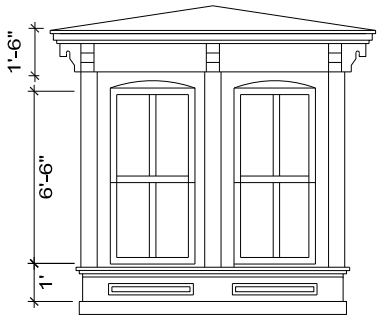
Special Windows



Dormer

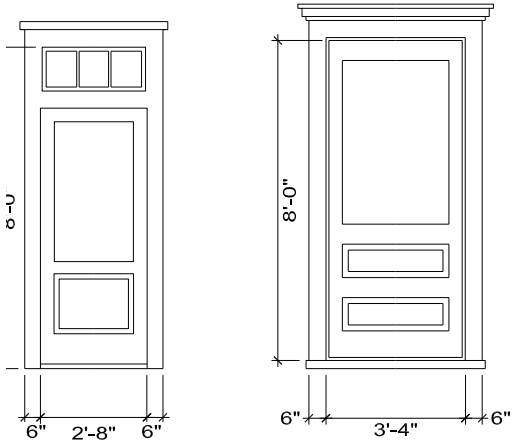


Accent

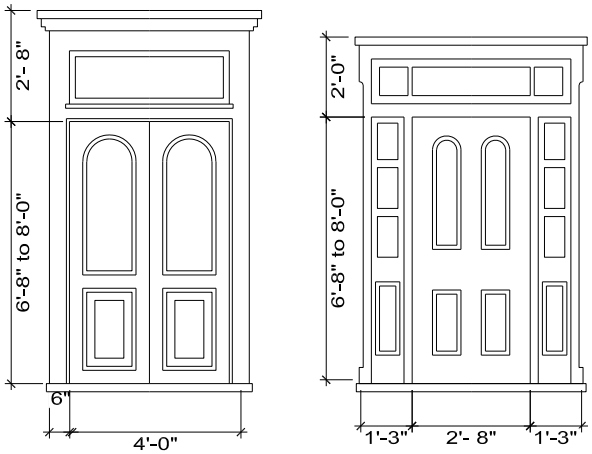


Box Bay Window

Simple Doors



Ornate Doors



Doors

- Doors on Gulf coast Victorian houses are vertical in proportion. The maximum width of a pair of double doors is 5 feet for doors at least 8 feet tall, and 4 feet for shorter pairs of double doors.

Trim

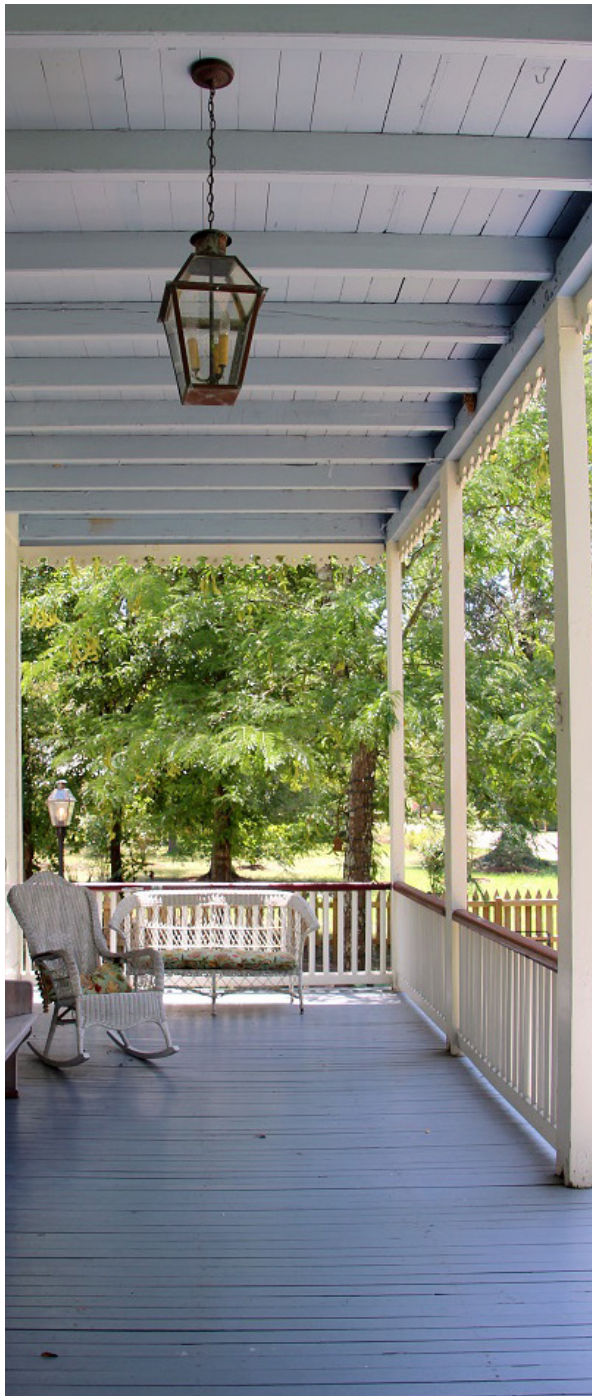
- Windows and doors have 6-inch trim with a simple backband profile. Victorian window and door trim carries a decorative crown and cap above; windows may feature an ornate hood.

Porch Roofs & Eaves

- Porches can be one or two stories tall with flat, shed or shallow hipped roofs.
- Full porches may be integrated under the house's main roof.
- Shed or hipped porch-es have a 3-in-12 to 4-in-12 pitch. Exposed 2 x 8 rafter tails typically occur every 14 to 16 inches on center.
- Entablatures are generally Classically proportioned and detailed.

Columns & Railings

- Column types include 8-inch-square posts and 8- to 10-inch-diameter Doric and Ionic columns.
- First-floor columns are 9- to 10-feet tall, while second-floor columns are 8- to 9- feet tall.
- Turned or square balusters are spaced no more than 4 inches apart.
- Porch bays should be vertically proportioned.
- Flat-cut ornamental balusters are also used with square columns.
- Square pattern lattice is used as infill between piers at the foundation.



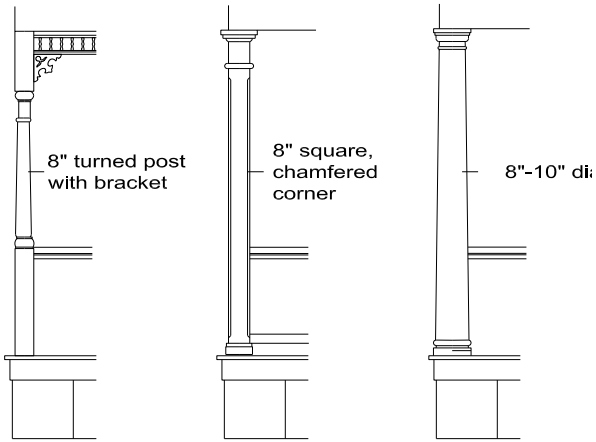
Brackets

- Brackets range from simple designs cut from boards, to more elaborate turned wood or jigsaw-cut openwork. Brackets are a minimum of 2 inches thick.
- Arch-way bracketing can be used to form portals over key entry locations.

Porch Location

- Full front porches are common on Gulf Coast Victorian houses. Porches can be used to wrap the corner of a house, or fill in the void created by an L-shaped plan. The minimum porch depth is 8 feet.

Column Types



Essential Elements of the Gulf Coast Classical

- Simple volumes with side wings and porches added to make more complex shapes
- Symmetrical composition of doors and windows
- Simplified versions of Classical details and columns, often with robust and exotic Classical orders such as Ionic and Corinthian used in the porch element
- Multi-pane windows that are more broad in proportion, usually with 6 over 6 or 9 over 9 pane patterns

Massing

Hipped or Side-Gabled
Hipped or side-gabled rectangular volume with roof pitches ranging from 6 to 8 in 12. One-story shed or hipped porches are often located centrally on the front facade. One-story side wings often occur. Although porches are most often one-third or one-fifth the length of the main body, they may also be three-fifths or the entire length of the front facade.

Hipped or Front-Gabled
Hipped or front-gabled box with roof pitches ranging from 6- to 8-in-12. Three-bay compositions are common. Full front porches and one-story side-wings are common to this massing type.

L-Shape
L-shape volume with a front facing gable roof intersecting either a gable or cross-gable at the rear. Roof pitch ranges from 6-in-12 to 10-in-12. One- and two-story porches often fill the space of the "L".

Massing Combinations

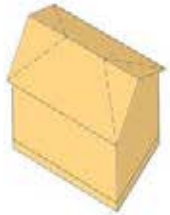
Complex forms and larger living spaces may be created by combining side and/or rear wings with the main body. Gabled or hipped dormers may be added to introduce light into half-story and attic spaces. The architectural character of the attached parts should match that of the main body.

Facade Composition
The Gulf Coast Classical facade composition is characterized by a symmetrical and balanced placement of doors and windows. Entrance doors are typically located in the center of the composition. Typically windows align vertically from floor to floor.

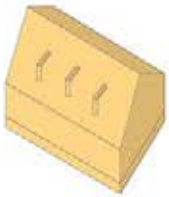
Eaves
The Gulf Coast Classical style is characterized by the vertical proportion of the window and door elements and well-detailed Classical eaves and cornices. The frieze below the soffit is typically small with profiled moldings and dentils.

Wall
The first floor of the Main Body is typically set 4 feet above the finished grade. The floor-to-ceiling height on the first floor is typically 10 feet. For two-story houses, the second-story floor-to-ceiling height is typically 8 to 9 feet tall.

Massing and Massing Combinations

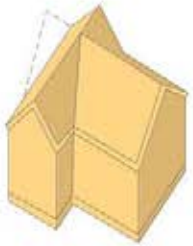


1 to 1-1/2 Story Hipped or Side-Gabled

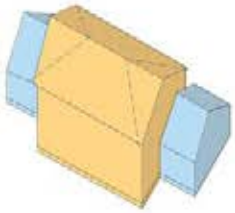


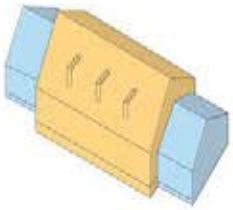
2-Story Hipped or Side-Gabled

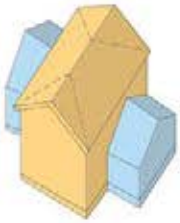
Hipped or Front-Gabled



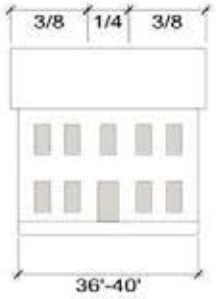
L-Shape

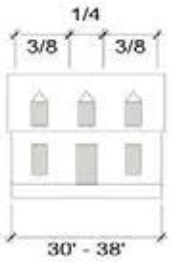


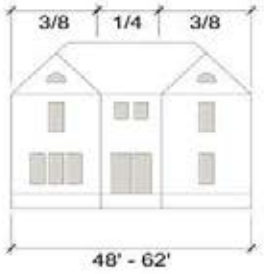


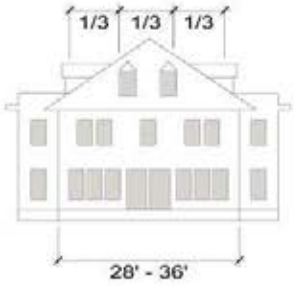


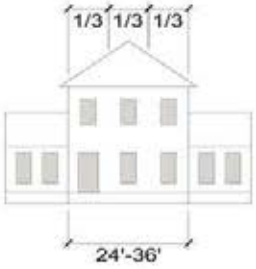
Facade Composition

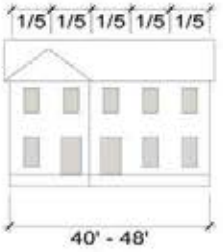












Standard Windows

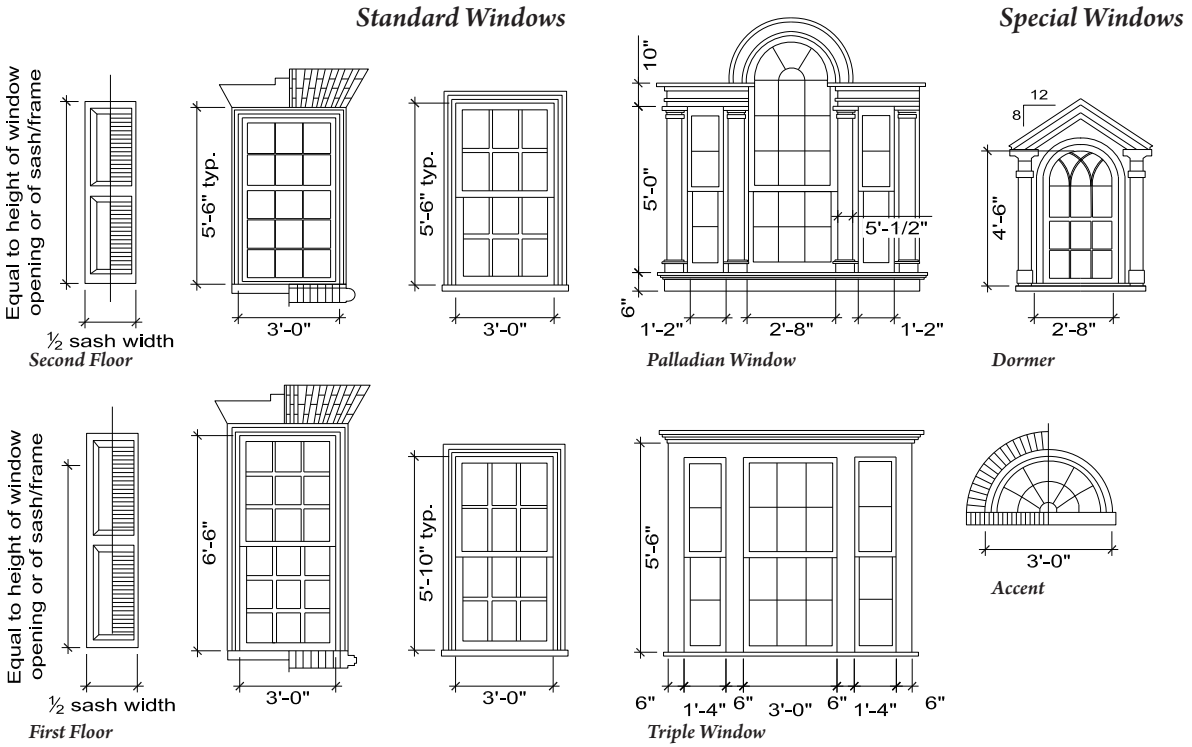
- Windows are typically vertical in proportion.
- Two basic window muntin patterns are 9 over 9 or 6 over 6 on the first floor, 9 over 9, 6 over 9 or 6 over 6 on the second floor, double hung with wide trim.
- Stone or brick jack arch lintels are typical.

Special Windows

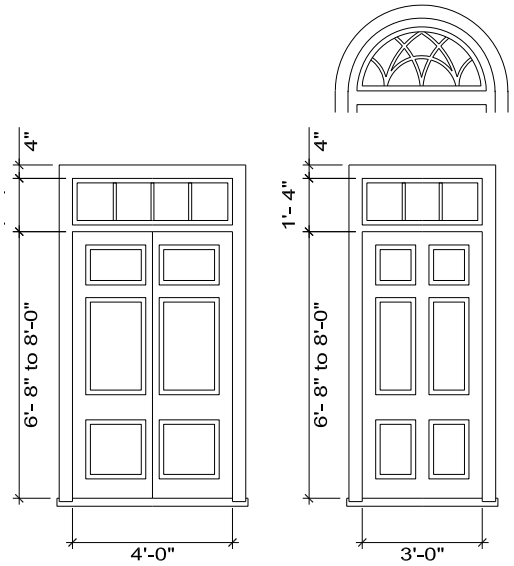
- Special windows include Palladian arched accent windows in gabled ends, dormers with gable or hipped roof, and the triple window with broad center sash, a hallmark of the Gulf Coast Classical style house.

Shutters

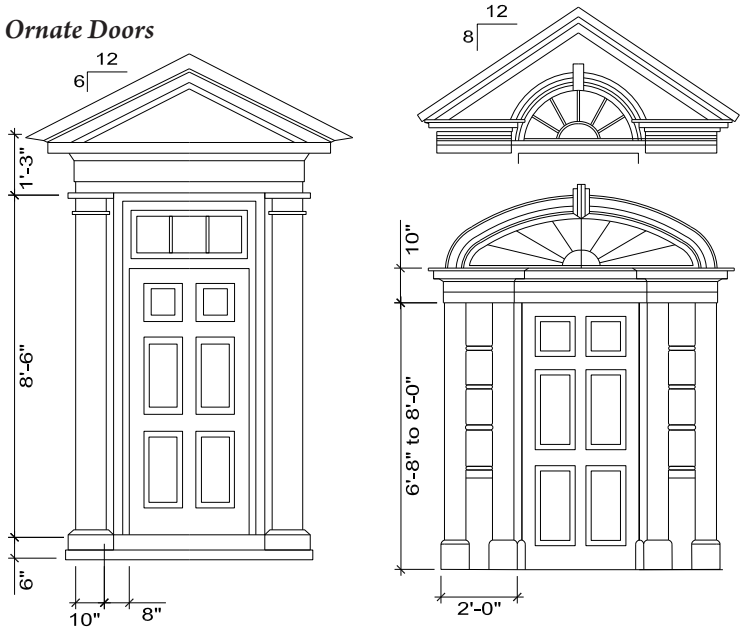
- Louvered and paneled shutters are common elements for windows and doors.
- Fixed-louver shutters should be turned to drain water toward the wall when open
- Shutters should be exactly one-half the width of the sash they are covering.
- All shutters should be installed with hinges and dogs and mounted with hardware to appear operable.
- Shutter dogs should relate stylistically to the architectural style of the residence. Common stamped S-dog types were only used in the Victorian era and later. Earlier shutter dogs should be wrought, with a finger loop that projects away from the wall.



Simple Doors



Ornate Doors



Doors

- Doors include 6- and 8-panel patterns, typically with sidelights and transom surrounds.

Trim

- Windows and doors typically have 4-inch-wide profiled trim.

Porch Roofs & Eaves

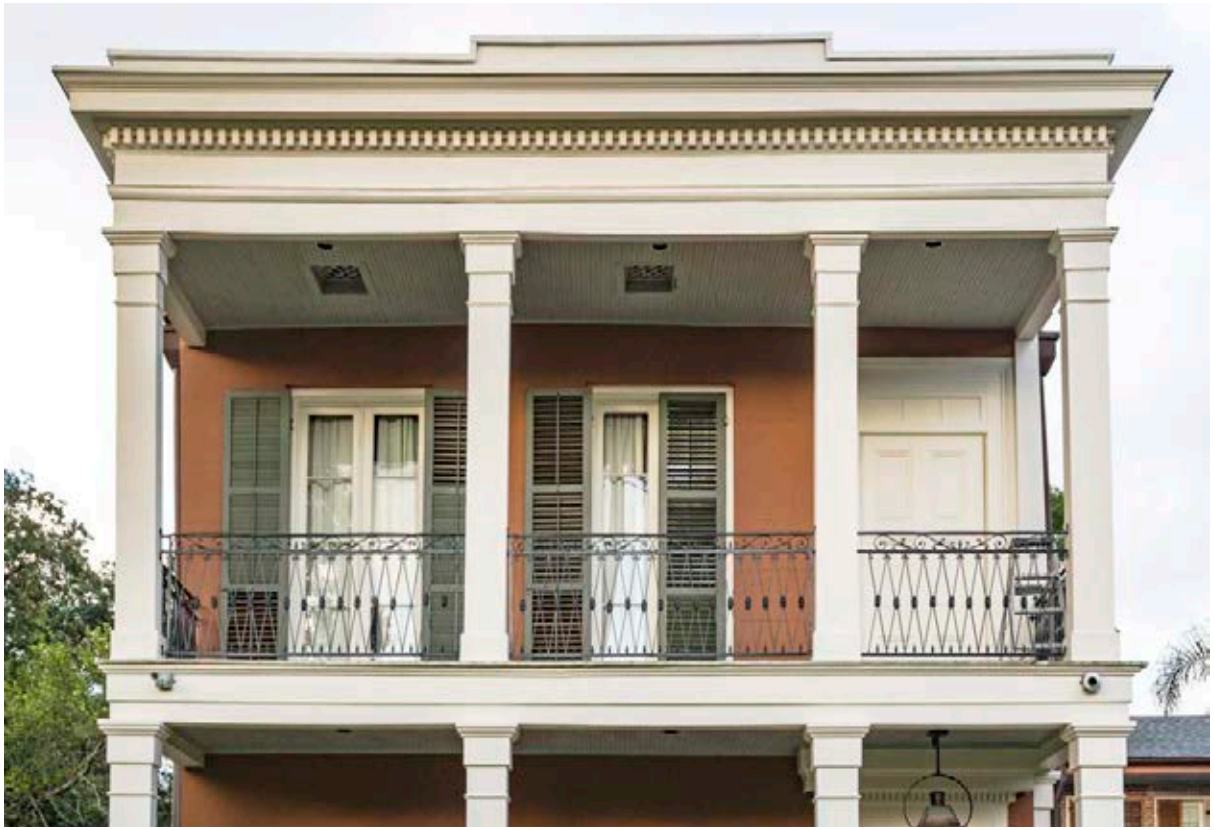
- Porches can be one or two stories tall with either flat, shed, gabled, or hipped roofs.
- Shed or hipped porches have a 2- to 4-in-12 pitch, while classically proportioned temple-front porch roofs have a 5- to 7-in-12 roof pitch.

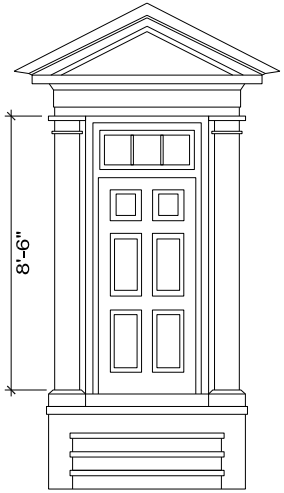
Columns & Railings

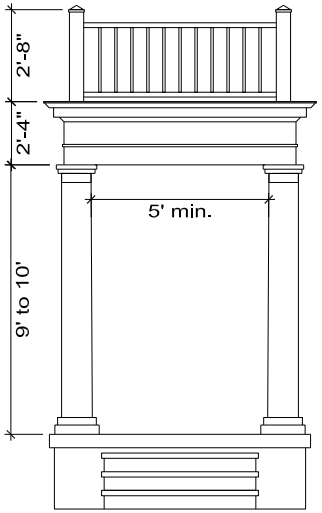
- Columns include 10-inch diameter Doric columns, and 12-inch diameter Ionic columns.
- Single-story porches have 9- to 10-foot-tall columns. Two-story porches use 10-inch diameter, 8- to 9-foot-tall columns on the second story and 12-inch diameter 9-to 10-foot-tall columns on the first floor.
- Porch column bays should be more narrow than wide.
- Balusters have a square or turned cross section, and should be spaced no more than 4 inches on center.

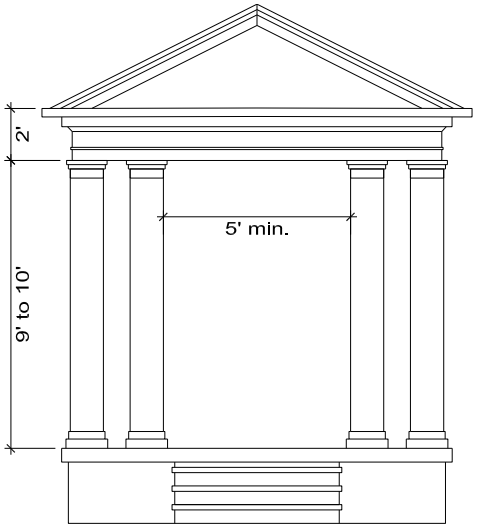
Porch Location and Massing

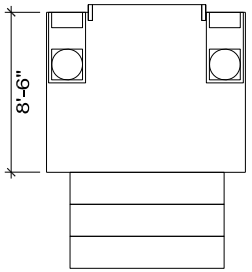
- Entry porticos and three-bay front porches are encouraged on Gulf Coast Classical houses.
- Porches are generally centered in the facade composition of this style.
- Minimum porch depth is 8 feet. For wood deck porches, the gaps between brick piers have lattice infill panels.
- Concrete porches should be faced in brick, stone or stucco if appropriate.



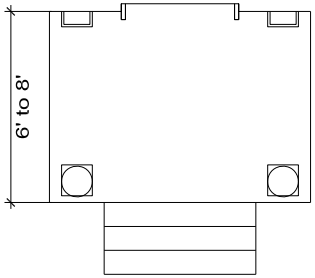




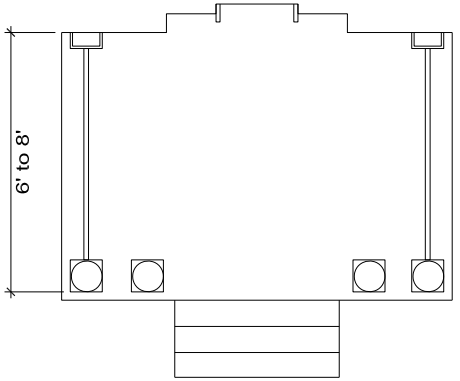




Aedicule



Portico with Railing



Pediment Porch

Essential Elements of the Gulf Coast Arts & Crafts Bungalow

- Shallow-pitched roofs with deep overhangs
- Deep, broad porch elements with expressive structural components
- Expressive structural elements such as rafters, brackets and columns
- A mixture of materials such as brick, shingles and siding
- Asymmetrical window and door compositions

Massing

Hipped

Rectangular or square volume with a 6-in-12 to 8-in-12 roof pitch; the ridge line runs perpendicular to the front of the house. Porches are inset under the roof and run the full front facade. These types are either three bay or five bay porches. These can be two stories, often with full two story porches.

Side Gable

Rectangular one or two story volume with a 4-in-12 to 8-in-12 hipped or gable roof pitch. Asymmetrically placed gabled and/or shed roofed porches are common. Porches are typically one story.

Side Gable with Integral Porch

Rectangular one-and-one-half-story volume with a 6 in 12 to 8 in 12 roof pitch. The integral porch is set under occupiable interior space, made possible by a Hipped Broad Front Bungalow Narrow Front dormer and high knee wall on the second floor. Integral front porches range from half to the full length of the front facade. Symmetrically placed gabled or shed dormers have a 3-in-12 roof pitch.

Front Gable or Hipped

Rectangular volume with a 6-in-12 to 8-in-12 roof pitch with gable facing the street. This can be either one or two stories. Hipped roof houses of this type are also found in the region. Asymmetrically placed, single bay, gable end porches are common. An inset one-story porch may also run the full width of the house.

Massing Combinations

Complex forms and larger living spaces may be created by combining side and/or rear wings with the main body. Gabled or hipped dormers may be added to introduce light into half-story and attic spaces. The architectural character of the attached parts should match that of the main body.

Facade Composition

Arts & Crafts Bungalow facade composition is characterized by an asymmetrical yet balanced placement of doors and windows. Typically, windows occur in pairs and multiples to create larger compositions. Entrance doors are most often under porches and off center. Doors typically have wide sidelights with expressive muntin patterns or Arts & Crafts Bungalow stained glass elements.

Eaves

Deep eaves are a dominant characteristic of the Arts & Crafts Bungalow style. There are two types of eaves in the style:

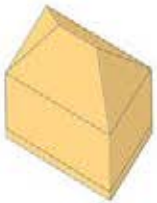
- Boxed eave with flat soffit and shallow profile brackets 6 inches wide and 24 inches on center (less common in Gulf Coast)
- Exposed 2 x 8-inch rafter tails, 16 to 24 inches on center is the most common eave type. Often hipped, gables feature a continuous fascia rather than exposed rafter ends.

Wall

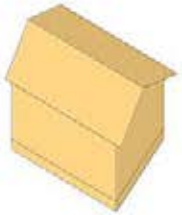
The first floor of the Arts & Crafts Bungalow house is typically set three to four feet above the finished grade. For one-story houses, the typical floor-to-ceiling height is 9 feet. For two-story houses, the typical floor-to-ceiling height is 9 feet for the first floor and 8 feet for the second floor.

Window head heights should be 7 feet to 8 feet above the floor for first floor windows, and 7 feet for second floor windows. These houses have 8- to 10-inch-wide skirt boards. Foundation vents are centered under windows when used.

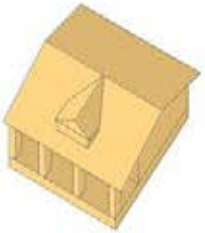
Massing and Massing Combinations



Hipped

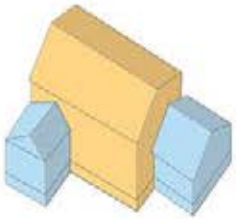


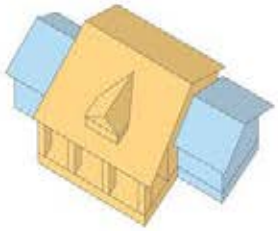
Side Gable

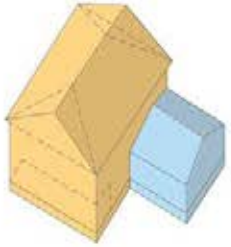


Side Gable with Integral Porch

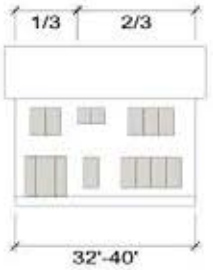
Front Gable or Hipped

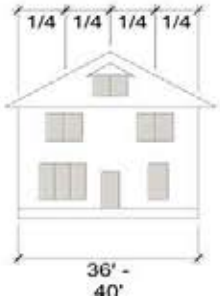


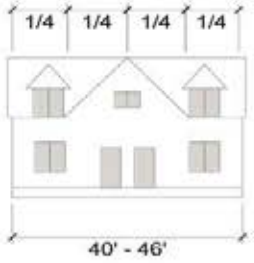


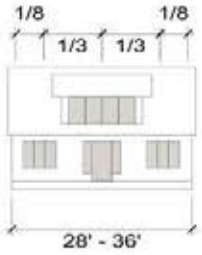


Facade Composition









Standard Windows

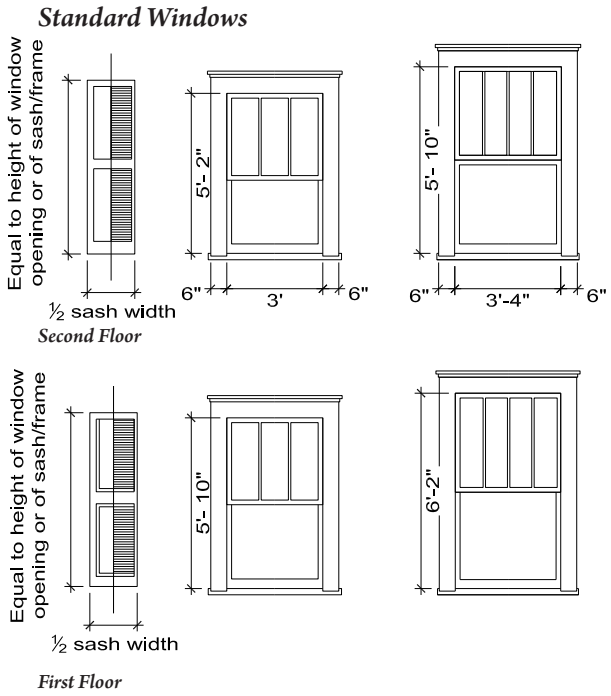
- Windows are typically vertical in proportion and have a 3 over 1, 4 over 1, 6 over 1, or 9 over 1 muntin pattern.
- Standard windows are double hung.

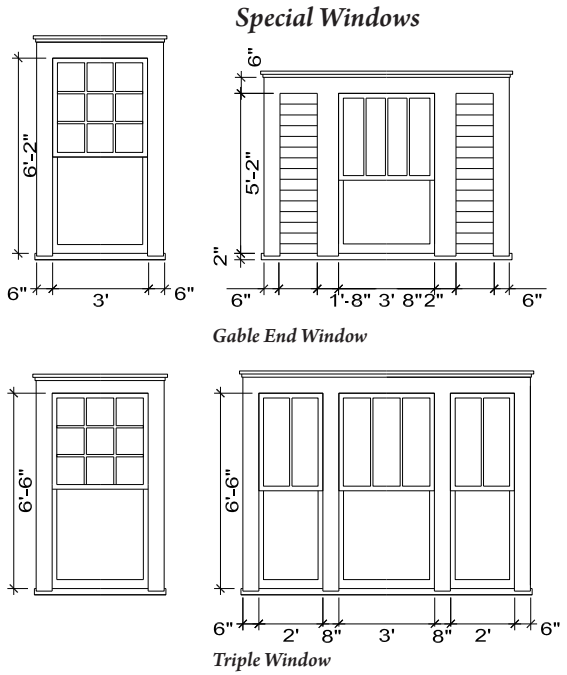
Special Windows

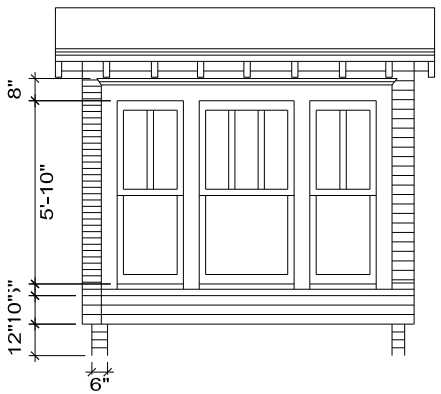
- Special windows include paired or triple windows, small square accent windows, and box bay windows supported on wood brackets.
- Broad, horizontal windows divided into several panes occur in dormers and gables.
- Other dormer windows are ganged together in wide gabled or shed dormers.

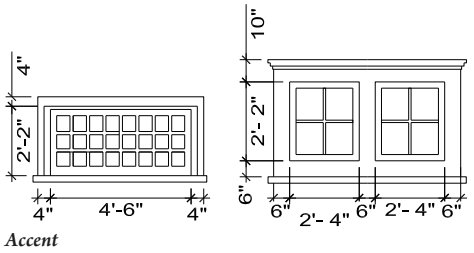
Shutters

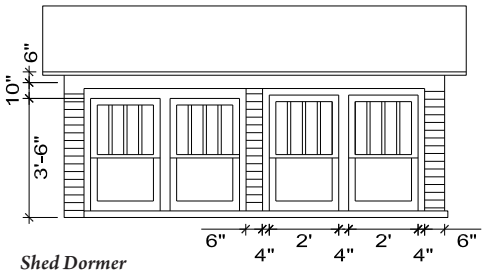
- Louvered and paneled shutters are common elements for windows and doors.
- Fixed-louver shutters should be turned to drain water toward the wall when open
- Shutters should be exactly one-half the width of the sash they are covering.
- All shutters should be installed with hinges and dogs and mounted with hardware to appear operable.
- Shutter dogs should relate stylistically to the architectural style of the residence. Common stamped S-dog types were only used in the Victorian era and later. Earlier shutter dogs should be wrought, with a finger loop that projects away from the wall.



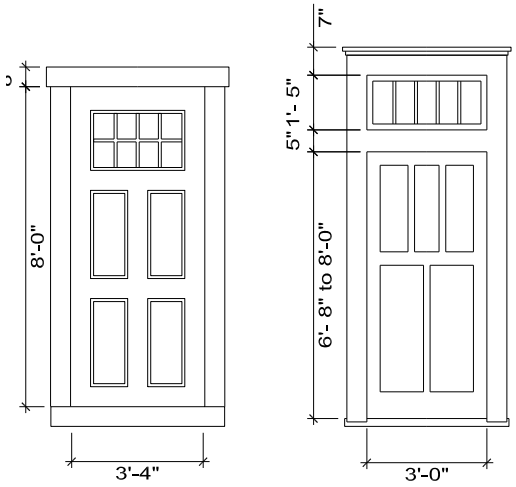








Simple Doors



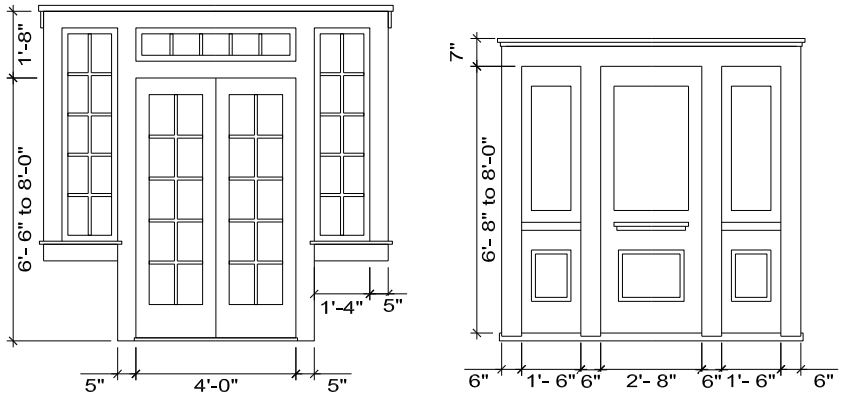
Doors

- Arts & Crafts Bungalow doors are often stained wood with either wood plank design or a panel door with a variety of different glazing patterns in the top half.
- Doors may have sidelights or transoms in clear or leaded glass in Arts & Crafts Bungalow patterns.

Trim

- Windows and doors have 6-inch straight or tapered flat trim.
- Arts & Crafts Bungalow window and door trim carry a simple molding and cap above.

Ornate Doors



Porch Roofs & Eaves

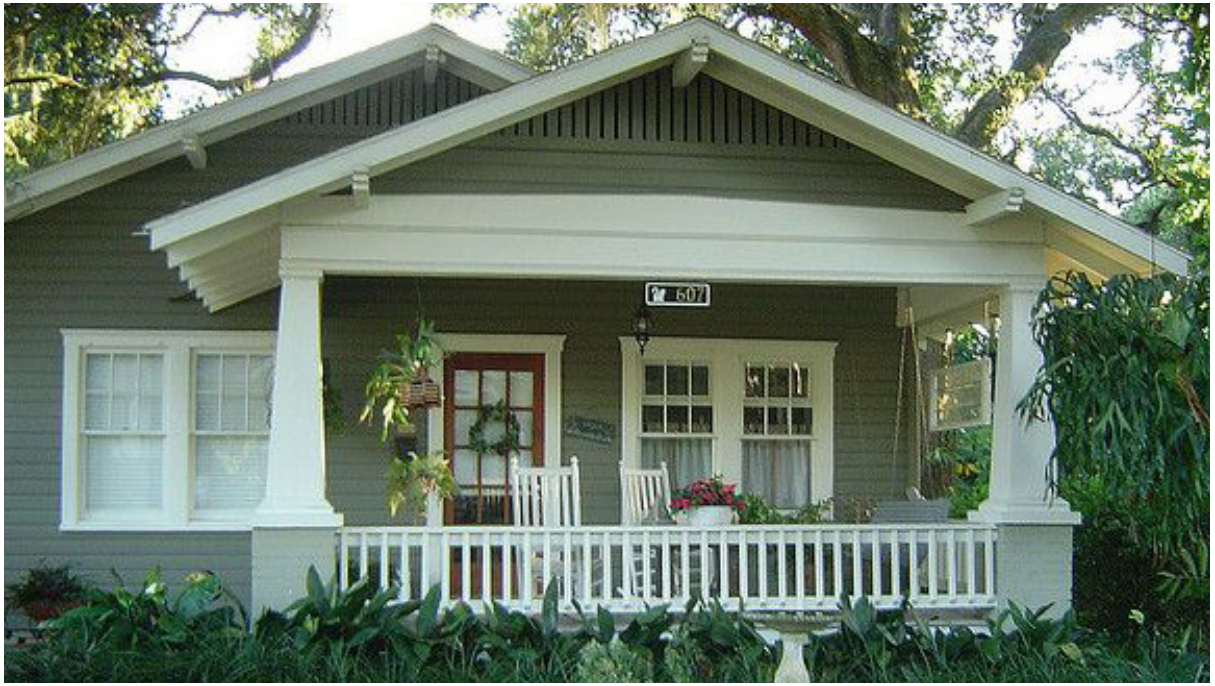
- Porches can have shed or gabled roofs or combinations of the two.
- Hipped porches are also common.
- Gable-end porches are designed with expressive structural elements.
- Shed and hip porches typically have a 4-in-12 to 6-in-12 pitch.
- Porches have deep eaves often repeating the same rafter or eave treatment as the main house body. Exposed rafter tails should be either shaped or cut plumb.

Columns & Railings

- Columns include full-height tapered box, half-height paneled box, and three-quarter-height paired box columns.
- Many columns are set on square piers or solid porch balustrades.

Porch Location and Massing

- Porches and porch locations vary considerably and are used to create a number of spatial effects.
- Porches are typically broad and low or fill in the void created by an inset house plan.
- Minimum porch depth of 8 feet is required.
- For wood deck porches, the gaps between brick piers should be infilled with lattice panels.
- Solid porches should be faced in brick, or stucco if appropriate and should read as part of a continuous foundation or base-treatment.

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Roof

- Hipped and gable roofs and their variants are preferred. Flat roofs with a parapet are acceptable.
- Roof pitch should be between 10-in-12 and 3-in-12. Shed or hipped roof porches should have a 3-in-12 to 4-in-12 pitch.
- Porches can be one- or two-stories with flat, shed, shallow-hipped roofs or a combination of roof types depending on the architectural style of the residence.
- Roof ornaments such as cupolas or cloche towers are allowable if appropriately massed and proportioned.
- No. 1 Clear Cypress, No. 1 Clear Cedar, or Pine Wood shingles are permitted roofing materials.
- Metal roofs of true 5V or standing- seam ribbing are appropriate and encouraged roofing materials.
- Pattern and color of asphalt shingles is subject to review and approval by the Design Review Board (DRB). Standard 3-tab asphalt shingles are prohibited.
- Metal ridge caps should be narrow and low.
- Bay roofs should be metal.
- No plumbing vents or mechanical flues are to be visible from 'public' areas.

Dormers

- Dormer jamb material shall be solid casing from the window to the corner of the dormer. Siding on the face of the dormer is not permitted.
- Brick dormer face is only permitted when it forms a parapet at the top of the dormer.
- Dormer windows shall be similar or slightly smaller than windows on lower levels.
- Dormer roof trim shall match or be more detailed than roof trim for the main body.

Roof Elements and Details

- Roof elements and detailing should reflect the architectural style of the residence.

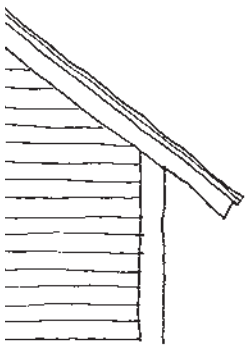
Eave

- Eave design is often an expression of numerous regional influences, including vernacular construction methods, locally available materials, climate, and tradition.
- Eave construction shall follow historic style precedents and may consist of exposed end rafter and trim, end rafter with visible purlins, or horizontal fascia "return." Block return or "pork chop" construction is not permitted.

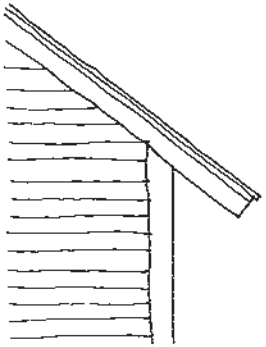
Cornice

- Cornice treatment can be done with brick corbeling or variations in brick courses. If eaves are wide, it is possible to use brackets and braces to support the eaves and evoke structural strength.
- Where appropriate to the design, eave returns are to follow the classical orders: architrave (beam), frieze (ceiling joists), and cornice (transition to the roof). One cyma profile is permitted along the cornice but it is not to be substituted for the bedmold.
- A frieze board is required under every cornice or eave.

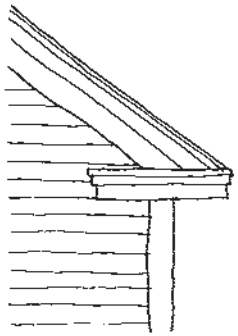
Eave Returns



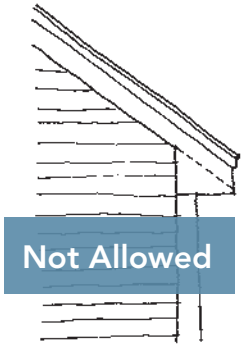
Exposed End Rafter and Trim



End Rafter with Visible Purlins



Horizontal Fascia "Return"



Block Return

Chimneys

- Design should follow basic principles of building type, including style and finish.
- Detailing should be appropriate to the materials used, which means that stucco and natural stone chimneys should generally be simpler than brick. Avoid over-simplification of chimney detailing, including truncated caps.
- Flue expression should be minimized.
- Chimneys must have a projecting cap and must extend to the ground if located on an exterior wall.
- Shoulders should typically occur in the vicinity of the primary eave height. In some cases, it is appropriate to step shoulders in both directions like a pyramid.
- Lap siding is not permitted as a finishing material.

Gutters and Downspouts

- Gutters should be copper, aluminum or metal.
- Half round gutters and round downspouts are required.
- PVC or vinyl materials are not permitted.

Facade

- Shall consist of no more than two wall materials, not including foundation or piers.
- Stone veneer should be laid with horizontal square cut stones to appear structural.
- Brick should look handmade and local. Rake joints should be avoided.
- Stucco should be smooth sand-finished. Highly textured synthetic finishes are not permitted.
- Walls should be 9 feet tall minimum. Walls under 9 feet on the first floor are not permitted.
- Complete brick coursing should align with all openings. No slivers of bricks are allowed above and below openings.
- Masonry foundation walls and frame walls should align. Masonry foundation wall ledges are not permitted.
- Heavier materials should be located on lower levels of the elevation, allowing for the semblance of rustication where appropriate.
- Vertical joints of material change should only occur at inside corners. Material change at outside corners is not permitted.

Finished Floor

- All single-family attached and detached homes shall be built on crawl, basement or raised slabs. On-grade slabs are not permitted.
- The finished floor elevation shall be a minimum of 18-inches above the adjacent street elevation.

Detached Garages, Carriage Houses, and Ancillary Buildings

Detached Garages and Carriage Houses

- Size of a single car garage shall not exceed 288 SF gross (12' x 24').
- Size of a two car garage shall not exceed 576 SF (24' x 24').
- Size of a three car garage shall not exceed 864 SF gross (24' x 36').
- Garage door composition should consist of a single door per each vehicle entrance. Double-wide doors are prohibited.
- Single-width garage doors up to 8 feet wide are recommended and shall be no larger than 9 feet wide.
- Paneled door styles appropriate to the style of the architecture should be used.
- Garages and carriage houses shall not have a roof peak higher than the main body of the house. Single story garages shall be no higher than 22 feet above parking grade level.
- Garage doors should include hardware so as to appear operable and may include a traditional swing, folding or sliding design.
- Carriage houses may have access through exterior or interior stairs and may include cantilevered balconies, or subtractive porches cut out of the second level garage mass.

Placement: Corner Lot

- For corner lots, the garage should be located in the rear yard close to the property line, turned to face a side street or alley, and be set back to match the house's setback, if possible.
- Garage placement to be at least 15 feet back (18

feet preferred) from side street or alley to prevent parked cars from encroaching into the public sidewalk in order to avoid a safety hazard.
- Two- or three-car carriage houses are ideally suited for corner lots.

Placement: In-line Lot

- Garage should be placed in the rear of the lot to provide sufficient turnaround space between the house and the garage.
- Access to the garage is typically from a 10 to 12 feet wide, narrow driveway.

Attached Garages

- A one-car garage is recommended so as to not create a massing problem in which the garage appears wider than the house.
- Attached one-car garages should be treated architecturally as a wing addition and should be setback from the front of the house (a distance equal to the width of the garage).
- Attached garages are typically built a step or two down from the main living level to prevent gases from seeping into the main living quarters.

Materials

The selection of high quality materials and durable finishes is imperative in order to promote a sense of continuity and enhance the overall character of the neighborhood. The thoughtful juxtaposition of traditional materials to yield a clean, simple palette further strengthens the charm and craftsmanship of the neighborhood.

Roofing

- Cedar shakes, slate (including manufactured slate products), laminated asphalt or composition shingles (with a slate pattern), painted metal standing seam or 5-V crimp panels

Soffits

- Smooth-finish composition board, tongue-and-groove wood boards, or fiber-cement panels

Gutters & Downspouts

- Half-round or ogee profile gutters with round or rectangular down-spouts in copper, painted or pre-finished metal

Foundations, Piers & Chimneys

- Brick, light sand-finish stucco or stone veneer
- Vinyl and synthetic stone are prohibited

Siding and Trim

- Wood clapboard siding is permitted, provided it is painted or stained with a minimum ½" butt and 4"-6" exposure
- Fiber-cement board siding is permitted with 4"-5" exposure
- Random-width cut wood or fiber-cement shingles with mitered corners or $\frac{5}{4}$" x 6-inch corner board trim
- Smooth-finish or sand-molded brick in Common, English or Flemish bond pattern
- Light sand-finish stucco
- Vinyl, aluminum, or fake wood grain siding is prohibited

Trim

- Wood, composite, cellular PVC or polyurethane millwork

Windows

- Painted wood or solid cellular PVC, or clad wood with brick veneer only
- true divided light or simulated divided light (SDL) sash with traditional exterior muntin profile (⅞ inch wide)

Shutters

- Shutters are to be solid-core polymers, composite or durable hardwoods.
- Shutters should be sized to match window sash and mounted with hardware to appear operable
- Shutter dogs are required and should relate to the architectural style of the residence
- Vinyl, nail-on, false wood grain, or pre-finished materials are prohibited.

Doors

- Wood, fiberglass or steel with traditional stile-and-rail proportions and panel profiles, painted or stained

Columns

- Columns shall relate architecturally to style of residence
- Wood, fiberglass or composite material with Classical proportions and details
- Square box column with chamfered corners in built-up wood, fiberglass or composite material
- Turned posts (minimum 6-inch stock) in wood, fiberglass or composite material

Railings

- Milled wood top and bottom rails with square, turned or scroll-cut board balusters
- Solid rails clad in siding, shingles, stucco, brick or stone veneer

Brackets

- Milled wood, fiberglass or composite material

Porch Ceilings

- Plaster, tongue-and-groove wood or composite boards, or beaded-profile plywood

Lighting

- Porch pendant or wall-mounted carriage lantern

Materials

Brick
- Shall be hard-fired clay
- Shall exhibit evenness in color and texture
- Painted where stylistically appropriate
- Avoid machine produced brick

Concrete
- Exhibit integral color and not surface stain
- Avoid stamped or stenciled patterns
- Finished should be appropriate for prescribed use
- Not permitted as a finish material on architecture

Crushed Stone
- Incorporate angular stone with varied particle sizes to allow for compaction and stability
- Avoid use on slopes greater than 5 percent due to tendency to wash or shift
- Crushed oyster shells are permitted
- Avoid limestone due to chemical reactivity

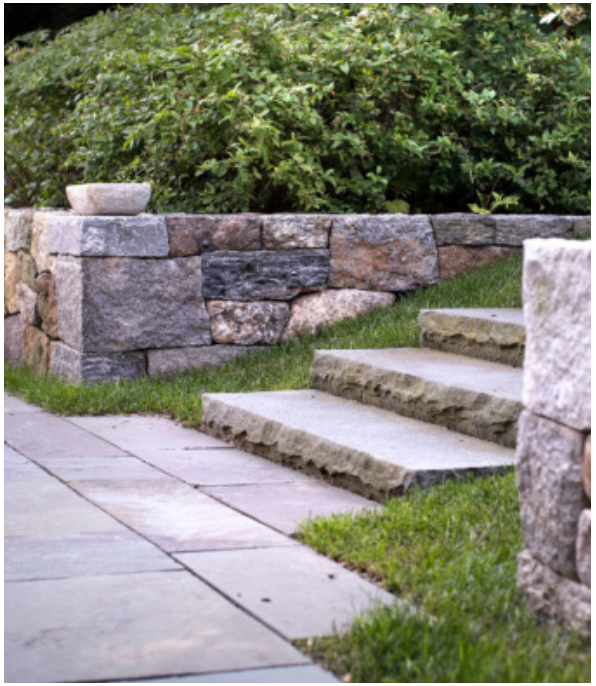
Metals
- Use durable corrosion resistant materials including copper, aluminum, iron, and steel
- Metal selections should take into account other architecture and site materials and compatibility
- Avoid mixing multiple metals
- Galvanized finishes shall be painted
- Avoid unnecessary metal edging

Stone
- Shall be natural quarried stone
- Finishes and stone types shall be compatible with use and should take into account other architecture and site materials
- Avoid thin veneer applications
- Use of regional or local stone is encouraged

Stucco
- 3-coat smooth, steel troweled
- Cement stucco
- Fiber cement stucco board (substitute for stucco in areas less than 4' x 8')
- Exterior insulation finish systems (EIFS) prohibited

Wood
- Use rot-resistant species or wood treated to be rot-resistant including black locust, cypress, cedar, and tropical hardwoods
- Selections should be compatible with other house and site materials
- Pressure-treated lumber prohibited except where hidden by finished materials
- Railroad ties prohibited
- Finish stains and paints shall be compatible with wood and other house and site finishes

Prohibited Materials
- Chain-link fencing and gates
- Vinyl and PVC fencing and gates
- Synthetic "stone"
- Composite decking
- Low quality material with short life cycle or high maintenance requirements that will quickly degrade to an eyesore
- White concrete is prohibited
- Any materials that do not appear original at 'arm's length'



Fences

- Front yard fencing is to be lower and shall not exceed 4 feet in height. Increased visibility is favored in order to connect and enhance public space, thus contributing to safety.
- Rear yard fencing can be higher and shall not exceed 8 feet in height. Fencing may be more opaque to provide privacy, contain children or pets, and screen unattractive views.
- Fences and fence foundations are to be constructed entirely on owner's property unless there is a recorded fence agreement covering location, design, cost-sharing, and maintenance responsibility.
- The framework for fences must face towards the owners property.
- Chain link and vinyl fencing is prohibited.
- All fences are subject to design approval by the DRB prior to installation.

Gates

- Follow same guidelines as fences
- Style and character should match that of architecture of the house

Walls

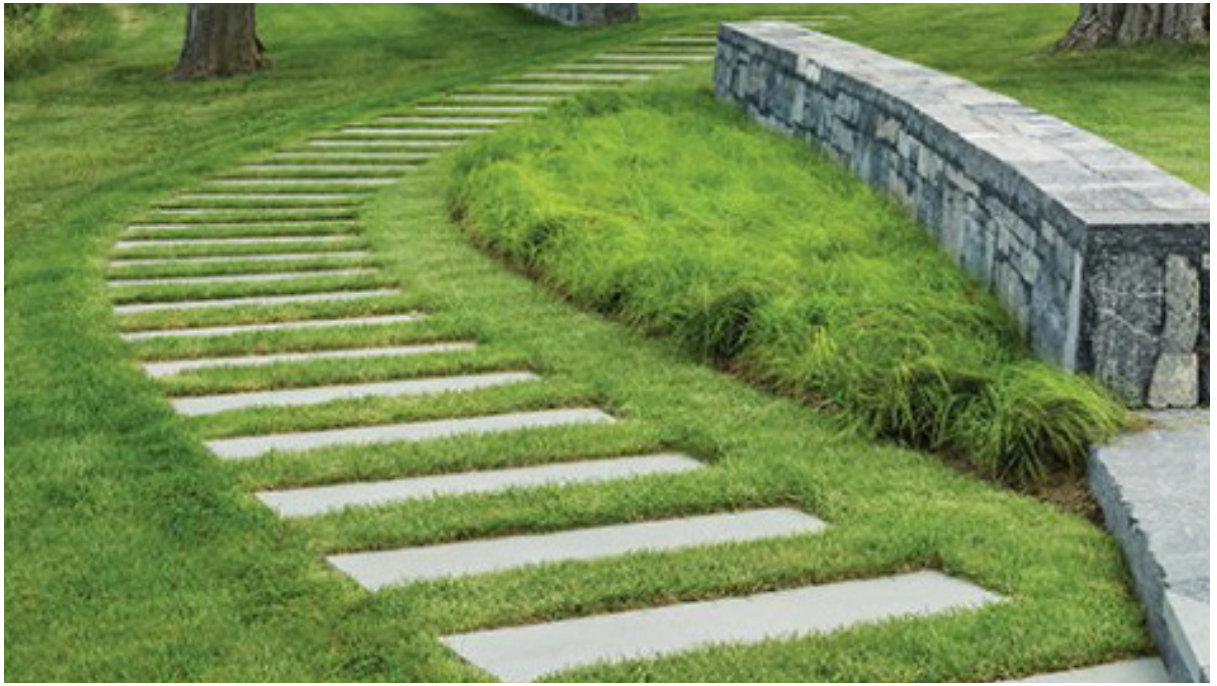
- Walls define space, mark ownership, provide seating, and screen unwanted views.
- Walls can be used to create flat or gently sloping land.
- Materials, scale, and style are to relate harmoniously to the architectural style of the residence.
- Shorter walls are appropriate in the front yard in order to avoid obscuring street visibility and impairing safety; higher walls are appropriate in back yard to facilitate privacy.
- Use walls sparingly and only where needed to avoid creating unnecessary barriers or obstructing views within the public viewshed.

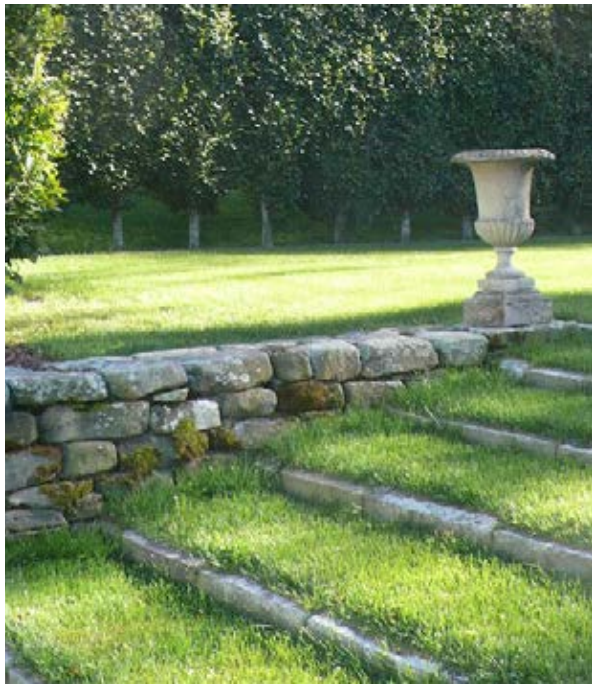
Retaining Walls

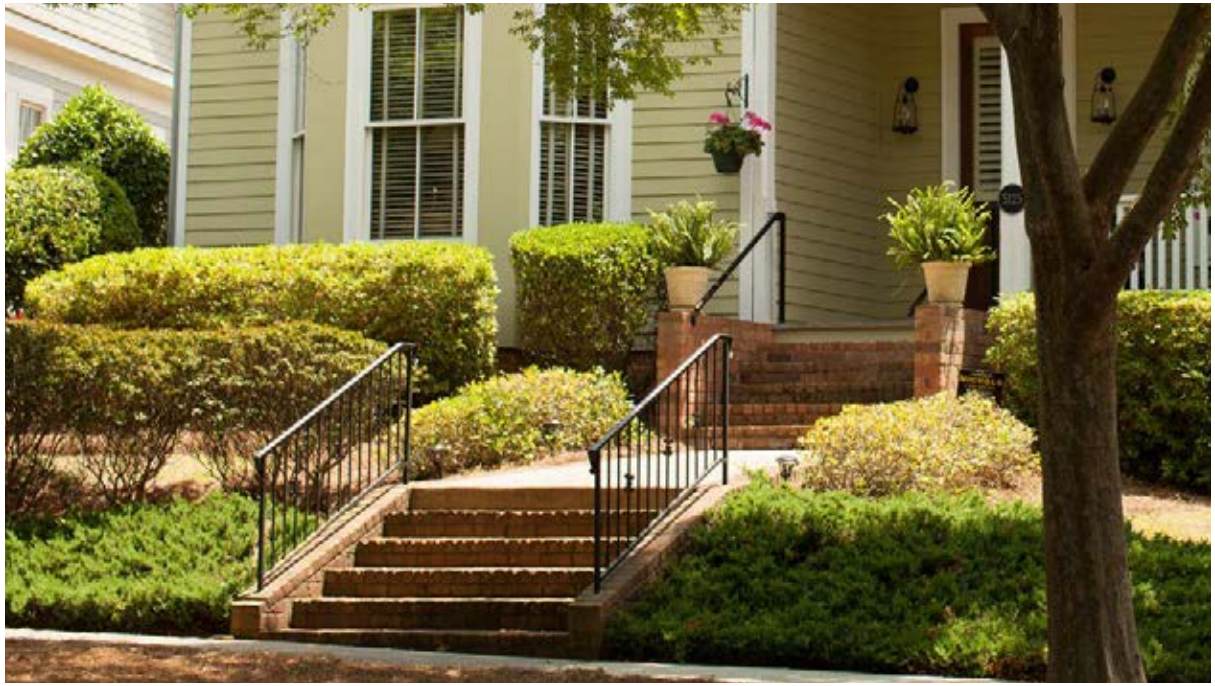
- Retaining walls should step with the natural topography of the site.
- Wall height should not exceed 7 feet from lowest finished grade to top of wall. Walls 4 feet and greater are subject to structural review and require a building permit.
- High walls are more likely to fail, create fall risk, and detract from the usability and comfort of the space.
- A series of shorter terraced retaining walls is preferred. Walls used for terraces should not exceed 4 feet tall and be spaced no closer than 4 feet apart.
- Veneer material should generally match the foundation of the residence.
- Retaining walls are subject to the approval by the DRB.

Walks

- Ease of access should be considered, creating routes that are laid out in a logical and maneuverable way.
- Provide proper grading to avoid ponding or washing.
- Consideration should be given to user needs for accessibility. In areas of great topography relief, walks may require ramps or stairs. Ramps and stairs requiring handrails should comply with all appropriate accessibility and safety standards.







Stairs

- Stair design should incorporate landings where stairs are taller than 4'-0" (8 steps or more).
- Maintain consistent width between walks and stairs. Stairs should never be narrower than width of adjoining walk.
- Stairs should meet all applicable code requirements including consistent riser height.
- Avoid cross slope grading at top or bottom of stairs

General Lighting Standards

- Provide appropriate illumination for function and safety without disrupting visibility of night sky.
- Use full cut-off fixtures that are Dark Sky compliant, as defined by the International Dark Sky Association (IDA).
- Consider durable fixtures that complement scale and style of residence. Reflective finishes and plastic fixtures are prohibited.
- Avoid "washing" or other widespread lighting techniques that cast glow on large areas.
- Accentuate landscape or architectural elements individually using lowest light levels possible for safety and function.
- Up-lights and related fixtures which create light pollution and prevent eyes from properly adjusting to lower, nighttime light levels are prohibited.
- Lighting must not trespass onto neighboring properties or common areas.
- Use low-voltage fixtures and LED bulbs to limit chance of shock, bulb replacement and utility cost.
- Floodlights shall not exceed 45 degrees from the ground plane.

Street Lighting Requirements

- All street lighting shall have a solid cap to minimize the impact of artificial light on the night sky.
- Pedestrian-scaled street lights shall not exceed 14 feet in height. Cobra-style lighting is prohibited.
- Fixture selection should be consistent with the character of the neighborhood and generally spaced between every other street tree to create an even rhythm and consistent light levels along streets. Final selection and placement is subject to review and approval by the governing authority in order to ensure that adequate light levels are maintained.
- LED fixtures are recommended with a target wattage in the range of 70 to 100 watts.
- If metal poles are desired, breakaway bases are required.

Site Elements Requiring Screening

- TV/Satellite Dishes, pet enclosures, play equipment/sports courts, and HVAC equipment should be located within the rear yard and properly screened from the public right-of-way.
- Screening walls, fences, or enclosures should relate to the architectural style of the residence.
- Freestanding flagpoles are prohibited.

Appendix

Acadian-Creole: Descriptive term for an architectural style that blends French-Canadian, Spanish-Colonial, and Caribbean influences in response to the local climate and inherited building traditions of the early settlers of the Gulf Coast.

Apron: A raised panel below a window sill.

Arts & Crafts: Eclectic movement of American domestic architecture in the arts and architecture during the second half of the 19th century and early part of the 20th century, emphasizing craftsmanship in a regional expression.

Balustrade: An entire railing system including a top rail, balusters, and often, a bottom rail.

Batten: A narrow strip of wood applied to cover a joint along the edges of two parallel boards in the same plane.

Beaded-Profile Panels: Panels manufactured to resemble traditional bead board.

Boxed Eave (boxed cornice): A hollow eave enclosed by the roofing, the soffit, and building wall.

Brickmold: Window or door trim, typically 2 inches wide.

Building: The complete, outfitted, and furnished 'Structure,' operational in every way, and ready for immediate occupancy and use.

Classical Architecture: The architecture of Hellenic Greece and Imperial Rome.

Classical Revival: An architecture movement in the early 19th century based on the use of Roman and Greek forms. Plaster, tongue-and-groove wood or composite boards, or beaded-profile plywood.

Colonial Revival: The use of Georgian and colonial design in the U.S. in the late 19th and early 20th centuries.

Corner Board: A board which is used as trim on the external corner of a wood-frame structure.

Cornice: An ornamental molding at the meeting of the roof and walls; usually consists of bed molding, soffit, fascia, and crown molding. Crown Molding: Projecting molding forming the top member of a cornice, door, or window frame.

Dentil: One of a band of small, square, tooth-like blocks forming part of the characteristic ornamentation of some classical orders.

Doric Order: The column and entablature developed by the Dorian Greeks, sturdy in proportion, with a simple cushion capital, a frieze of triglyphs and metopes, and mutules in the cornice.

Fascia: Vertical board that terminates a sloped roof at the eave.

Fenestration: Any opening, or arrangement of openings, in a building (normally filled with glazing) that admits daylight and any devices in the immediate proximity of the opening that affect light distribution (such as baffles, louvers, draperies, overhangs, light shelves, jambs, sills, and other light- diffusing materials).

Gable: The vertical triangular portion of the end of a building having a double-sloping roof, from the level of the cornice or eaves to the ridge of the roof.

Gable L: Describes the massing of a house having a hipped roof with a projecting gable form at the front, typically two-thirds the width of the facade.

Gable Roof: A roof having a gable at one or both ends.

Hipped Roof: A roof which slopes upward from all four sides of a building, requiring a hip rafter at each corner.

Insulating Concrete Forms (ICFs): Rigid foam forms that hold concrete in place during curing and remain in place afterwards to serve as thermal insulation for concrete walls. The foam sections are lightweight and result in energy-efficient, durable construction. Visit www.forms.org to learn more.

Ionic Order: The classical order of architecture characterized by its capital with large volutes, a fasciated entablature, continuous frieze, usually dentils in the cornice, and by its elegant detailing.

Jack Arch: A flat or straight masonry arch.

Knee Wall: Short, vertical wall that closes off the low space created by a sloping ceiling and the floor.

Leaders in Energy and Environmental Design (LEED): LEED is a building environmental certification program developed and operated by the U.S. Green Building Council.

Light: A pane of glass, a window, or a subdivision of a window.

Lintel: A horizontal structural member (such as a beam) over an opening which carries the weight of the wall above it.

Louver: An assembly of sloping, overlapping blades or slats designed to admit air and/or light and exclude rain and snow.

Low-E: Most often used in reference to a coating for high-performance windows, the 'e' stands for emissivity or re-radiated heat flow. The thin metallic oxide coating increases the U-value of the window by reducing heat flow from a warm(er) air space to a cold(er) glazing surface. The best location for the coating is based on whether the primary heat flow you want to control is from the inside out (heating climates) or the outside in (cooling climates).

Massing: The general form or shape of a building.

Mullion and Muntin: The vertical and horizontal members separating (and often supporting) window, doors, or panels set in series.

Natural Cooling: Use of environmental phenomena to cool buildings, e.g., natural ventilation, evaporative cooling, and radiative cooling.

Passive Solar Design: Designing a building's architectural elements to collect, store, and distribute solar resources for heating, cooling, and daylighting.

Rafter Tails: A rafter, bracket, or joist which projects beyond the side of a building and supports an overhanging portion of the roof.

Roof Pitch: The slope of a roof expressed as a ratio of its vertical rise to its horizontal rise.

R-value: Quantitative measure of resistance to heat flow or conductivity, the reciprocal of U-factor. The units for R-value are (ft2 h °F)/Btu (English) or (m2 °C)/W (SI or metric). While many in the building community consider R-value to be the primary or paramount indicator of energy efficiency, it only pertains to conduction, one of three modes of heat flow, (the other two being convection and radiation). As an example of the context into which R-value should be placed, 25% to 40% of a typical house's energy use can be attributed to air infiltration.

Seasonal Energy Efficiency Ratio (SEER): The Seasonal Energy Efficiency Ratio is the efficiency rating for air conditioning units. The higher the SEER rating, the better the energy efficiency. SEER is the ratio of the amount of BTU's used for cooling in normal annual use to the total amount of electrical power (measured in watts) over the same period.

Shed Roof: A roof shape having only one sloping plane.

Shutter Dog: A pivoting bar for fixing shutters in the open position against a wall.

Side Gable: Describes the massing of a house having the gable end (or roof ridgeline) perpendicular to the street.

Side Hall: Narrow residential house type that is one-room wide, associated with French settlements and the Mississippi River region.

Simulated Divided Light: Refers to a light in a window sash that is visually subdivided by applied muntins and that simulates a true divided sash.

Site: The natural location intended for the 'Building,' altered, modified, and prepared to the point where 'Construction' activities for the 'Structure' can be initiated.

Site Selection and Preparation: That complete sequence or series of activities and actions that begins with the natural environment and results in some specific geographic location defined in terms of boundaries, and altered and modified to the point where it has become the building 'Site' ready for 'Construction' to begin.

Skirting Board: A board set horizontally at the bottom of wall cladding.

Soffit: The exposed under-surface of any over-head component of a building, such as a beam, cornice, lintel, or vault.

Stile-and-rail: Type of door construction that utilizes a framework of vertical and horizontal members infilled with panels.

Structural Insulated Panels (SIPs): High-performance building panels for floors, walls, and roofs in residential and commercial buildings. Each panel is typically made using rigid foam insulation sandwiched between two structural skins of oriented strand board (OSB), though other surface types are available. The result is a building system that is very strong, energy-efficient, and cost-effective. Visit www.sips.org to learn more.

Structure: The completed building envelope on the 'Site,' externally and internally complete, including all operating systems ready for its interior furnishings.

Sustainable: The condition of being able to meet the needs of present generations without compromising those needs for future generations. Achieving a balance among extraction and renewal and environmental inputs and outputs, as to cause no overall net environmental burden or deficit. To be truly sustainable, a human community must not decrease biodiversity, must not consume resources faster than they are renewed, must recycle and reuse virtually all materials, and must rely primarily on resources of its own region.

Tongue-and-groove: Method of joining materials,usually wood, where a tongue or projection in one board fits the groove of its neighbor.

V Zone: (Velocity Zones): Areas within the floodplain subject to potential high damage from waves.

Verge: The edge projecting over the gable of a roof. Also, the area of planting, lawn or pavement between the sidewalk and the curb on a street.

Vergeboard: An ornamental board hanging from the rake, or verge, of a gable roof.

Vernacular Architecture: A mode of building based on regional forms and materials.

Victorian Architecture: Revival and eclectic architecture of Great Britain named after the reign of Queen Victoria (1837–1901); also its American counterpart which reached its zenith in the U.S. during the latter half of the 19th century.

Visitability: Unlike the more extensive features legally required by accessibility standards and codes, visitability involves a short list of features recommended for voluntary inclusion in virtually all new homes—single-family detached, row-houses,etc. Visitability features are those most crucial for people to remain in their homes if they develop an impairment, and to visit their neighbors as full members of the community. These features include at least one entrance without any steps on an accessible path at the front, side or back of the home, depending on topography; all interior passage doors providing at least 32 inches of clear passage space; and at least a half bath (preferably a full bath) on the floor served by the zero-step entrance that has minimum space requirements for access by a person who uses a wheelchair. Refer also to "accessibility" which has more extensive requirements.

Vocabulary: A collection of related architectural elements, materials, or stylistic conventions used to describe a building or structure.

Water Course or Water Table: A board or masonry projection fixed to the foot of a wall to shoot water away from it.

Window-to-floor Ratio: The ratio of total, unobstructed window glass area to total floor area served by the windows, expressed as a percentage. This value can also be further subdivided by solar orientation (such as south-facing window-to-floor ratio).

Wing: a subsidiary part of a building extending out from the main portion or body.

Zero Energy House: Any house that averages out to net zero energy consumption. A zero energy house can supply more than its needs during peak demand, typically using one or more solar energy strategies, energy storage and/or net metering. In a zero energy house, efficiencies in the building enclosure and HVAC are great enough that plug loads tend to dominate and so these houses must have the added focus of high efficiency appliances and lighting.

Windows

Marvin (http://www.marvin.com)
Wood double-hung and casement
Clad double-hung and casement with aluminum trim accessories
Replacement sash w/profiled aluminum panning
Wood or clad simulated divided lights (SDL)
French doors

Caradco (http://www.jeld-wen.com/windows/wood/caradco)
Wood double-hung and casement
Clad double-hung and casement with aluminum trim accessories
Wood or clad simulated divided lights (SDL)
French doors

Windsor (http://www.windsorwindows.com)
Wood double-hung and casement
Cellular PVC Legend Series double-hung and casement
Wood or PVC simulated divided light (SDL)
Direct set transoms and sidelights

Shutters

Southern Shutter Company (http://www.southernshutter.com)

J&L Shutters (http://www.jlshutters.com)
Stephen Fuller Signature Series (composite shutters, Permex)

Entry Doors

Simpson (http://www.simpsondoor.com)
Wood doors: Appropriate for all styles; hard to find Arts & Crafts door (#1662) is less than $400; several hard-to-find 2/3 light Victorian doors; European Romantic doors

Nord (http://jeld-wen.com/windows/wood/norco)
Wood doors: Classical and Colonial Revival styles, some Victorian and European Romantic doors

ThermaTru (http://www.thermatru.com)
Fiberglass and Premium Steel Series
Steel Doors: Classical, Colonial Revival and Victorian styles; acceptable European Romantic and Arts & Crafts doors

Stanley (http://www.stanleyworks.com)
Fiberglass and steel doors: Classical, Colonial Revival and Victorian styles; acceptable European Romantic doors

Peachtree (http://www.peach99.com)
Fiberglass and steel doors: Classical, Colonial Revival and Victorian styles; acceptable European Romantic doors

Columns

Turncraft (http://www.turncraft.com)
Architecturally correct round and square composite and wood columns; Arts & Crafts tapered square "Polybox"; composite columns

Column & Post (http://www.columnpost.com)
Architecturally correct round and square composite

Somerset (http://www.somersetcolumns.com)
Architecturally correct round and square wood columns and pilasters

HB&G (http://www.hbgcolumns.com)
PermaPorch system: Cellular pvc; 2x2 square or turned balusters with "Savannah" top rail

Exterior Siding (synthetic options)

James Hardie (http://www.jameshardie.com)
Hardiplank (fiber cement), lap siding, shingle, panel, and soffit products

Georgia-Pacific (http://www.gp.com)
Fiber cement cladding board

Exterior Molding, Trim & Brackets (synthetic options)

Chemcrest (http://www.chemcrest.com)
Classic Moulding & Door: Crown, bed, casing, and brackets in polyurethane

Azek (http://www.azek.com)
Cellular PVC flat sheet (4' x 8', 4' x 10' and 4' x 12') for gables, soffits, etc. 3/4" thick trim boards, 5/4" thick trim boards (4" and 6" widths), tongue-and-groove paneling

Royal Wood (http://www.royalwood.com)
Composite 1x trim boards, brickmould and T&G paneling for porch ceilings

Fypon or Duraflex (http://www.fypon.com)

Porch Ceilings

Georgia-Pacific (http://www.gp.com)
"PlyBead Classic" or T&G beaded paneling

Garage Doors

Designer Door (http://www.designerdoors.com)

Clopay Doors (http://www.clopay.com)

Roof Shingles & Tiles (synthetic options)

Majestic Skylines (http://www.majesticskylines.com)

Synthetic slate

Owens Corning (http://www.miravistaroof.com)

MiraVista specialty roofing: synthetic shakes, slate, copper, and metal

Berkshire Collection: composite shingles

Tamko Roofing Products (http://www.lamarite.com)

Lamarite slate composite shingles

Resources

A Field Guide to American Houses, McAlester, V. & L., 1984 Random House.

Traditional Construction Patterns, Mouzon, Stephen A. and Susan M. Henderson, 2004 McGraw-Hill

Louisiana Speaks: Pattern Book, Urban Design Associates, 2007 Louisiana Recovery Authority.

A Pattern Book for Gulf Coast Neighborhoods, Urban Design Associates, 2005 Mississippi Renewal Forum.

DECIDUOUS TREE - CANOPY

Botanical Name	Common Name	Native
Acer barbatum	Southern Sugar Maple	Yes
Acer rubrum 'October Glory'	October Glory Red Maple	Yes
Acer saccharum	Sugar Maple	Yes
Celtis laevigata x 'Magnifica'	Magnificent Hackberry	Yes
Fagus grandifolia	American Beech	Yes
Liquidambar styraciflua 'Rotundiloba'	Fruitless Sweetgum	Yes
Liriodendron tulipifera 'Happidaze'	Happidaze Tulip Poplar	Yes
Nyssa aquatica	Water Tupelo	Yes
Nyssa sylvatica	Black Tupelo	Yes
Platanus occidentalis	American Sycamore	Yes
Quercus bicolor	Swamp White Oak	Yes
Quercus falcata pagodifolia	Swamp Spanish Oak	Yes
Quercus palustris	Pin Oak	Yes
Quercus phellos	Willow Oak	Yes
Quercus shumard	Shumard Oak	Yes
Taxodium ascendens	Pond Cypress	Yes
Taxodium distichum	Bald Cypress	Yes
Ulmus americana 'Valley Forge'	American Elm	Yes

EVERGREEN TREE

Botanical Name	Common Name	Native
Cedrus deodara	Deodar Cedar	No
Ilex opaca	American Holly	Yes
Ilex x attenuata 'Fosteri'	Foster Holly	Yes
Juniperus vrginiana	Eastern Red Cedar	Yes
Magnolia acuminata var. subcordata	Yellow Cucumber Magnolia	Yes
Magnolia g. 'Bracken's Brown Beauty'	Bracken's Brown Beauty Magnolia	Yes
Magnolia g. 'Little Gem'	Little Gem' Magnolia	Yes
Magnolia virginiana	Sweetbay Magnolia	Yes
Pinus taeda	Loblolly Pine	Yes

DECIDUOUS TREE - UNDERSTORY

Botanical Name	Common Name	Native
Acer buergerianaum	Trident Maple	No
Aesculus pavia	Red Buckeye	Yes
Amelanchier arborea	Downy Serviceberry	Yes
Asimina triloba	Pawpaw	Yes
Carpinus betulus	European Hornbeam	No
Carpinus caroliniana	Musclewood	Yes
Cercis canadensis	Eastern Redbud	Yes
Chionathis virginicus	Fringe Tree	Yes
Cornus alternafolia	Alternate Leaf Dogwood	Yes
Cornus florida	Flowering Dogwood	Yes
Cotinus obovatus	American Smoke Tree	Yes
Crataegus phaenopyrum	Washington Hawthorn	Yes
Crataegus viridis 'Winter King'	'Winter King' Hawthorn	No
Hamamelis virginiana	Common Witchhazel	Yes
Ostrya virginiana	American Hophornbeam	Yes
Persea palustris	Swamp Redbay	Yes
Viburnum prunifolium	Black Haw Viburnum	Yes
Viburnum rufidulum	Rusty Black Haw Viburnum	Yes

DECIDUOUS SHRUB

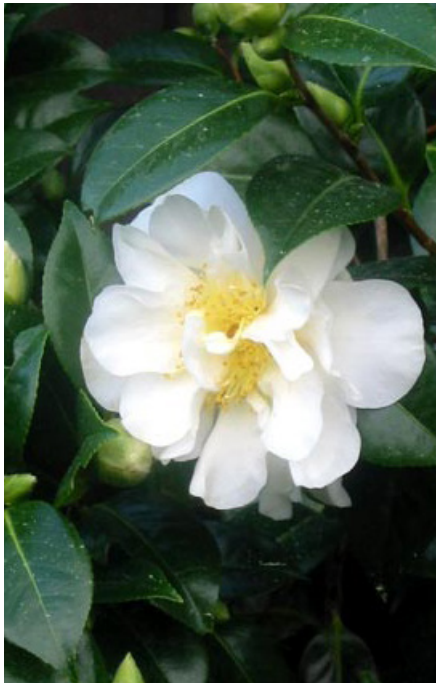
Botanical Name	Common Name	Native
Calicarpa americana	American Beautyberry	Yes
Calycanthus floridus	Sweetshrub	Yes
Ceanothus americanus	New Jersey Tea	Yes
Cornus sericea	Redosier Dogwood	Yes
Cyrilla recemiflora	Titi	Yes
Daphne odora	Winter Daphne	No
Ficus carica	Common Fig	No
Forsythia 'Arnold Dwarf'	Dwarf Forsythia	No
Fothergilla gardenii	Dwarf Fothergilla	Yes
Hydrangea arborescens 'Annabelle'	Smooth Hydrangea	Yes
Hydrangea macrophylla 'Nikko Blue'	Nikko Blue Mophead Hydrangea	No
Hydrangea quercifolia 'Sike's Dwarf'	Dwarf Oakleaf Hydrangea	Yes
Hydrangea serrata 'Bluebird'	Bluebird Lacecap Hydrangea	No
Hypericum 'Hidcote'	Hidcote St. Johnswort	Yes
Ilex decidua	Possumhaw	Yes
Ilex verticillata	Winterberry	Yes
Ilex verticillata 'Cacapon'	Cacapon Winterberry	Yes
Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	Yes
Ilex verticillata 'Jim Dandy'	Jim Dandy Winterberry	Yes
Rhododendron alabamense	Alabama Azalea	Yes
Rhododendron austrinum	Florida Flame Azalea	Yes
Rhododendron canescens	Piedmont Azalea	Yes
Vaccinium ashei	Rabbiteye Blueberry	Yes
Viburnum dentatum 'Blue Muffin'	Blue Muffin Arrowood Viburnum	Yes
Viburnum dentatum 'Chicago Lustre'	Chicago Arrowood Viburnum	Yes
Viburnum nudum	Witherod Viburnum	Yes
Viburnum nudum 'Winterthur'	Winterthur Witherod Viburnum	Yes

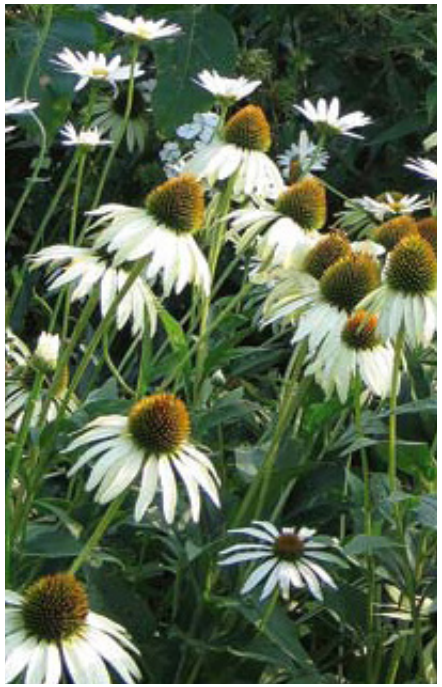
EVERGREEN SHRUB

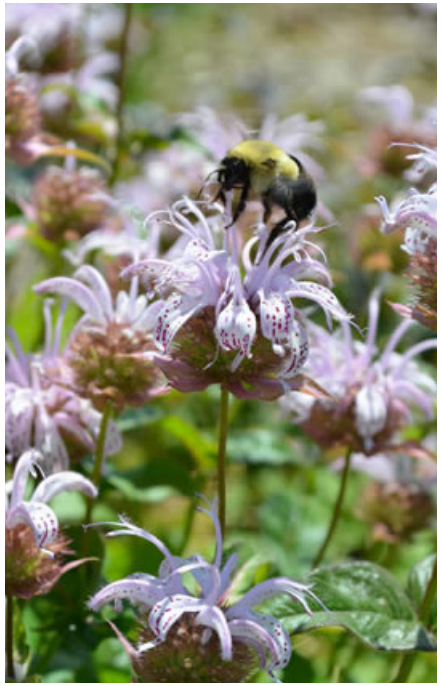
Botanical Name	Common Name	Native
Camelia japonica	Japanese Camelia	No
Camelia sasanqua	Sasanqua Camelia	No
Ilex glabra 'Compact'	Compacta Inkberry Holly	Yes
Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	Yes
Ilex vomitoria 'Nana'	Dwarf Yaupon Holly	Yes
Ilex vomitoria 'Hoskins Shadow'	Hoskins Shadow Yaupon Holly	Yes
Ilex vomitoria 'Stoke's Dwarf'	Stokes Dwarf Yaupon Holly	Yes
Illicum floridanum	Florida Anise	Yes
Illicum parviflorum	Yellow Anise	Yes
Leucothoe axilaris	Coast Leucothoe	Yes
Myrica cerifera	Southern Waxmyrtle	Yes
Osmanthus fragrans	Tea Olive	No
Sabal minor	Dwarf Palmetto	Yes
Viburnum obovatum 'Mrs. Schiller's Delight'	Mrs. Schiller's Delight Viburnum	Yes

GRASSES

Botanical Name	Common Name	Native
Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Gramma Grass	Yes
Carex eburnea	Bristleleaf Sedge	Yes
Iris cristata	Dwarf Crested Iris	Yes
Iris versicolor	Blue Flag Iris	Yes
Muhlenbergia capillaris	Pink Muhly Grass	Yes
Ophiopogon japonicus 'Gyoku-ryu'	Dwarf Mondo Grass	No
Panicum armari	Coastal Panicgrass	Yes
Panicum virgatum 'Shenandoah'	Shenandoah Dwarf Switchgrass	Yes
Schizachyrium scoparium 'Standing Ovation'	Upright Little Bluestem	Yes
Spartina paterns	Saltmeadow Cordgrass	Yes
Sporobolus virginicus	Seashore Dropseed	Yes
Sisyrinchium angustifolium	Blue-eyed Grass	Yes
Tripsacum dactyloides	Fakahatchee Grass	Yes







GROUNDCOVER

Botanical Name	Common Name	Native
Amsonia hubrichtii	Western Bluestar	Yes
Amsonia tabernaemontana	Eastern Bluestar	Yes
Anemone hupehensis 'September Charm'	September Charm Anemone	No
Anemone tomentosa 'Robustissima'	Robustissima Anemone	No
Antennaria plantaginifolia	Pussytoes	Yes
Aquilegia canadensis 'Nora Barlow'	Nora Barlow Columbine	Yes
Asclepias incarnata	Swamp Milkweed	Yes
Asclepias tuberosa	Butterfly Weed	Yes
Baptisia australis	False Blue Indigo	Yes
Coreopsis auriculata 'Nana'	Mouse Ear Coreopsis	Yes
Coreopsis verticillata 'Moonbeam'	Threadleaf Coreopsis	Yes
Echinacea purpurea	Purple Coneflower	Yes
Echinacea purpurea 'White Swan'	White Coneflower	Yes
Eurybia divaricata	White Wood Aster	Yes
Geranium maculatum	Wild Geranium	Yes
Geranium x 'Tiny Monster'	Tiny Monster Cranesbill	No
Heuchera americana	Alum Root	Yes
Heuchera americana 'Dales Strain'	Dales Strain	No
Heuchera villosa 'Autumn Bride'	Autumn Bride Alum Root	No
Hypericum calycinum	Creeping St. John's Wort	Yes
Lantana depressa var. depressa	Wild Lantana	Yes
Pachysandra procumbens	Allengheny Pachysandra	Yes
Penstemon digitalis 'Husker Red'	Husker Red Beard Tongue	Yes
Phlox divaricata	Woodland Phlox	Yes
Phlox paniculata 'David'	David Garden Phlox	Yes
Phlox stolonifera	Creeping Phlox	Yes
Phlox subulata	Moss Phlox	Yes
Pycanthemum tenuifolium	Slender Mountain Mint	Yes
Rudbeckia fulgida	Black-Eyed Susan	Yes

GROUNDCOVER

Botanical Name	Common Name	Native
Salvia guaranitica	Blue Anise Sage	No
Salvia leucantha	Velvet Sage	No
Stokesia laevis	Stoke's Aster	Yes
Symphyotrichum novae-angliae	New England Aster	Yes
Symphyotrichum novi-belgii	New York Aster	Yes
Symphyotrichum oblongifolium	Aromatic Aster	Yes
Tricyrtis hirta	Toad Lily	Yes
Veronicastrum virginicum	Culver's Root	Yes

FERNS

Botanical Name	Common Name	Native
Athyrium felix-femina	Lady Fern	Yes
Dennstaedtia punctilobula	Hay-scented Fern	Yes
Dryopteris marginalis	Marginal Woodfern	Yes
Polystichum acrostichoides	Christmas Fern	Yes

VINES

Botanical Name	Common Name	Native
Aristolochia macrophylla	Dutchman's Pipe	Yes
Bignonia capreolata	Cross Vine	Yes
Lonicera sempervirens	Coral Honeysuckle	Yes
Gelsemium sempervirens	Carolina Jessamine	Yes
Smilax smallii	Jackson Vine	Yes
Wisteria frutescens	American Wisteria	Yes

May 18, 2022

Charles Lawshe
Director of Investor Relations
The Eagle Group
4470 Chamblee Dunwoody Rd; Suite 250
Atlanta, Georgia 30338, US

Re: Wetland Assessment Report
Jubilee Development
Santa Rosa County, Fl
WSI Project #2004-233

Dear Mr. Lawshe,

As requested, Wetland Sciences, Inc. has completed a field wetland assessment for the 2,714.76-acre parcel of property collectively known as the Jubilee Development in Santa Rosa County, Florida (See site location map in **Exhibit A**). The property is identified by Sant a Rosa County Property Appraiser by the following identification numbers: 27-2N-29-0000-00300-0000, 26-2N-29-0000-00100-0000, 22-2N-29-0000-00100-0000, 22-2N-29-0000-00200-0000, 21-2N-29-0000-00200-0000, 21-2N-29-0000-00101-0000, 15-2N-29-0000-00100-0000, 16-2N-29-0000-00101-0000, and 21-2N-29-0000-00100-0000

The purpose of performing the wetland assessment was to assess if wetlands or Waters of the State (WOTUS) are present and, if so, to identify the boundaries. The wetland delineation was performed in accordance with the methodologies outlined in Chapter 62-340, Florida Administrative Code. The following is a summary of our findings.

Desktop Review

Prior to performing the delineation, several remote data sources were reviewed to assist with identifying potential WOTUS and wetland areas at the site. Each source of data is described in detail below.

Natural Resource Conservation Service Soil Survey

WSI reviewed the Natural Resources Conservation Service (NRCS) on-line Web Soil Survey (WSS) to identify soil types within the subject property (See Custom Soil Survey Report in **Exhibit B**). Each soil unit is described within the soil survey report.

Of interest are those soils which would be considered hydric. A review of the hydric soils rating map (**Exhibit C**) identified a single soil type that is considered hydric with a rating of 90%. This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and

reproduction of hydrophytic vegetation. The NTCHS definition identifies general soil properties that are associated with wetness. To determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Aerial Photograph

WSI reviewed current and historic aerial photographs to identify suspected wetland areas on the site and to determine changes in wetland areas over time. Signatures consistent with forested hardwood wetlands and isolated forested depressional wetlands were noted on the aerial photographs reviewed (Exhibit D).

National Wetland Inventory Map

The US Fish and Wildlife Service (FWS) is the principal US Federal agency tasked with providing information to the public on the status and trends of our Nation's wetlands. The US FWS National Wetlands Inventory (NWI) is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of US wetlands. Prior to our field inspection of the property, Wetland Sciences, Inc. researched the U.S. Fish and Wildlife Service's National Wetland Inventory Data (See National Wetland Inventory Map in Exhibit E). Forested and herbaceous wetland communities were noted within the project site.

USGS Quadrangle Map

The USGS 7.5-minute quadrangle map was reviewed. Pond Creek is noted along the eastern margins of the project site. Hurricane Branch is also depicted on the quad map (See Quad Map in Exhibit F).

Florida Cooperative Land Cover, Version 3.4

The Florida Cooperative Land Cover Map (CLC) is a partnership between the Florida Fish and Wildlife Conservation Commission (FWC) and Florida Natural Areas Inventory (FNAI) to develop ecologically based statewide land cover from existing sources and expert review of aerial photography. The CLC is primarily funded by the Florida's State Wildlife Grants program in support of The Florida State Wildlife Action Plan which identified improved habitat mapping as a priority data gap. A review of the CLC data available from FWC suggests the property is comprised of twenty individual land cover categories: Artificial Impoundment/Reservoir, Coniferous Plantations, Extractive, Golf Courses, Improved Pasture, Marshes, Mixed Hardwood Coniferous Swamps, Mixed Hardwood-Coniferous, Mixed Scrub-Shrub Wetland, Residential Medium Density, Row Crops, Rural Open, Shrub and Brushland, Transportation, Unimproved/Woodland Pasture, Upland Coniferous, Upland Hardwood Forest, Upland Pine, Utilities, and

Wet Prairie (See Collective Land Cover Map in Exhibit G). These land cover categories are described below:

Artificial Impoundment/Reservoir (FLUCCS 3220)

Aquatic community of an artificial lake created by the impoundment of a river with a dam. Reservoirs are constructed to collect water for municipal and/or agricultural water use, to provide hydroelectric power, and to improve opportunities for recreational activities (e.g. boating, swimming), and development.

Coniferous Plantations (FLUCCS 183332)

This community is dominated by a canopy of slash and loblolly pine (*Pinus elliottii* and *P. taeda*) that was planted as part of active silviculture operation. Understory species include ink berry (*Ilex glabra*), wax myrtle (*Morella cerifera*), saw palmetto (*Seneroa repens*), and bracken fern (*Pteridium aqulinium*).

Extractive (FLUCCS 1870)

Encompass both surface and subsurface mining operations. Included are sand, gravel and clay pits, phosphate mines, limestone quarries plus oil and gas wells. Industrial complexes where the extracted material is refined, packaged or further processed are also included in this category.

Golf Courses (FLUCCS 182132)

Mowed lawn in low density residential areas. Includes recreational or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing.

Improved Pasture (FLUCCS 183313)

This category in most cases is composed of land which has been cleared, tilled, reseeded with specific grass types and periodically improved with brush control and fertilizer application. Water ponds, troughs, feed bunkers and, in some cases, cow trails are evident.

Marshes (FLUCCS 2120)

Long hydroperiod; dominated by grasses, sedges, broadleaf emergents, floating aquatics, or shrubs.

Mixed Hardwood Coniferous Swamps (FLUCCS 2240)

Includes mixed wetlands forest communities in which neither hardwoods nor conifers achieve a 66 percent dominance of the crown canopy composition.

Mixed Hardwood-Coniferous (FLUCCS 1400)

Mix of hardwood and coniferous trees where neither is dominant.

Mixed Scrub-Shrub Wetland (FLUCCS 2112)

Wetlands areas that are dominated by woody vegetation less than 20 feet in height. This can occur in many situations, but in most cases involves transitional or disturbed communities on drier sites. Persistent examples of shrub wetlands include shrub bogs and willow swamps.

Residential Medium Density (FLUCCS 18221) 2-5 Dwelling Units/ac

Rural and recreational types of subdivisions will be included in the Residential category since this land is almost entirely committed to residential use even though forest or open areas may be present also.

Row Crops (FLUCCS 183311)

Corn, tomatoes, potatoes and beans are typical row crops found in Florida. Rows remain well defined even after crops have been harvested.

Rural Open (FLUCCS 1831)

Herbaceous or shrubby vegetated areas in a rural setting. Ground typically appears improved or disturbed to some degree.

Shrub and Brushland (FLUCCS 1500)

This association includes a variety of situations where natural upland community types have been recently disturbed through clear-cutting commercial pinelands, land clearing, or fire, and are recovering through natural successional processes. This type could be characterized as an early condition of old-field succession, and various shrubs, tree saplings, and lesser amounts of grasses and herbs dominate the community. Common species include wax myrtle, saltbush, sumac, elderberry, saw palmetto, blackberry, gallberry, fetterbush, staggerbush, broomsedge, dog fennel, together with oak, pine and other tree seedlings or saplings.

Transportation (FLUCCS 1840)

Transportation facilities are used for the movement of people and goods. Highways include areas used for interchanges, limited access rights-of-way and service facilities. The Transportation category encompasses rail-oriented facilities including stations, round-houses, repair and switching yards and related areas. Airport facilities include runways, intervening land, terminals, service buildings, navigational aids, fuel storage, parking lots and a limited buffer zone and fall within the Transportation category. Transportation areas also embrace ports, docks, shipyards, dry docks, locks and water course control structures designed for transportation purposes. The docks and ports include buildings, piers, parking lots and adjacent water utilized by ships in the loading and unloading of cargo or passengers. Locks, in addition to the actual structures, include the control buildings, power supply buildings, docks and surrounding supporting land use (i.e., parking lots and green areas).

Unimproved/Woodland Pasture (FLUCCS 183314)

Includes cleared or forest land with major stands of trees and brush where native grasses have been allowed to develop. Normally, this land will not be managed with brush control and/or fertilizer application.

Upland Coniferous (FLUCCS 1230)

Upland with sand/clay substrate; mesic-xeric; longleaf pine and/or loblolly pine and/or shortleaf pine.

Upland Hardwood Forest (FLUCCS 1110)

Upland with sand/clay and/or calcareous substrate; mesic; Panhandle to central peninsula; rare or no fire; closed deciduous or mixed deciduous/evergreen canopy; American beech, southern magnolia, hackberry, swamp chestnut oak, white oak, horse sugar, flowering dogwood, and mixed hardwoods.

Upland Pine (FLUCCS 1231)

Upland with sand/clay substrate; mesic-xeric; panhandle to extreme northern central peninsula; frequent fire (1-3 years); widely spaced canopy of pine over primarily herbaceous understory; longleaf pine and/or loblolly pine and/or shortleaf pine, southern red oak, wiregrass. (FNAI)

Utilities (FLUCCS 1860)

Include power generating facilities and water treatment plants including their related facilities such as transmission lines for electric generation plants and aeration fields for sewage treatment sites. Small facilities or those associated with an industrial, commercial or extractive land use are included within these larger respective categories. (FLUCCS)

Wet Prairie (FLUCCS 2111)

Flatland or slope with sand or clayey sand substrate; usually saturated but only occasionally inundated; statewide excluding extreme southern peninsula; frequent fire (2-3 years); treeless, dense herbaceous community with few shrubs; wiregrass, blue maidencane, cutthroat grass, wiry beaksedges, flattened pipewort, toothache grass, pitcherplants, coastalplain yellow-eyed grass. (FNAI)

Field Review

The desktop review was followed by a pedestrian survey. The overall parcel was evaluated over several days in March, April, and May 2022 and during initial due diligence activities in 2004. Technical criteria, field indicators, historic aerial photographs, and other sources of information to assess the site. The evaluation methods followed the routine on-site determination method referenced 62-340, Florida Administrative Code.

Wetlands generally have three essential characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. The techniques for evaluating the plant community, soils, and hydrology are described in the following sections.

Hydric Soils Assessment

Several soil test holes were evaluated to identify field indications of hydric soils. WSI utilized the hydric soil definition provided by the National Technical Committee for Hydric Soils and criteria to determine whether soils within the site are considered hydric. It was determined during the desktop review the property contain hydric soils. A specific area is not necessarily considered to have hydric soils because it is dominated by soils on a hydric soils list. Hydric soils must be identified by verifying the presence of one of more of the hydric soil indicators.

During our field inspection of the property, WSI verified the presence of hydric soils within several areas associated with either headwater or isolated wetland complexes with hydric soil characteristics including sandy redox, dark surface, and muck.

Wetland Hydrology Assessment

Visual indicators of wetland hydrology were evaluated. Examples of primary wetland hydrology indicators include, but are not limited to, surface water, high water table, soil saturation, water marks, sediment deposits, drift deposits, iron deposits, inundation visible on aerial imagery, sparsely vegetated concave surface, and water-stained leaves. If at least one primary or two secondary indicators are observed, the data point location was considered to have wetland hydrology.

Hydrologic indicators noted during the field inspection included saturation, plant morphological adaptations, and aquatic fauna. These indicators were generally associated with either headwater or isolated wetland features identified within the subject property.

Plant Community Assessment

The wetland dependent ecological communities identified within the assessment area included a bay swamp community, wet pine flatwood community, and Atlantic White Cedar Forest.

Field Identification of Wetlands

Hydric soil indicators along with an assessment of the plant community structure was used to formulate the delineated wetland boundary line. The delineated wetland boundary line was established in the field by progressively locating points along 15-25 intervals along the wetland/upland boundary line or at directional changes along the boundary. These points are identified in the field with pink flagging tape labeled “Wetland Delineation” and assigned an alpha numeric designator. The upland/wetland boundary line was located using a Trimble Geo7X Global Navigation Satellite System (GNSS). The GNSS data is depicted on the attached wetland sketch (Exhibit H).

The identified wetlands will be subject to regulatory purview of the Florida Department of Environmental Protection (DEP), Department of the Army Corps of Engineers, Northwest Florida Water Management District (District), and Santa Rosa County, Florida. Be advised that District and Santa Rosa County may regulate those lands within 25-ft. landward (upland) of the delineated wetland boundary line.

This concludes our report. The information presented within this report represents the professional opinion of the scientist that performed the work and is intended to furnish the client with an approximation of the status of natural resources on the site under consideration. The boundary of

jurisdictional wetland as depicted in the exhibits of this report are not final or “binding” until such time as they are confirmed by the DEP, District, or Corps through field inspection.

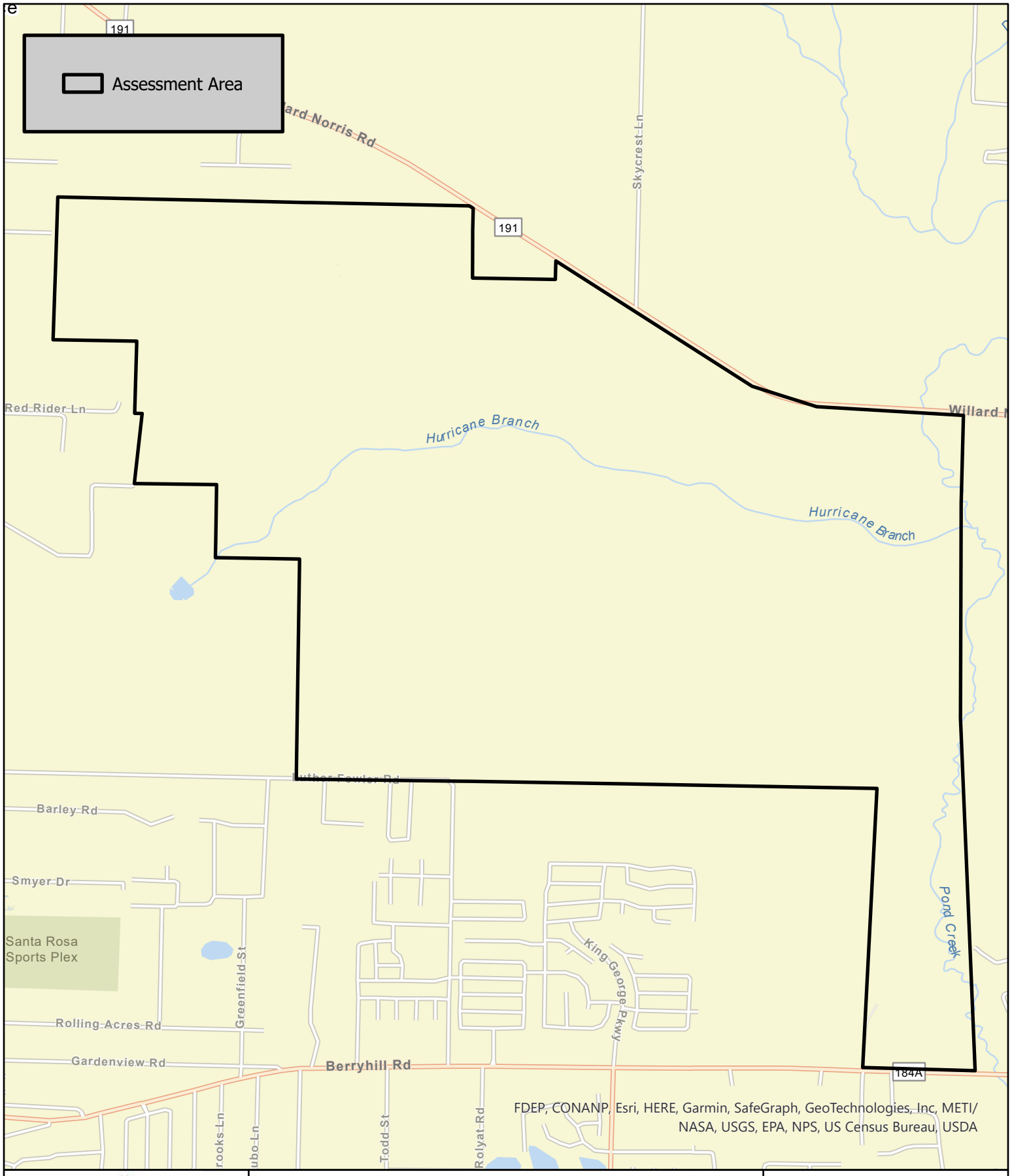
If you have any questions, please do not hesitate to me at (850) 453-4700.

Respectfully,
WETLAND SCIENCES, INC.

Keith Johnson
Environmental Scientist

Exhibit A

Site Location Map



WETLAND SCIENCES INCORPORATED

Site Location Map

Jubilee Development
Santa Rosa County, Fl

0 0.17 0.33 0.66 0.99 1.32
Miles

Data Source:
ERSI
Imagery Source:
ESRI

N
W E
S

Coordinate System:
NAD 1983 FL
State Plane North

Exhibit B

Soils Map

United States Department of Agriculture

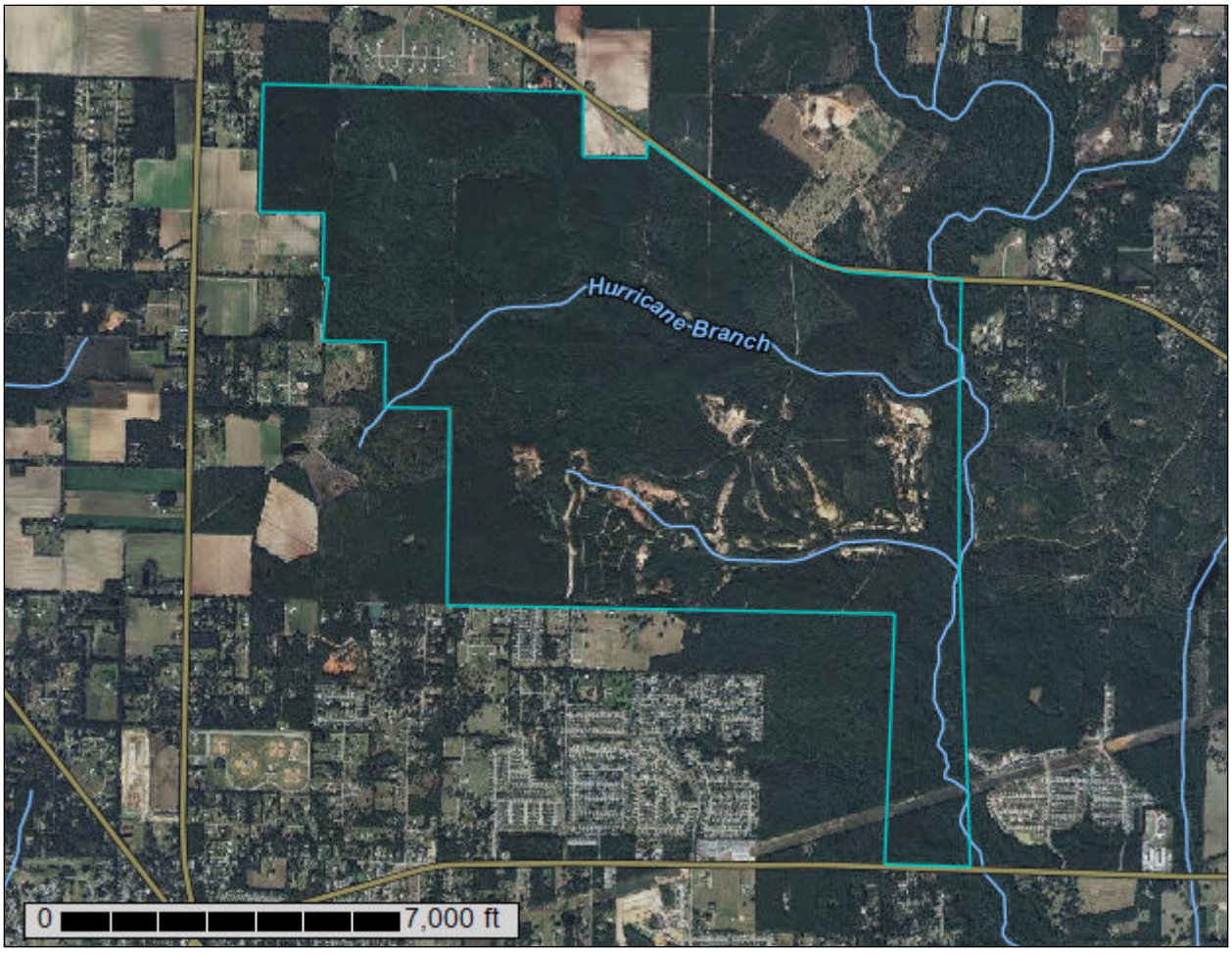
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Santa Rosa County, Florida

Jubilee Santa Rosa County, FL



May 18, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

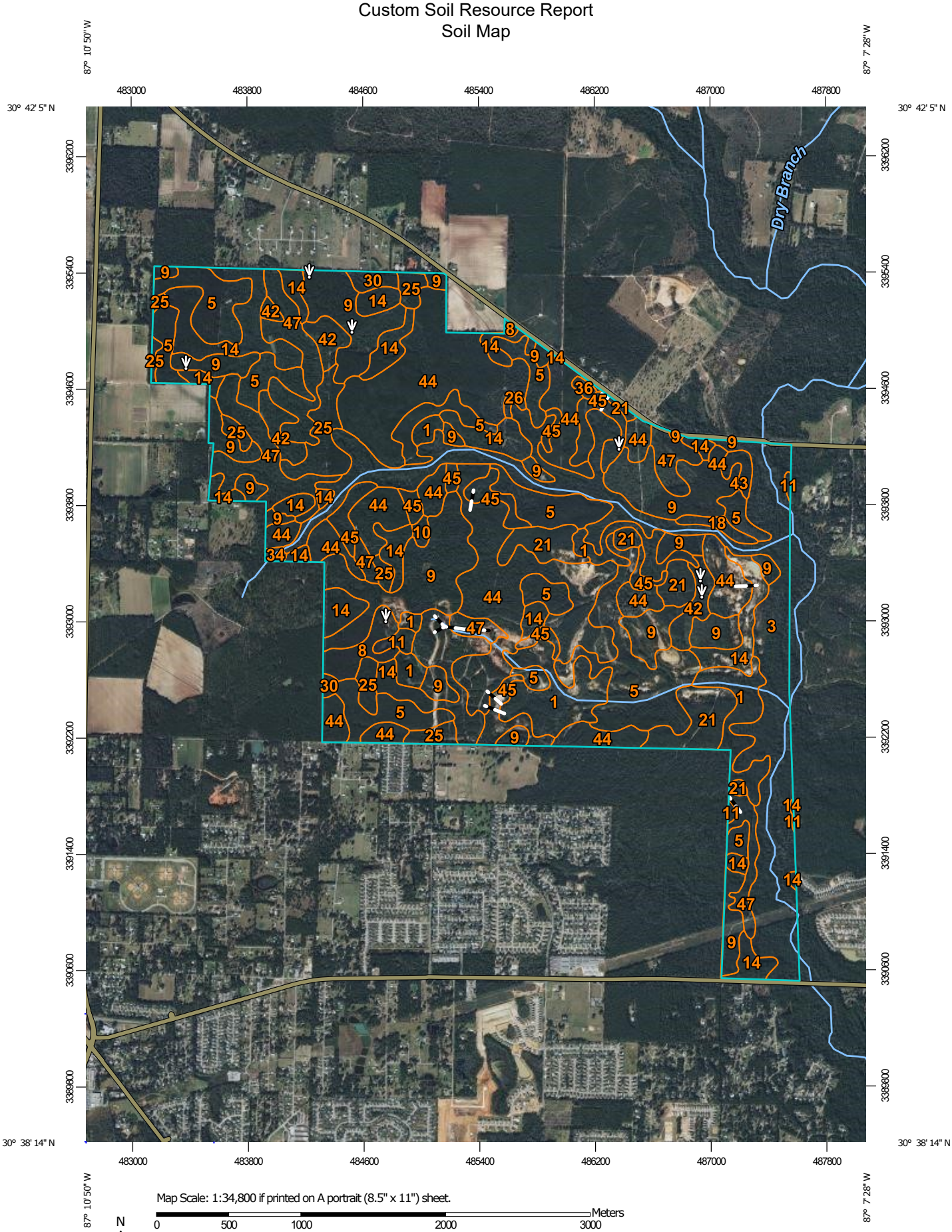
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:34,800 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0, 500, 1000, 2000, 3000

Feet: 0, 1500, 3000, 6000, 9000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Santa Rosa County, Florida
Survey Area Data: Version 18, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 23, 2020—Dec 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Albany loamy sand, 0 to 5 percent slopes	162.7	5.9%
3	Bibb-Kinston association	371.6	13.5%
5	Bonifay loamy sand, 0 to 5 percent slopes	358.3	13.1%
8	Dothan fine sandy loam, 0 to 2 percent slopes	29.0	1.1%
9	Dothan fine sandy loam, 2 to 5 percent slopes	390.7	14.2%
10	Dothan fine sandy loam, 5 to 8 percent slopes	4.8	0.2%
11	Escambia fine sandy loam, 0 to 2 percent slopes	11.2	0.4%
14	Fuquay loamy sand, 0 to 5 percent slopes	318.0	11.6%
18	Johns fine sandy loam	9.7	0.4%
21	Lakeland sand, 0 to 5 percent slopes	94.6	3.5%
25	Lucy loamy sand, 0 to 5 percent slopes	85.3	3.1%
26	Lucy loamy sand, 5 to 8 percent slopes	3.8	0.1%
30	Orangeburg sandy loam, 0 to 2 percent slopes	13.1	0.5%
34	Pactolus loamy sand, 0 to 5 percent slopes	3.2	0.1%
36	Pits	3.7	0.1%
42	Tifton sandy loam, 2 to 5 percent slopes	58.4	2.1%
43	Tifton sandy loam, 5 to 8 percent slopes	9.9	0.4%
44	Troup loamy sand, 0 to 5 percent slopes	539.2	19.7%
45	Troup loamy sand, 5 to 8 percent slopes	100.0	3.6%
47	Troup-Orangeburg-Cowarts complex, 5 to 12 percent slopes	176.1	6.4%
Totals for Area of Interest		**2,743.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas

shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Santa Rosa County, Florida

1—Albany loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttkx
Elevation: 20 to 200 feet
Mean annual precipitation: 60 to 68 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 209 to 239 days
Farmland classification: Not prime farmland

Map Unit Composition

Albany and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Albany

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 8 inches: loamy sand
E - 8 to 61 inches: loamy sand
Btg - 61 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: NoneRare
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Minor Components

Fuquay

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Troup

Percent of map unit: 5 percent
Landform: Hillslopes on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope, riser
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Plummer

Percent of map unit: 3 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL)
Hydric soil rating: No

3—Bibb-Kinston association

Map Unit Setting

National map unit symbol: wn5l
Elevation: 0 to 450 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: Not prime farmland

Map Unit Composition

Bibb and similar soils: 50 percent
Kinston and similar soils: 25 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bibb

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy and sandy alluvium

Typical profile

A - 0 to 17 inches: silt loam
Cg1 - 17 to 42 inches: silt loam
Cg2 - 42 to 65 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Hydric soil rating: Yes

Description of Kinston

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

A - 0 to 9 inches: silt loam
E - 9 to 18 inches: silt loam
2Bg - 18 to 50 inches: sandy clay loam
2Cg - 50 to 65 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained

Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Hydric soil rating: Yes

Minor Components

Rutlege

Percent of map unit: 10 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL)
Hydric soil rating: Yes

Pamlico

Percent of map unit: 5 percent
Landform: Depressions on marine terraces, flood plains on marine terraces
Landform position (three-dimensional): Flat
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains (G133AA645FL)
Hydric soil rating: Yes

Johns

Percent of map unit: 4 percent
Landform: Stream terraces on marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Escambia

Percent of map unit: 3 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex

Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Pactolus

Percent of map unit: 3 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

5—Bonifay loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tsyc
Elevation: 50 to 390 feet
Mean annual precipitation: 45 to 73 inches
Mean annual air temperature: 52 to 72 degrees F
Frost-free period: 246 to 306 days
Farmland classification: Farmland of local importance

Map Unit Composition

Bonifay and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonifay

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: loamy sand
E - 3 to 54 inches: loamy sand
Btv - 54 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.58 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Minor Components

Troup

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

Albany

Percent of map unit: 4 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 4 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, riser
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

Blanton

Percent of map unit: 4 percent
Landform: Ridges on marine terraces, knolls on marine terraces

Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, base slope, tread
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Lakeland

Percent of map unit: 4 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, riser
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

8—Dothan fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: wn5r
Elevation: 0 to 500 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dothan and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dothan

Setting

Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 9 inches: fine sandy loam
BE - 9 to 13 inches: fine sandy loam
Bt - 13 to 43 inches: sandy clay loam
Btv - 43 to 63 inches: sandy clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Forage suitability group: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Hydric soil rating: No

Minor Components

Orangeburg

Percent of map unit: 8 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 7 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

9—Dothan fine sandy loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttkd
Elevation: 100 to 500 feet
Mean annual precipitation: 65 to 73 inches

Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 190 to 310 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dothan and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dothan

Setting

Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 6 inches: fine sandy loam
BE - 6 to 14 inches: fine sandy loam
Bt - 14 to 30 inches: sandy clay loam
Btv - 30 to 79 inches: sandy clay

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 39 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Forage suitability group: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Minor Components

Orangeburg

Percent of map unit: 7 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve

Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Esto

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

10—Dothan fine sandy loam, 5 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2ttkz
Elevation: 170 to 500 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dothan and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dothan

Setting

Landform: Ridges on marine terraces

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 5 inches: fine sandy loam
BE - 5 to 9 inches: fine sandy loam
Bt - 9 to 43 inches: sandy clay loam
Btv - 43 to 80 inches: sandy clay

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Forage suitability group: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL)
Other vegetative classification: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL)
Hydric soil rating: No

Minor Components

Orangeburg

Percent of map unit: 7 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

11—Escambia fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: wn5v
Elevation: 20 to 450 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Escambia and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Escambia

Setting

Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 7 inches: fine sandy loam
EB - 7 to 14 inches: fine sandy loam
Btv - 14 to 65 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C

Forage suitability group: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Minor Components

Rains

Percent of map unit: 10 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Hydric soil rating: Yes

Lynchburg

Percent of map unit: 5 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Dothan

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Hydric soil rating: No

Albany

Percent of map unit: 2 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

14—Fuquay loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tbyt
Elevation: 50 to 400 feet
Mean annual precipitation: 40 to 73 inches
Mean annual air temperature: 52 to 72 degrees F
Frost-free period: 190 to 310 days
Farmland classification: Farmland of local importance

Map Unit Composition

Fuquay and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fuquay

Setting

Landform: Interfluves
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits over loamy marine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand
E1 - 10 to 22 inches: loamy sand
E2 - 22 to 28 inches: loamy sand
Bt1 - 28 to 36 inches: sandy loam
Bt2 - 36 to 43 inches: sandy clay loam
Btv - 43 to 65 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 40 to 61 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: B
Forage suitability group: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

Minor Components

Nankin
Percent of map unit: 4 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Cowarts
Percent of map unit: 4 percent
Landform: Interfluves
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Bonneau
Percent of map unit: 3 percent
Landform: Broad interstream divides
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Ailey
Percent of map unit: 3 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Blanton
Percent of map unit: 2 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Dothan
Percent of map unit: 2 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve

Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Hydric soil rating: No

Troup

Percent of map unit: 1 percent
Landform: Hillslopes on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope, riser
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Bonifay

Percent of map unit: 1 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, tread
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

18—Johns fine sandy loam

Map Unit Setting

National map unit symbol: wn62
Elevation: 0 to 450 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Johns and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Johns

Setting

Landform: Stream terraces on marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear

Parent material: Loamy and sandy fluviomarine deposits

Typical profile

A - 0 to 9 inches: fine sandy loam
E - 9 to 19 inches: loam
Bt - 19 to 35 inches: sandy clay loam
2Cg - 35 to 63 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: NoneRare
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Forage suitability group: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Minor Components

Albany

Percent of map unit: 3 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Pactolus

Percent of map unit: 3 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Escambia

Percent of map unit: 3 percent
Landform: Rises on marine terraces

Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Lynchburg

Percent of map unit: 3 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Kalmia

Percent of map unit: 3 percent
Landform: Stream terraces on marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

21—Lakeland sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2rz0n
Elevation: 100 to 400 feet
Mean annual precipitation: 40 to 69 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 190 to 310 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakeland and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakeland

Setting

Landform: Hills on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 7 inches: sand
C - 7 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Minor Components

Troup

Percent of map unit: 6 percent
Landform: Knolls, ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

Bonifay

Percent of map unit: 5 percent
Landform: Hills on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Foxworth

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Albany

Percent of map unit: 2 percent
Landform: Interfluves on marine terraces, ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Side slope, interfluve, tread
Down-slope shape: Convex
Across-slope shape: Convex, linear
Other vegetative classification: Forage suitability group not assigned (G133AA999FL)
Hydric soil rating: No

Chipley

Percent of map unit: 2 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

25—Lucy loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tdq2
Elevation: 100 to 400 feet
Mean annual precipitation: 40 to 69 inches
Mean annual air temperature: 55 to 70 degrees F
Frost-free period: 190 to 310 days
Farmland classification: Farmland of local importance

Map Unit Composition

Lucy and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lucy

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Sandy and loamy marine deposits

Typical profile

Ap - 0 to 8 inches: loamy sand
E - 8 to 24 inches: loamy sand
Bt1 - 24 to 35 inches: sandy loam
Bt2 - 35 to 70 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Forage suitability group: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Hydric soil rating: No

Minor Components

Orangeburg

Percent of map unit: 4 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

Troup

Percent of map unit: 4 percent
Landform: Hillslopes on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope, riser
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Bonneau

Percent of map unit: 3 percent

Landform: Marine terraces
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, interfluve, riser, tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Fuquay

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Rattlesnake forks

Percent of map unit: 2 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

26—Lucy loamy sand, 5 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tdq3
Elevation: 100 to 400 feet
Mean annual precipitation: 40 to 69 inches
Mean annual air temperature: 55 to 70 degrees F
Frost-free period: 190 to 310 days
Farmland classification: Not prime farmland

Map Unit Composition

Lucy and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lucy

Setting

Landform: Broad interstream divides
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy marine deposits

Typical profile

Ap - 0 to 8 inches: loamy sand
E - 8 to 24 inches: loamy sand
Bt1 - 24 to 35 inches: sandy loam
Bt2 - 35 to 70 inches: sandy clay loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: B
Forage suitability group: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Hydric soil rating: No

Minor Components

Orangeburg

Percent of map unit: 4 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

Troup

Percent of map unit: 4 percent
Landform: Hillslopes on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope, riser, tread
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Bonneau

Percent of map unit: 3 percent

Landform: Broad interstream divides
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Benevolence

Percent of map unit: 2 percent
Landform: Broad interstream divides
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Fuquay

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

30—Orangeburg sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tsyl
Elevation: 170 to 500 feet
Mean annual precipitation: 42 to 73 inches
Mean annual air temperature: 59 to 77 degrees F
Frost-free period: 190 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Orangeburg and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orangeburg

Setting

Landform: Rises on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Typical profile

Ap - 0 to 5 inches: sandy loam
BE - 5 to 9 inches: sandy loam
Bt1 - 9 to 25 inches: sandy clay loam
Bt2 - 25 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Forage suitability group: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

Minor Components

Lucy

Percent of map unit: 4 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Hydric soil rating: No

Dothan

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Red bay

Percent of map unit: 3 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Hydric soil rating: No

34—Pactolus loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: wn6l
Elevation: 0 to 350 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: Not prime farmland

Map Unit Composition

Pactolus and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pactolus

Setting

Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine and fluvial deposits

Typical profile

A - 0 to 8 inches: loamy sand
C - 8 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Minor Components

Albany
Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Leon
Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL)
Hydric soil rating: No

Lakeland
Percent of map unit: 2 percent
Landform: Ridges on marine terraces, hills on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

Rutlege
Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL)
Hydric soil rating: Yes

Bonifay
Percent of map unit: 2 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Troup

Percent of map unit: 1 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

36—Pits

Map Unit Composition

Pits: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, dip
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Forage suitability group: Forage suitability group not assigned (G133AA999FL)
Other vegetative classification: Forage suitability group not assigned (G133AA999FL)
Hydric soil rating: Unranked

42—Tifton sandy loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: wn6v
Elevation: 100 to 500 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Tifton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tifton

Setting

Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Typical profile

Apc - 0 to 9 inches: sandy loam
Btcv1 - 9 to 14 inches: sandy clay loam
Btcv2 - 14 to 33 inches: sandy clay loam
Btv - 33 to 70 inches: sandy clay

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Forage suitability group: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Hydric soil rating: No

Minor Components

Dothan

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Hydric soil rating: No

Orangeburg

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex

Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

Esto

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 2 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

43—Tifton sandy loam, 5 to 8 percent slopes

Map Unit Setting

National map unit symbol: wn6w
Elevation: 100 to 500 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Tifton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tifton

Setting

Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Typical profile

Apc - 0 to 6 inches: sandy loam

Btcv1 - 6 to 11 inches: sandy clay loam
Btcv2 - 11 to 31 inches: sandy clay loam
Btv - 31 to 70 inches: sandy clay

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Forage suitability group: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL)
Other vegetative classification: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL)
Hydric soil rating: No

Minor Components

Dothan

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL)
Hydric soil rating: No

Orangeburg

Percent of map unit: 5 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on ridges and side slopes of mesic uplands (G133AA312FL)
Hydric soil rating: No

Esto

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Other vegetative classification: Loamy and clayey soils on ridges and side slopes of mesic uplands (G133AA312FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 2 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

44—Troup loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2rypy
Elevation: 30 to 490 feet
Mean annual precipitation: 40 to 69 inches
Mean annual air temperature: 55 to 70 degrees F
Frost-free period: 190 to 310 days
Farmland classification: Farmland of local importance

Map Unit Composition

Troup and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Troup

Setting

Landform: Hillslopes on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope, riser, tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Unconsolidated sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: loamy sand
E - 3 to 55 inches: loamy sand
Bt - 55 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL)
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Minor Components

Bonifay

Percent of map unit: 4 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL), Longleaf Pine-Turkey Oak Hills (R133AY002FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Lucy

Percent of map unit: 3 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent
Landform: Hills on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL)

Hydric soil rating: No

Orangeburg

Percent of map unit: 2 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

45—Troup loamy sand, 5 to 8 percent slopes

Map Unit Setting

National map unit symbol: wn6y
Elevation: 0 to 500 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: Not prime farmland

Map Unit Composition

Troup and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Troup

Setting

Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: loamy sand
E - 4 to 60 inches: loamy sand
Bt - 60 to 80 inches: sandy loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

Minor Components

Lucy

Percent of map unit: 5 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent
Landform: Ridges on marine terraces, hills on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

Orangeburg

Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on ridges and side slopes of mesic uplands (G133AA312FL)
Hydric soil rating: No

Bonifay

Percent of map unit: 2 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 2 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

47—Troup-Orangeburg-Cowarts complex, 5 to 12 percent slopes

Map Unit Setting

National map unit symbol: wn70
Elevation: 0 to 700 feet
Mean annual precipitation: 65 to 73 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 242 to 272 days
Farmland classification: Not prime farmland

Map Unit Composition

Troup and similar soils: 39 percent
Orangeburg and similar soils: 20 percent
Cowarts and similar soils: 15 percent
Minor components: 26 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Troup

Setting

Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 2 inches: loamy sand
E - 2 to 52 inches: loamy sand
Bt - 52 to 80 inches: sandy loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Hydric soil rating: No

Description of Orangeburg

Setting

Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 6 inches: sandy loam
Bt - 6 to 80 inches: sandy clay loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Forage suitability group: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Other vegetative classification: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Hydric soil rating: No

Description of Cowarts

Setting

Landform: Ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine deposits

Typical profile

A - 0 to 6 inches: loamy fine sand
Bt1 - 6 to 9 inches: fine sandy loam
Bt2 - 9 to 23 inches: sandy clay loam
C - 23 to 80 inches: sandy clay loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Forage suitability group: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Other vegetative classification: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Hydric soil rating: No

Minor Components

Dothan

Percent of map unit: 10 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL)
Hydric soil rating: No

Troup

Percent of map unit: 5 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent
Landform: Ridges on marine terraces, hills on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Hydric soil rating: No

Lucy

Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 3 percent
Landform: Ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

Albany

Percent of map unit: 2 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

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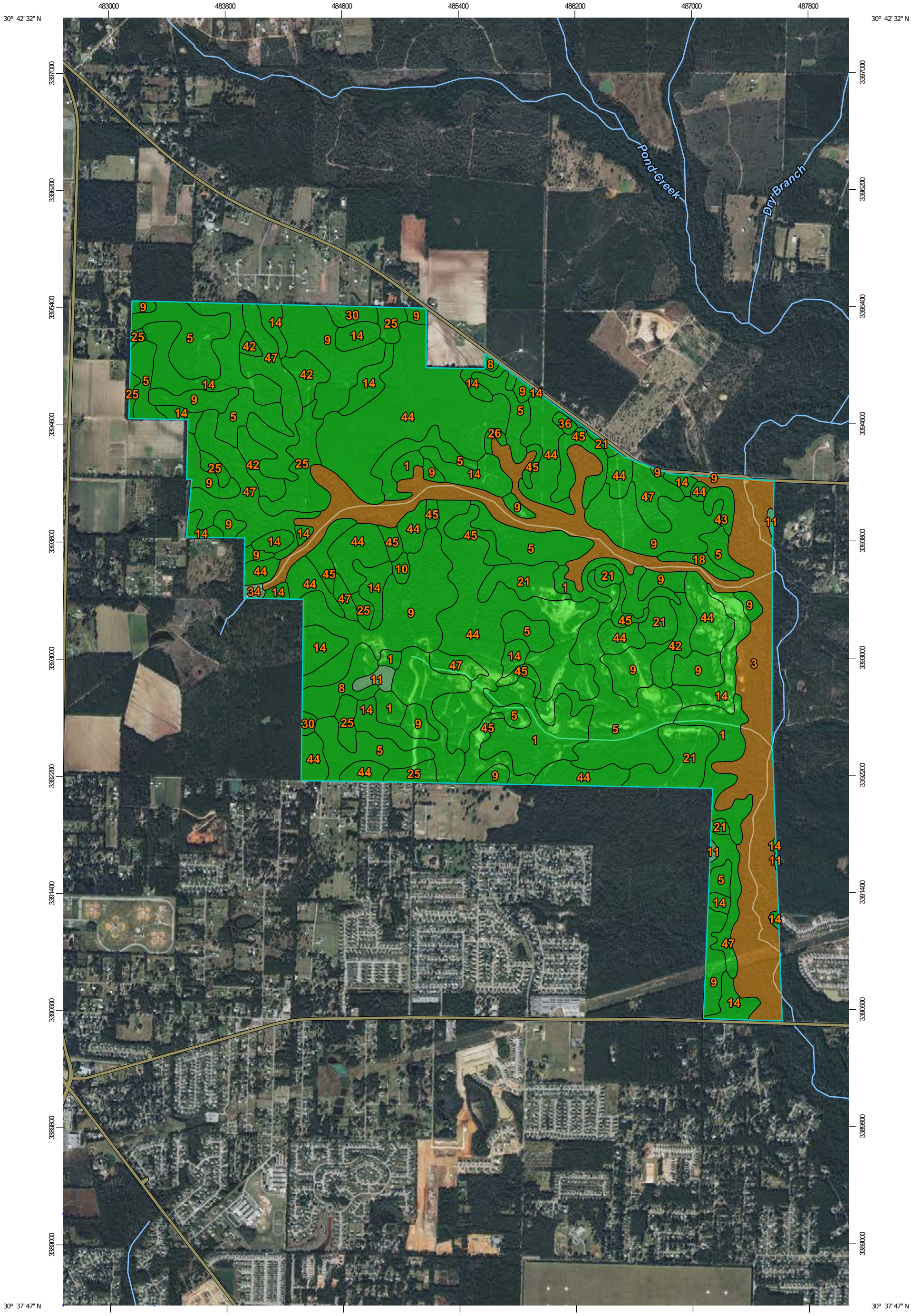
Exhibit C

Hydric Soils Map

Hydric Rating by Map Unit—Santa Rosa County, Florida
(Jubilee Santa Rosa County, FL)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Santa Rosa County, Florida
Survey Area Data: Version 18, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 23, 2020—Dec 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Albany loamy sand, 0 to 5 percent slopes	0	162.7	5.9%
3	Bibb-Kinston association	90	371.6	13.5%
5	Bonifay loamy sand, 0 to 5 percent slopes	0	358.3	13.1%
8	Dothan fine sandy loam, 0 to 2 percent slopes	0	29.0	1.1%
9	Dothan fine sandy loam, 2 to 5 percent slopes	0	390.7	14.2%
10	Dothan fine sandy loam, 5 to 8 percent slopes	0	4.8	0.2%
11	Escambia fine sandy loam, 0 to 2 percent slopes	10	11.2	0.4%
14	Fuquay loamy sand, 0 to 5 percent slopes	0	318.0	11.6%
18	Johns fine sandy loam	0	9.7	0.4%
21	Lakeland sand, 0 to 5 percent slopes	0	94.6	3.5%
25	Lucy loamy sand, 0 to 5 percent slopes	0	85.3	3.1%
26	Lucy loamy sand, 5 to 8 percent slopes	0	3.8	0.1%
30	Orangeburg sandy loam, 0 to 2 percent slopes	0	13.1	0.5%
34	Pactolus loamy sand, 0 to 5 percent slopes	2	3.2	0.1%
36	Pits	0	3.7	0.1%
42	Tifton sandy loam, 2 to 5 percent slopes	0	58.4	2.1%
43	Tifton sandy loam, 5 to 8 percent slopes	0	9.9	0.4%
44	Troup loamy sand, 0 to 5 percent slopes	0	539.2	19.7%
45	Troup loamy sand, 5 to 8 percent slopes	0	100.0	3.6%
47	Troup-Orangeburg-Cowarts complex, 5 to 12 percent slopes	0	176.1	6.4%
Totals for Area of Interest			**2,743.2**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

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Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

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Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

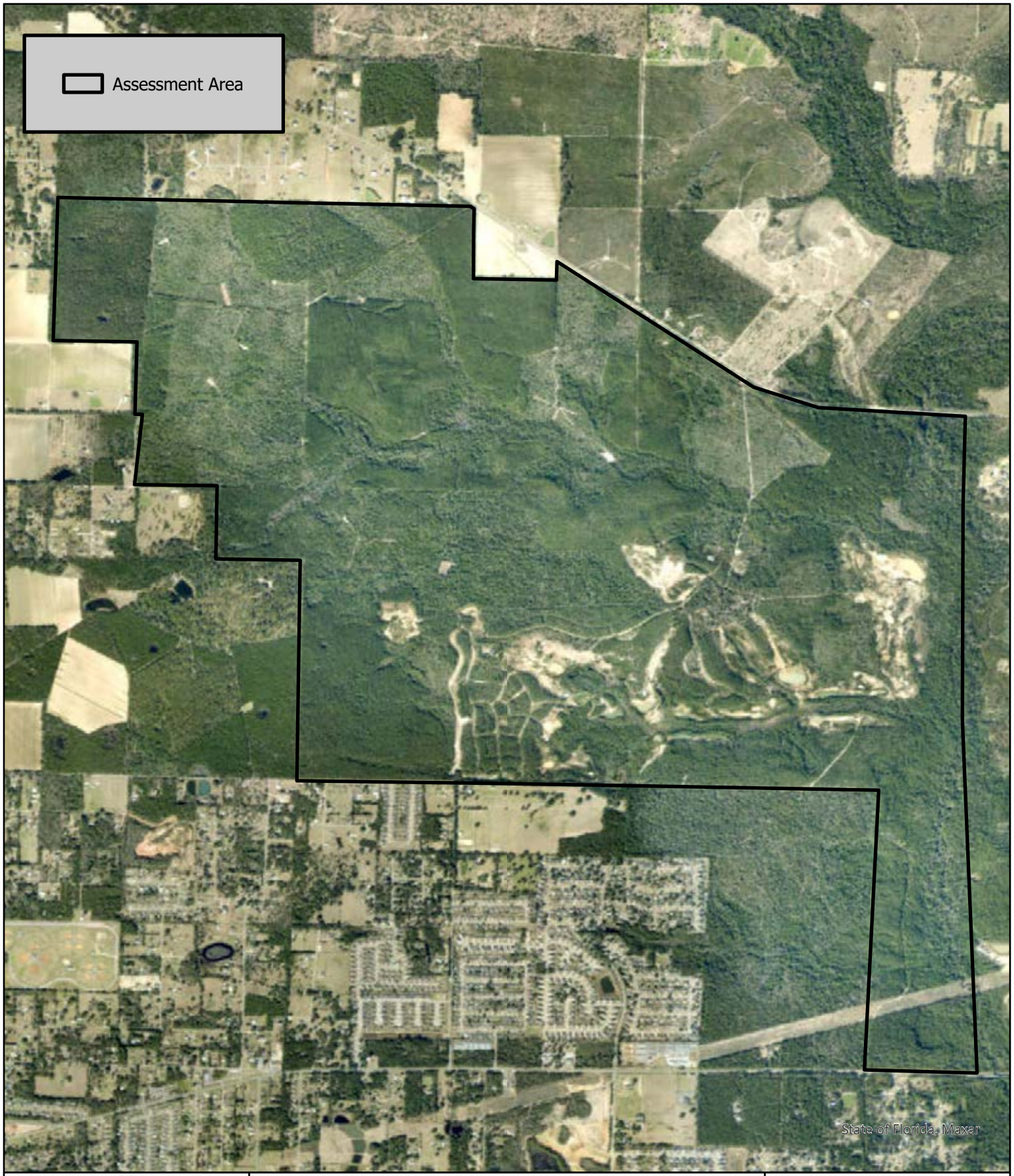
Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Exhibit D

Current Aerial



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Current Aerial

Jubilee Development
Santa Rosa County, Fl

0 0.17 0.33 0.66 0.99 1.32
Miles

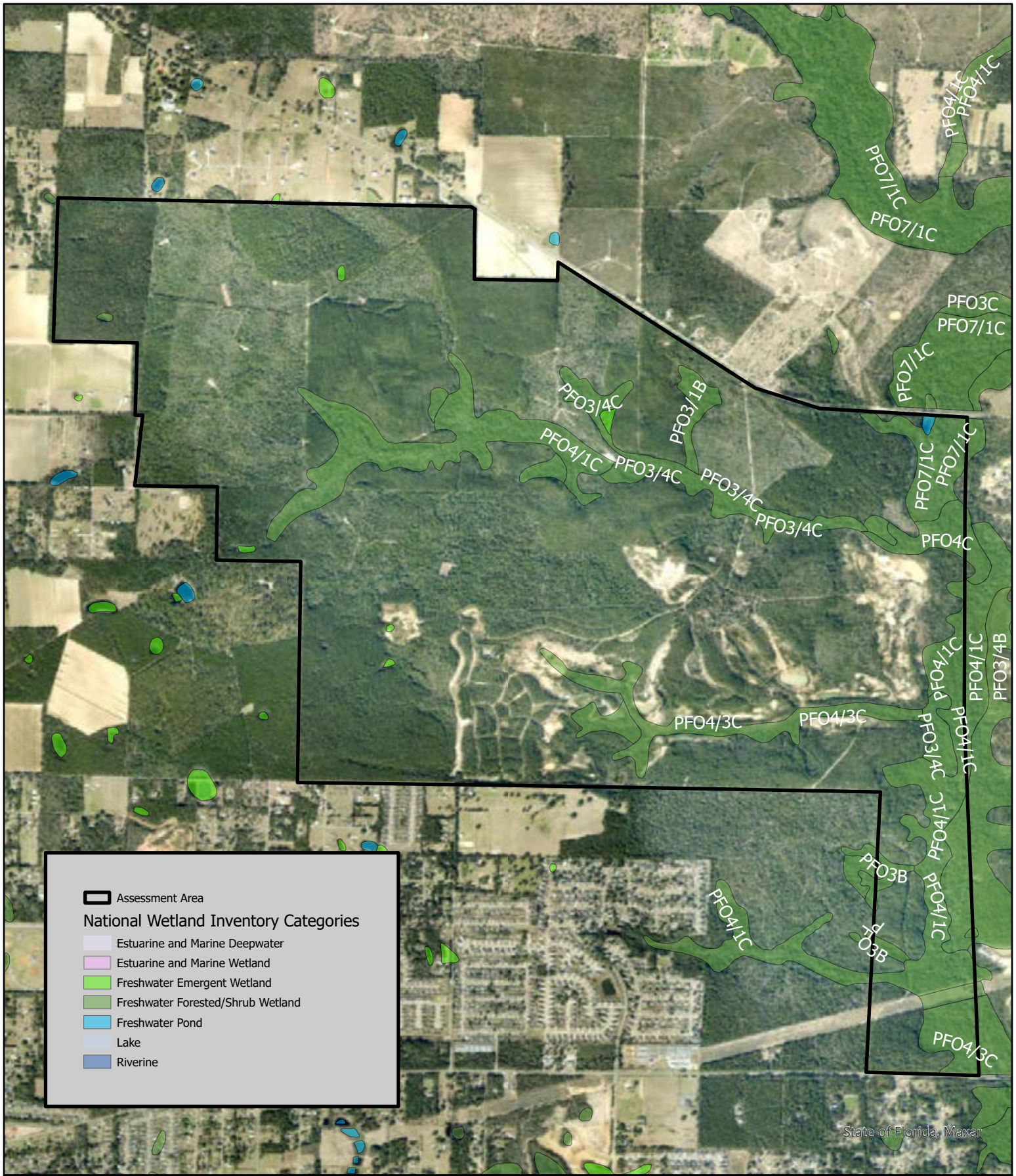
Data Source:
ERSI
Imagery Source:
ESRI

N
W E
S

Coordinate System:
NAD 1983 FL
State Plane North

Exhibit E

National Wetland Inventory Map



WETLAND SCIENCES INCORPORATED

National Wetland Inventory Map

Jubilee Development
Santa Rosa County, Fl

0 0.17 0.33 0.66 0.99 1.32
Miles

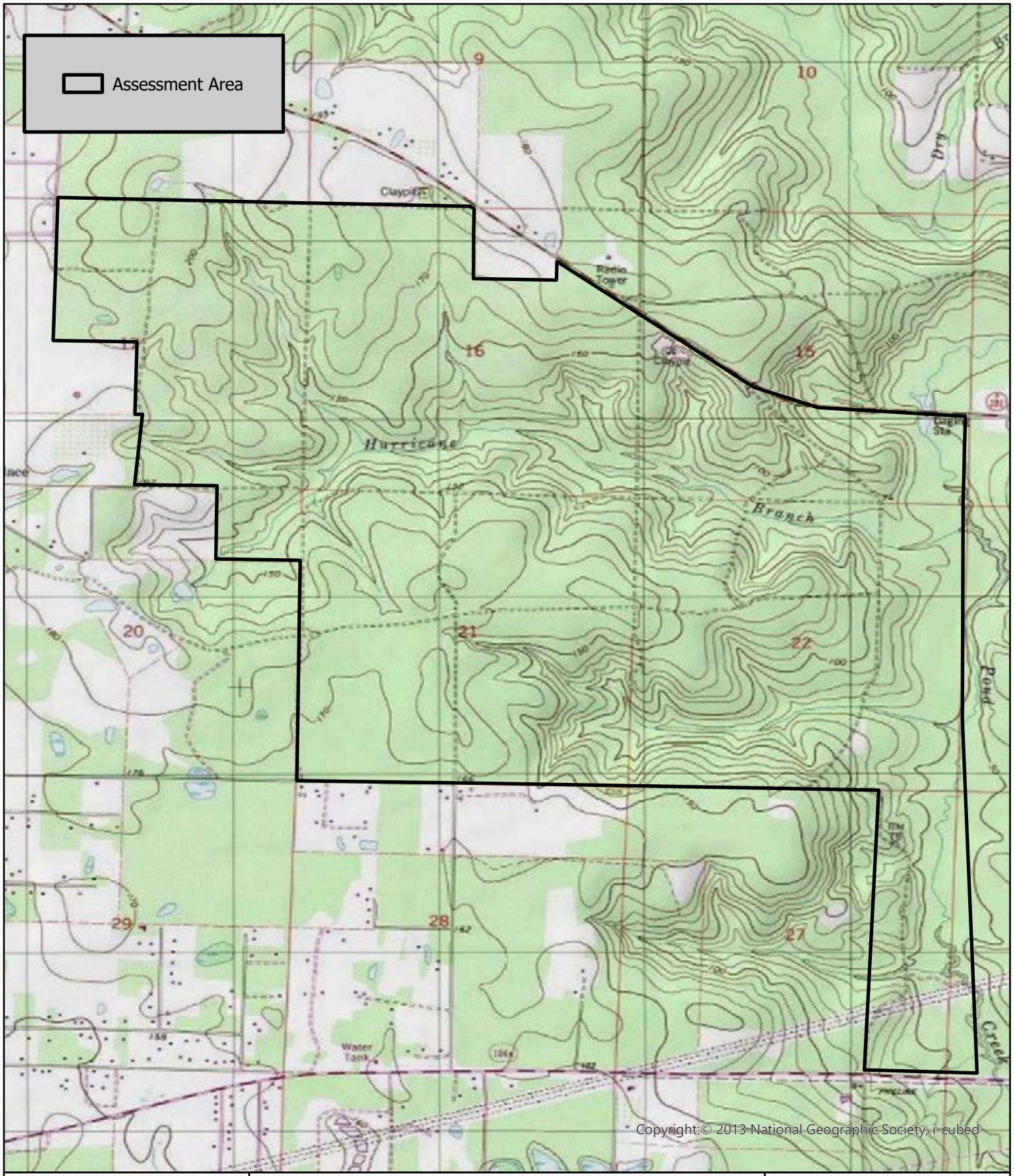
Data Source:
USFWS
Imagery Source:
ESRI

N
W E
S

Coordinate System:
NAD 1983 FL
State Plane North

Exhibit F

Quad Map



WETLAND SCIENCES INCORPORATED

Quad Map

Jubilee Development
Santa Rosa County, Fl

0 0.17 0.33 0.66 0.99 1.32
Miles

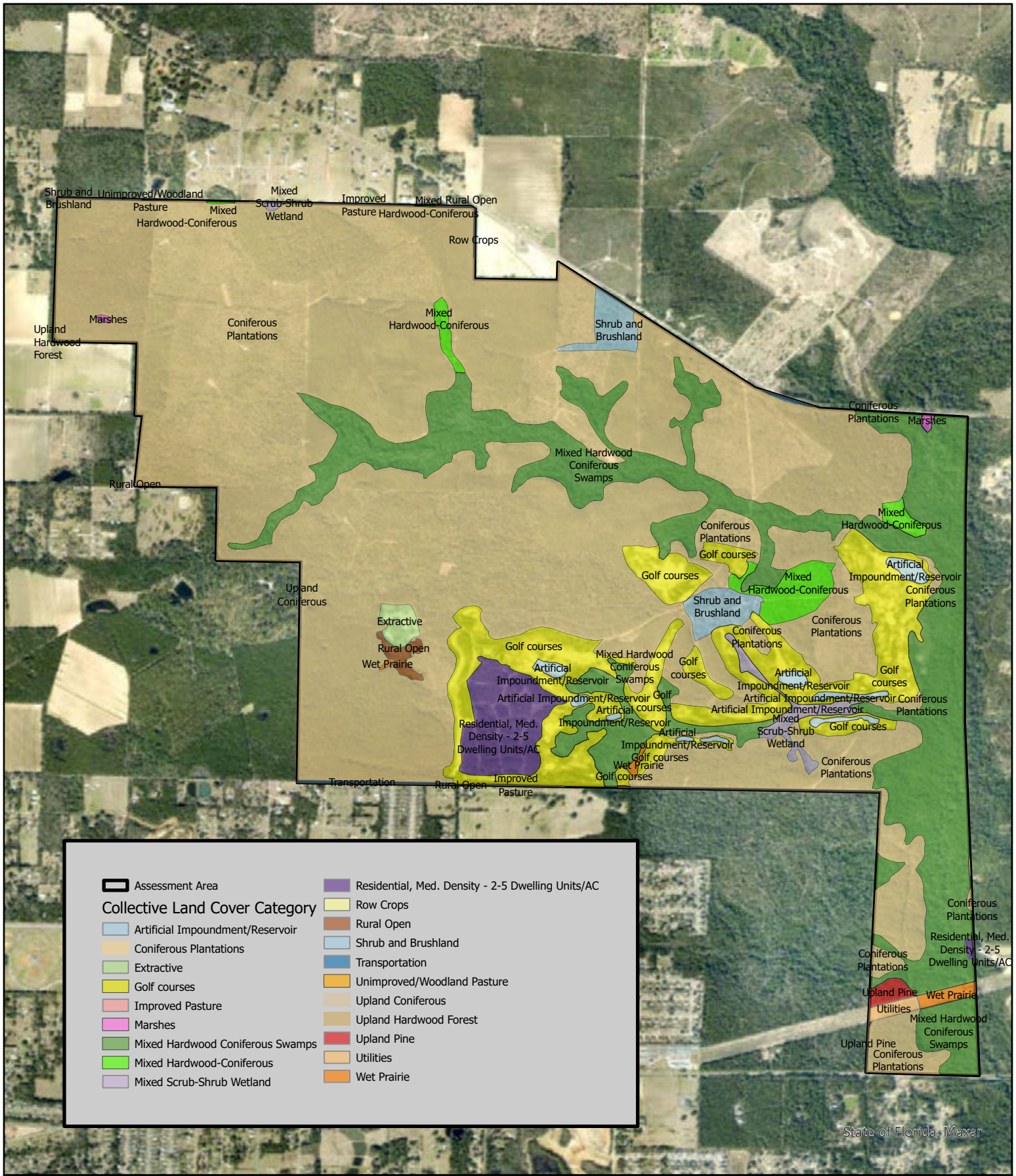
Data Source:
Quad
Imagery Source:
ESRI

N
W E
S

Coordinate System:
NAD 1983 FL
State Plane North

Exhibit G

Florida Collective Land Cover Map, V3.4



WETLAND SCIENCES INCORPORATED

All data within this map are supplied as is, without warranty. This product has not been prepared for legal, engineering, or survey purposes. Users of this information should review or consult the primary data sources to ascertain the usability of the information.

Florida Collective Land Cover Category

Jubilee Development
Santa Rosa County, Fl

0 0.17 0.33 0.66 0.99 1.32
Miles

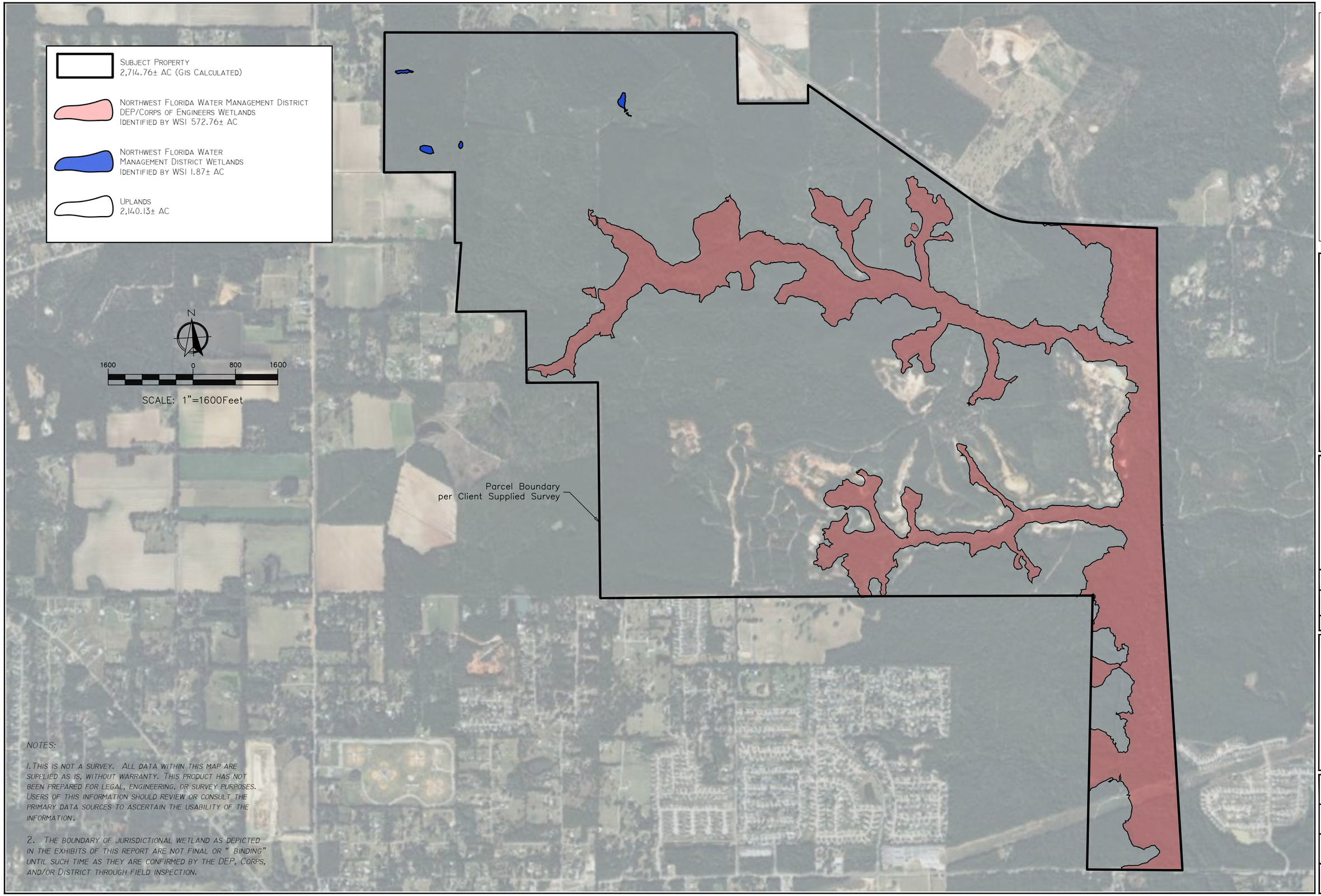
Data Source:
FFWC
Imagery Source:
ESRI

N
W E
S

Coordinate System:
NAD 1983 FL
State Plane North

Exhibit H

Sketch of Wetland Resources



NOTES:

1. This is not a survey. All data within this map are supplied as is, without warranty. This product has not been prepared for legal, engineering, or survey purposes. Users of this information should review or consult the primary data sources to ascertain the usability of the information.

2. The boundary of jurisdictional wetland as depicted in the exhibits of this report are not final or " binding" until such time as they are confirmed by the DEP, Corps, and/or District through field inspection.

WETLAND SCIENCES INCORPORATED
ENVIRONMENTAL CONSULTANTS
3308 GULF BEACH HIGHWAY
PENSACOLA, FLORIDA 32507
TEL: 850.453.4700
KEITH@WETLANDSCIENCES.COM

NO	DATE	APPR.	REVISION/ACTION TAKEN

Jubilee

Sketch of Wetland Resources

PROJECT NO.: 2004-233

DRAWN BY: KDJ

DATE: 05/18/22

SHEET: 1 of 1

UNIVERSITY of WEST FLORIDA

The Haas Center
212 Church Street
Pensacola, FL 32502

Economic Impact Analysis of Jubilee

May 2022

The Eagle Group requested an economic impact analysis of the Jubilee community that is under development in Santa Rosa County, FL. The group provided our team with valuable information on the project's employment, investments, and timeline for construction.[1]

We ran the various economic events through an Input-Output (I-O) model in order to determine the impact of the Jubilee Development on the county across a 14-year period. We used IMPLAN for the analysis, as it has been a standard tool for academic and professional economists for decades. The methods used to produce IMPLAN's economic data set and economic impact estimates have been widely published both in professional publications as well as peer-reviewed academic journals. Many of these methods are considered standard best practices in a wide variety of applied economic fields today.

IMPLAN provides the estimated **indirect** and **induced effects** that stem from economic activity in Santa Rosa County, FL. It is important to know that price changes are not built into the assessment. Input-Output models do not account for gains or losses in other industries, or geographies or the diversion of funds from other projects. In using this model, we assume that consumer preferences, government policy, technology, and prices all remain constant.

[1] See attached information provided.

office 850.439.5400
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haas.uwf.edu

Project Results:

The proposed Jubilee Development represents a long-term investment in Santa Rosa County. The spending related to this project will bring new dollars to the community and these funds will cycle through the economy over several years. The new housing development comes at a time when (1) attainable housing for young families is in short supply and (2) officials with the United States Department of Defense are signaling a need for additional off-base housing to ensure they can adequately staff the mission at area bases. The results detailed below represent the estimated economic impact to the Santa Rosa County economy.

Impact Summary Across 14 Years

	Labor Income	Value Added	Output
Direct	$1,527,467,919	$2,113,241,400	$4,304,911,451
Indirect	$160,708,799	$264,026,650	$589,894,225
Induced	$677,171,209	$1,541,949,450	$2,549,190,275
	$2,365,347,927	$3,919,217,499	$7,443,995,951

Direct Impacts

These are direct expenses and new hires related to completing the project. We included an array of expenditures including but not limited to developer costs, new utilities, vertical construction costs, medical facility improvements, and school construction. Total direct output over 14 years is $4.3B.

Indirect impacts or business-to-business purchases

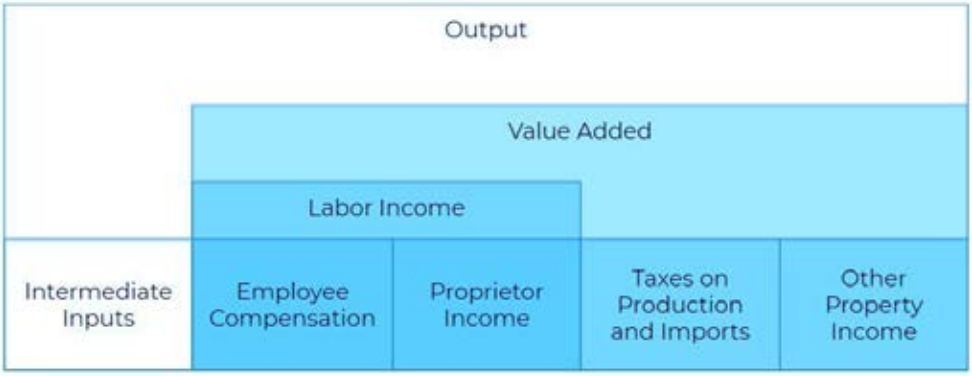
Jubilee developers are purchasing supplies like concrete and timber and paying vendors, like plumbers and masons. Other examples of indirect expenses include commercial and industrial machinery and equipment rental and leasing related to the project. Total indirect output over 14 years is $590M.

Induced impacts

Researchers quantify the induced impacts or the value stemming from labor income. We observe this when employees in the supply chain spend money

on other goods and services. For instance, a plumber is paid as a vendor on the Jubilee project, and he purchases school supplies for his youngest son. The purchase of school supplies is an induced impact of the Jubilee development. Other examples include spending by another Jubilee vendor– a kitchen cabinet carpenter – buys a new Cape Horn fishing boat, manufactured in Santa Rosa County. Or the brick mason, also a Jubilee vendor, hires a surgeon at the Andrews Institute in Santa Rosa County to fix his knee. The total induced output is $2.5B across 14 years.

Figure 1



Output

Output is the total production value of a project. Once completed, the total economic output of the Jubilee development may exceed $7.4B. This includes all sales and resources expended on the project. Output incorporates an array of spending, including but not limited to, the new income generated by additional physicians' offices constructed to service the residents who occupy the town, as well as the income derived by developers from the sale of new homes.

Value Added

The value added by the Jubilee development in Santa Rosa County is expected to be $3.9B. As Figure 1 demonstrates, value added represents the difference between output and the cost of inputs, like brick and plumbing supplies, in Santa Rosa County over a 14-year period. Value added is equivalent to the project's contribution to the gross county product (or GDP) for that region. For instance, the project will include high speed internet access in

a part of Santa Rosa County that does not possess such access today. The fiber and the infrastructure are inputs or expenditures (Intermediate Inputs). The actual income the high-speed internet service generates is considered value added.

Taxes

The county, state, and federal governments will benefit from the development of Jubilee. Across 14 years, the development will generate more than $738M in tax revenue; of which Santa Rosa County will benefit from $120M; the State of Florida is likely to receive $175M over the same period; and the Federal Government is the largest beneficiary at $442M. The state and county dollars are invested locally in new infrastructure, like roads, bridges, and better schools. At the federal level, these dollars support the military and social security.

Labor Income and Annual Employment

The economic impact model shows that Jubilee investments produce a total of $2.4B in labor income across the 14-year period examined in the model. This provides a foundation for the economy to expand, while also allowing new and existing residents of the area to prosper because of the project. Growth in employment triggers an increase in labor income that will go towards consumer spending on goods and services in the region. Labor income includes employee compensation for construction, as well as proprietor income of the local business owners installing fixtures on site at Jubilee. Furthermore, developers may attract new businesses that seek highspeed internet service as well as Jubilee's town center amenities.

We expect the annual employment to grow from 2,688 jobs in year one, to a peak of 5,447, by 2029. On average, the Jubilee Development will create 4,303 jobs a year during the various construction phases of the project. More importantly, the community will continue to generate jobs and wages years after the last planned building is completed in Jubilee. The following page provides additional details related to jobs created by the Jubilee development.

Jobs and Impacts by Year

	Jobs by Year	Labor Income	Value Added	Output
2022	2,688	$ 122,771,389	$ 205,081,564	$ 420,946,454
2023	2,686	$ 122,809,204	$ 204,519,678	$ 420,521,859
2024	4,265	$ 179,181,759	$ 262,032,633	$ 537,601,351
2025	5,030	$ 218,029,238	$ 313,553,815	$ 639,860,160
2026	4,276	$ 170,688,567	$ 280,759,707	$ 534,710,952
2027	4,538	$ 176,953,562	$ 289,922,444	$ 553,629,326
2028	4,622	$ 178,605,648	$ 291,973,117	$ 558,145,037
2029	5,447	$ 209,377,101	$ 362,322,910	$ 673,888,077
2030	5,400	$ 207,480,932	$ 358,554,535	$ 667,035,404
2031	5,355	$ 205,613,311	$ 354,843,050	$ 660,285,977
2032	4,021	$ 144,858,294	$ 252,087,277	$ 449,592,826
2033	3,996	$ 143,916,043	$ 249,949,675	$ 446,056,841
2034	3,972	$ 142,988,234	$ 247,844,836	$ 442,575,054
2035	3,947	$ 142,074,646	$ 245,772,259	$ 439,146,633
	Avg. 4,303	**$2,365,347,927**	**$3,919,217,499**	**$7,443,995,951**

Top 10 Industries by Employment in Peak Year 2029

	Industry	Jobs
1-	Construction (including new highways & streets)	1,108
2-	Elementary and secondary schools	499
3-	Hospitals	461
4-	Retail - Food and beverage stores	322
5-	Retail - General merchandise stores	278
6-	Retail - Clothing and clothing accessories stores	241
7-	Limited-service restaurants	233
8-	Retail - Miscellaneous store retailers	228
9-	Real Estate	163
10-	Retail - Health and personal care stores	151

The Eagle Group, LLC

March 24, 2022

Pursuant to your request for input data for the Economic Impact Study associated with the proposed 2718-acre, 10,000-unit Jubilee development, please review the following inputs.

Total Project Development Costs Estimate:

Horizontal (Developer Costs)	$47,750 x 5,862 lots	$280,000,000
Developer Costs – Village Center, Medical		$27,000,000
School Site – Land/Utilities		$1,000,000
Total Estimated Horizontal Cost:		$308,000,000
Vertical Construction Costs:	$250k x 7,933 units	$1,983,250,000
Vertical Village Center Costs:	Common House/Improvements	$5,000,000
Hospital and Medical Improvements:		$70,000,000
School Improvements:	Build-to-Suit Lease	$150,000,000
Common Area Amenities/Sales/Adm Improvements		$200,000,000
Total Estimated Vertical Cost:		$2,408,250,000
Total Estimated Development Budget:		**$2,716,250,000**

2017 Salamanca Street
Navarre, Florida 32566
https://theeaglegroup.com/

Projected Jobs by Industry:

2024 School (HS/MS/3-Elementary)		Haas to provide
2025 Hospital & Medical		350 FTE's
Commercial/Retail/Hospitality	(1.0M SF)	Hass to provide

10k sf 2023; 40k sf 2024; 50k 2025; 900k sf equally distributed over thirteen years

2023 - 2 HOA/Mgt 25 FTE's

Number Homes by Type:

Single Family Detached	5,144
Bungalows	400
Retired Senior Living	200
Condominium	118
Multifamily	2,071
Total	7,933

Occupancy per Unit	2.64 (US Census)	20,943

2017 Salamanca Street
Navarre, Florida 32566
https://theeaglegroup.com/

ATKINS

Member of the SNC-Lavalin Group

Jubilee Large-Scale Amendment

Traffic Impact Analysis

Smith Planning Group

15 May 2023

Santa Rosa County

Notice

This document and its contents have been prepared and are intended solely as information for Smith Planning Group and use in relation to the Jubilee Traffic Impact Analysis.

WS Atkins, Inc. assumes no responsibility to any other party in respect of, arising out of, or in connection with this document and/or its contents.

Contents

Tables

Figures

Appendix

1. Project Information

A rezoning is proposed for approximately 2,718 acres of agricultural land located north of the community of Pace adjacent to Willard Norris Road and Luther Fowler Road.

1.1. Location

The location of the proposed rezoning is shown in Figure 1: Project Location.

1.2. Acreage

The subject property consists of thirteen (13) adjoining parcels totaling approximately 2,718 acres. These specific project parcels are listed below and highlighted in Figure 2: Project Parcels.

162N290000001010000	556.383 acres Ag
152N290000001000000	247.298 acres Ag
172N290000001000000	324.931 acres Ag
172N290000001020000	78.974 acres Ag
202N290000001000000	41.561 acres Ag
212N290000001000000	347.236 acres Ag
212N290000001010000	128.552 acres Ag
212N290000002000000	179.248 acres Ag
222N290000001000000	210.808 acres Ag
222N290000002000000	429.163 acres Ag
232N290000001030000	1.616 acres Ag
262N290000001000000	22.022 acres Ag
272N290000003000000	147.722 acres Ag

1.3. Existing Future Land Use (EFLU)

The Existing Future Land Use (EFLU) for these parcels is Rural Residential Agriculture (AG-RR).

1.4. Proposed Future Land Use (PFLU)

The Proposed Future Land Use (PFLU) designation is Town Center Core (TC-1) for all of the parcels listed in section 1.2

Figure 1 - Project Location

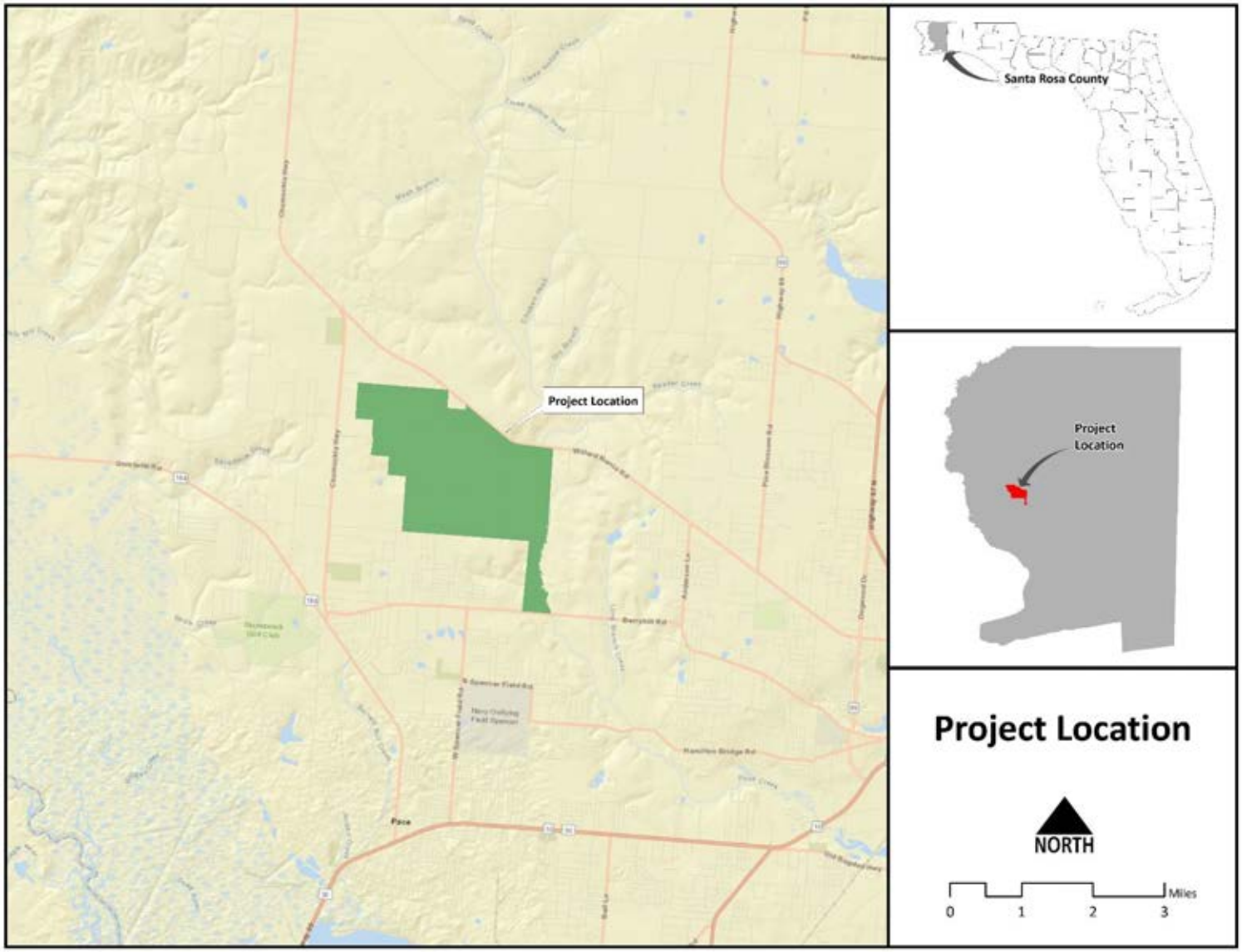
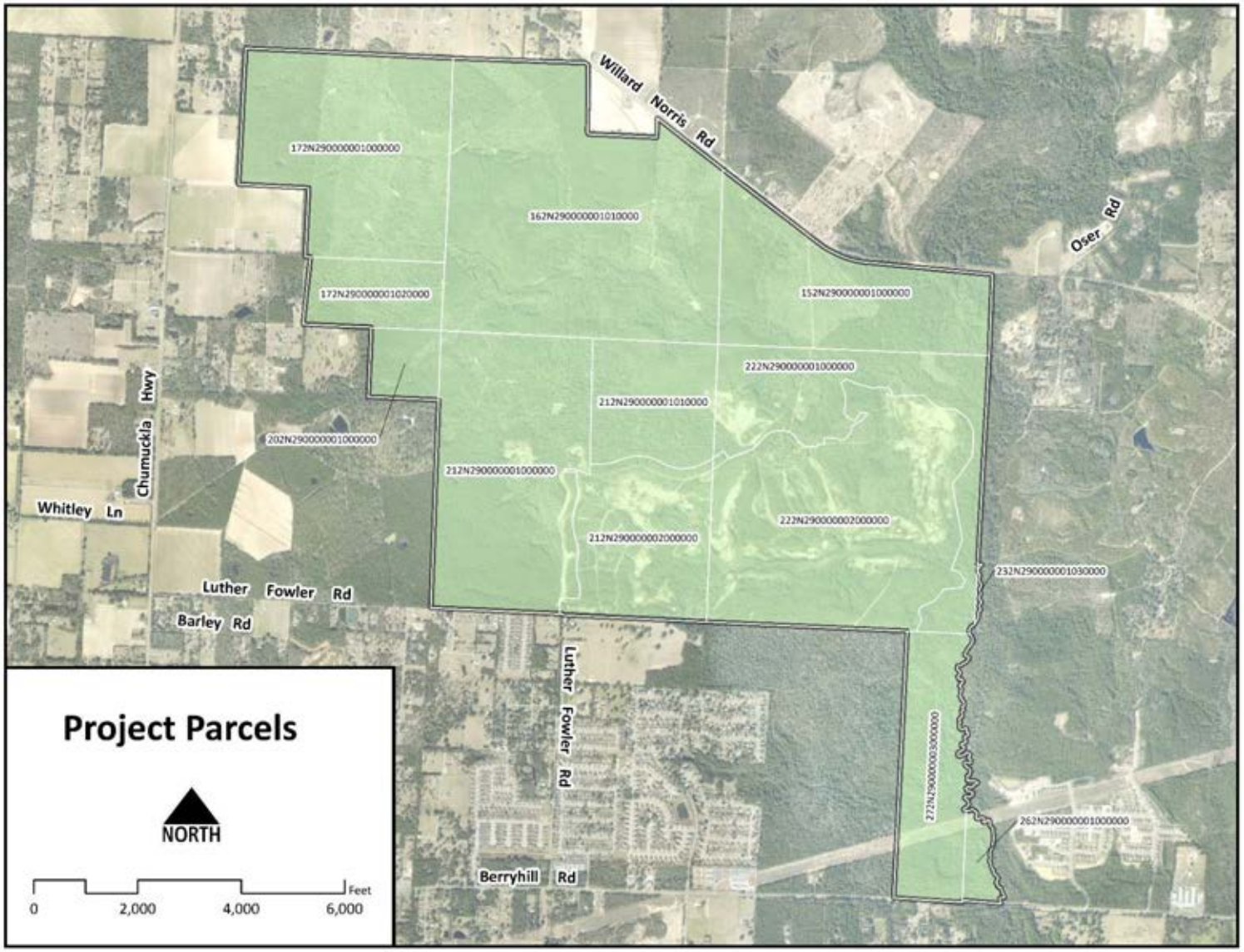


Figure 2 - Project Parcels



2. Project Traffic Analysis

This traffic analysis will include the following tasks:

- Calculation of the total number of trips associated with the proposed development using the Institute of Traffic Engineers (ITE) Trip Generation Manual (11th Edition).
- Distribution of project trips onto the surrounding roadway network using the current Florida-Alabama regional travel demand model.
- Determination of the net impact of the Proposed Future Lane Use on the impacted roadway segments.
- Evaluation of the impacted capacity of roadway segments for 5-year and 10-year timeframes and the 2040 planning horizon year.
- Discussion of mitigation strategies for any impacted roadway segments where the project trips will cause the maximum service volume to be exceeded.

2.1. Trip Generation

The proposed Town Center Core (TC-1) category will allow a maximum residential density of ten (10) dwelling units per acre that is to be supplemented with small scale commercial development with varied architecture. The maximum residential density will be reduced to 2.95 units per acres, as a condition of rezoning. There are various land use categories in the most recent edition of the ITE Trip Generation Manual, 11th Edition that were used to determine the number of trips generated by the proposed development. A summary of the proposed development that includes the ITE Code, proposed land use, and quantity is provided in Table 1.

Table 1: Development Summary

ITE Code	Land Use	Quantity	Units
210	Single-Family Detached Housing	6,049	dwelling units
215	Single-Family Attached Housing	772	dwelling units
220	Multi-Family Housing (Low-Rise)	1,075	dwelling units
230	Low-Rise Residential with Ground Floor Commercial	121	dwelling units
710	General Office Building	60,000	square feet
720	Medical-Dental Office Building	100,000	square feet
820	Shopping Center (>150k)	593,000	square feet
821	Shopping Plaza (40-150k)	200,000	square feet
822	Strip Retail Plaza	47,000	square feet

To account for the mixture of land uses anticipated for this development, the ITE Codes 210, 215, 220, 230, 710, 720, 820, 821, and 822 were utilized and detailed trip generation formulas are provided in the Appendices. The gross project-generated trips were reduced using a mixed-use reduction for complimentary land uses proposed for this development and any pass-by trips associated with the retail portion of the proposed development. There were no reductions calculated for any alternative modes of travel.

Mixed-use reductions were calculated based upon procedures outlined in the ITE Trip Generation Handbook, Chapter 7: Multi-Use Development. The worksheets used in calculating these reductions for the multi-use generated trips are also provided in the Appendices. The complementary land uses within the proposed development will be inter-connected with site design features that promote pedestrian accessibility and connectivity. Internal capture rates were calculated for the weekday and AM and PM peak-hours. The pass-by

trips associated with the retail portion of the proposed development were taken from "vehicle pass-by rates by land use" provided in the ITE Trip Generation Manual, 11th Edition. These "pass-by rates by land use" are provided in the Appendices.

The total (net) trips generated and evaluated in this analysis, which were distributed throughout the study area network, are listed in the Table 2, and more detailed results are provided in the Appendices.

Table2: Net Trip Generation

Reduction Factors	Daily Trips	AM Peak		PM Peak	
		Enter	Exit	Enter	Exit
Gross Project Trips	118,991	2,465	4,388	6,435	5,082
Mixed-Use Reduction	-10,343	-149	-142	-522	-479
Alternative Mode Reduction	0	0	0	0	0
Pass-by Reduction	-3,717	0	0	-576	-620
Net New Trips	104,931	2,317	4,246	5,337	3,983

The existing AG-RR category will allow one dwelling unit per acre. The maximum build-out under the existing future land use (FLU) would therefore be 2,718 dwelling units, which would generate 21,058 daily trips.

It should ne noted that three school sites totaling approximately 78 acres are proposed to be located within Jubilee. At this time, the developer of Jubilee and the Santa Rosa County School District administration are working together to identify the best potential options available to meet the educational needs of the surrounding area and future residents of Jubilee. These options include 1) a fee-simple donation of at least two school sites mentioned above to the Santa Rosa County School District, 2) the development of educational facilities (schools and ancillary/auxiliary spaces) that will be designed with input from the school district and constructed at the sole expense of the developer. These schools and ancillary/auxiliary facilities will be considered public schools designed to accommodate students living within the Jubilee development, as well as students living outside of the Jubilee development (school attendance zone and school choice). It is anticipated that the schools will be staffed and operated by the Santa Rosa School District, and/or 3) a proportionate share mitigation fee assessment to offset the impact on the school system and current resident taxpayers.

As these schools can not be clearly identified at this time, they were not included in the traffic impact analysis at this time.

2.2. Trip Distribution

2.2.1. Proposed Future Land Use

The distribution of trips generated by the proposed future land use was completed using the Cube travel demand model adopted by the Florida-Alabama TPO. Similar to the distribution completed for the future lane use, the 2015 base year model was used, with the addition of a new traffic analysis zone representing the proposed project. The Cube model was applied for three different phasing scenarios of the proposed development as follows:

- Phase I: 2023 – 2028
- Phase II: 2029 – 2039
- Phase III (full build-out): 2040 – 2043

The zonal socioeconomic data was created for each of the three scenarios based on the above phasing information related to dwelling units and commercial square footage. For dwelling units, the provided development information was used to categorize single unit versus multi-unit dwellings. Other zonal inputs related to residential

data (persons per household, % vacancy, etc) were developed using information from adjacent zones. For employment data, FDOT land use conversion factors were applied based on the type of commercial development and the square footage as follows:

- Office: 4 service employees per 1,000 sq ft
- Hospital (medical): 3 service employees per 1,000 sq ft
- Small retail: 3 commercial employees per 1,000 sq ft
- Large retail: 2 commercial employees per 1,000 sq ft

The model was run using select zone analysis, which provides a distribution of only the project trips onto the surrounding model network. For each phasing scenario, the model generated trips entering / exiting the development zone were compared against the ITE generated trips. Link volumes were scaled to match the ITE generated trips. Figures 3A, 3B, and 3C present the model output with the distribution of new daily trips associated with the proposed project for Phase I, Phase II, and Phase III, respectively.

Based on the County's analysis procedures, an impact threshold of 1% of the daily maximum service volume (MSV) was used to determine impacts on the surrounding roadways. Table 3 summarizes the roadway segments, MSV, 1% MSV threshold, and distribution of daily project trips. Table 3 also provides a determination of impacted roadway segments. Roadway segments and associated maximum service volumes were obtained from the 2020 Congestion Management Process (CMP) developed by the Florida-Alabama Transportation Planning Organization (TPO). Table 4 presents the the impacted segments by phase as determined from Table 3.

Figure 3A – Distribution of Daily Project Trips: Proposed FLU Phase I (2023 – 2028)

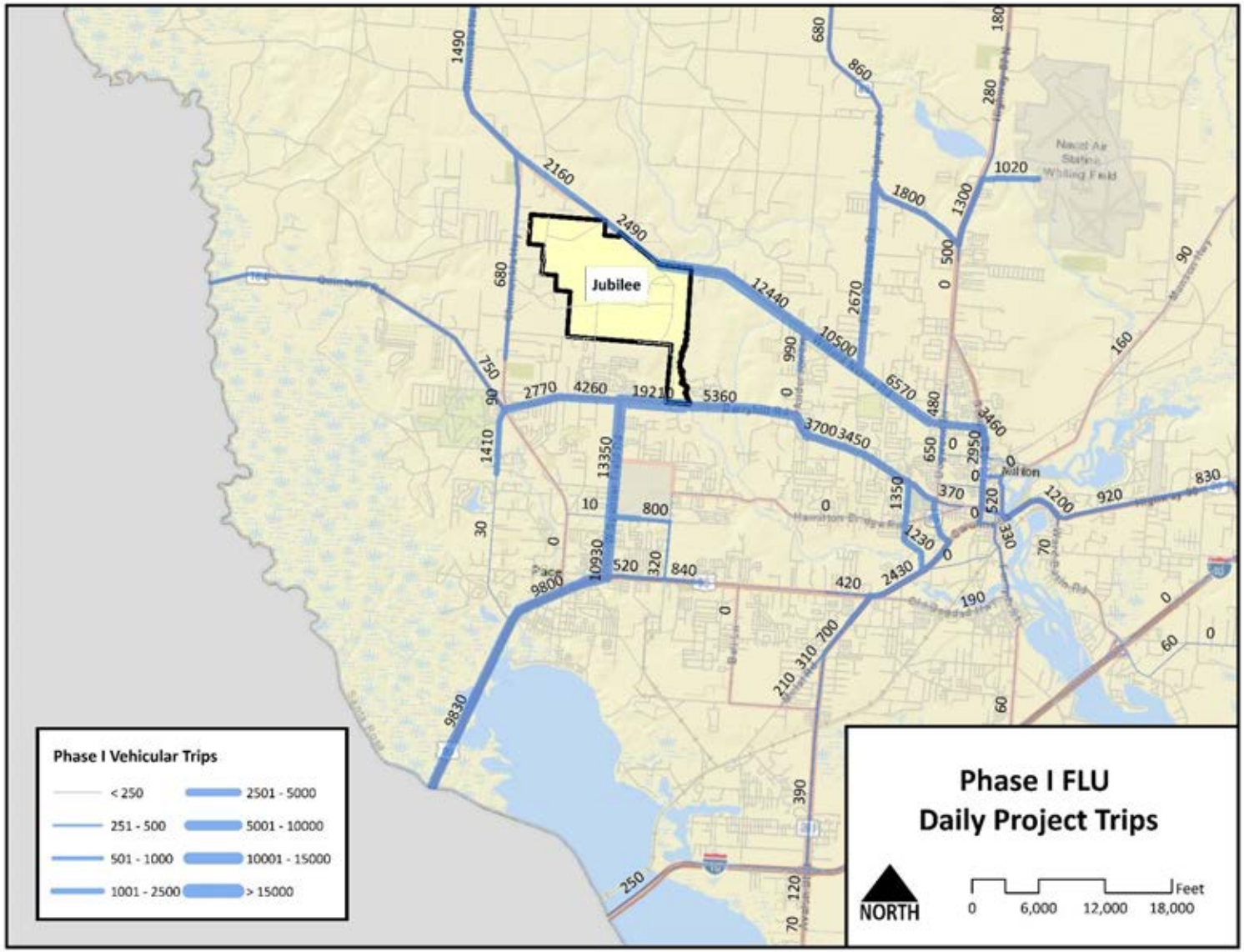


Figure 3B – Distribution of Daily Project Trips: Proposed FLU Phase II (2029 – 2039)

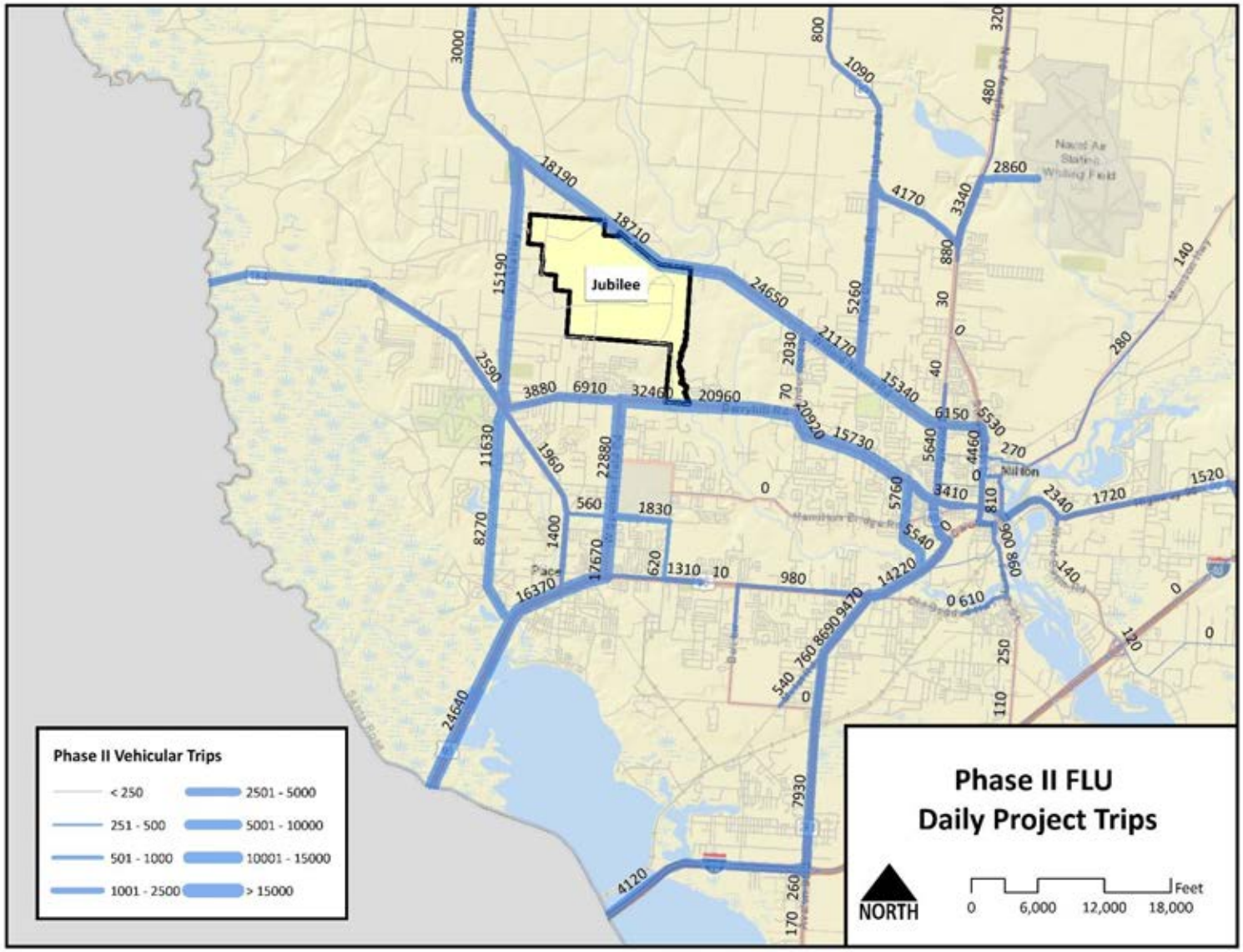


Figure 3C – Distribution of Daily Project Trips: Proposed FLU Phase III Full Build-Out (2040 – 2043)

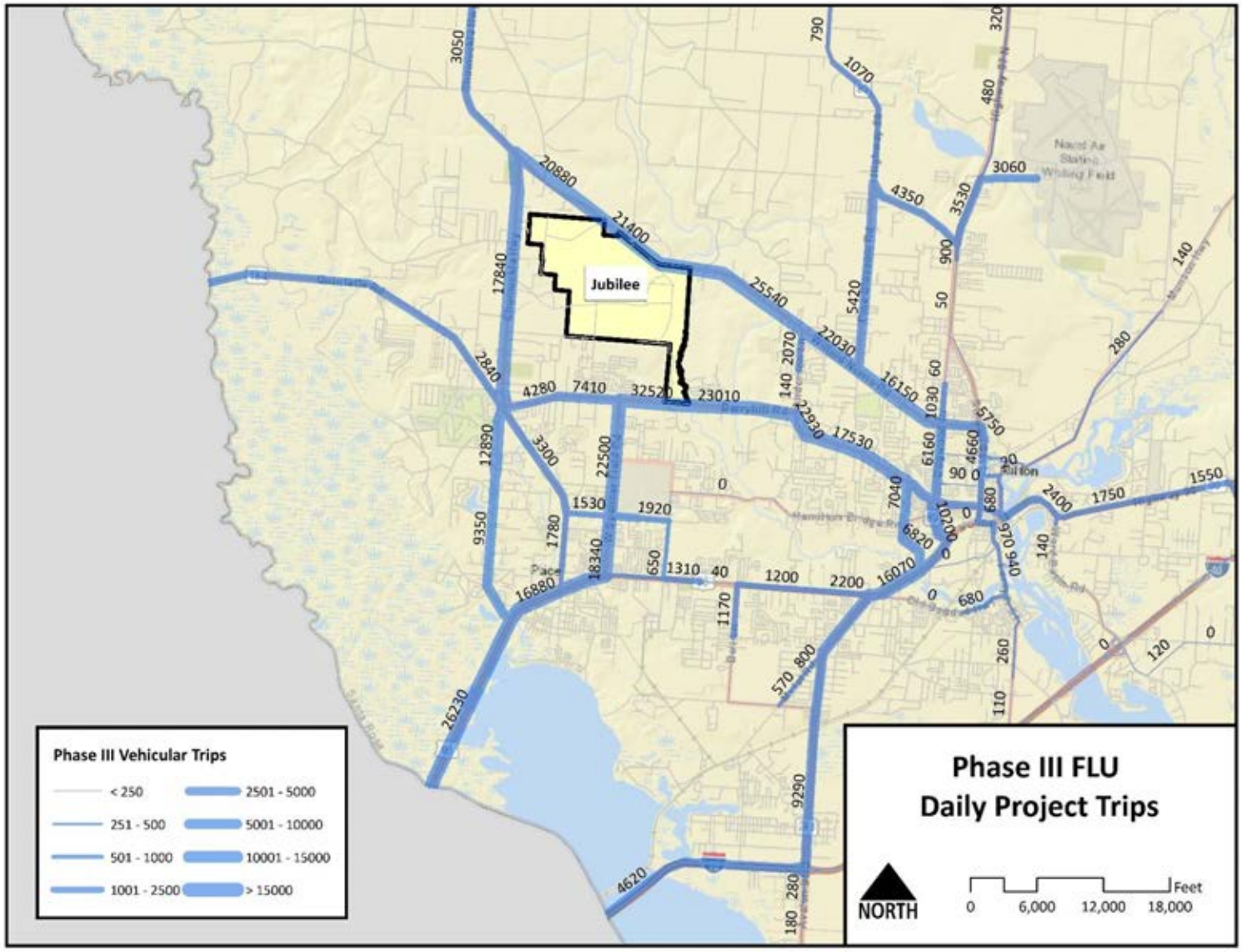


Table 3: Determination of Impacted Segments Proposed FLU

Roadway Segment	Maximum Service Volume (Daily)	1% of MSV	Phase I		Phase II		Phase III Full Build-Out	
			Daily Project Trips	Impact	Daily Project Trips	Impact	Daily Project Trips	Impact
SR 281 (Avalon Boulevard)								
I-10 (SR 8) to CR 281/Cymanamid Road	41,790	418	394	No	7,932	Yes	9,288	Yes
CR 281/Cymanamid Road to CR 191/Mulat Road	39,800	398	394	No	7,932	Yes	9,288	Yes
CR 191/Mulat Road to Old Bagdad Highway	41,790	418	1,027	Yes	9,474	Yes	10,908	Yes
Old Bagdad Highway to US 90/SR 10	41,790	418	1,027	Yes	9,474	Yes	10,908	Yes
Chumuckla Highway								
US 90/SR 10 to CR 197/CR 197A (Woodbine Road)	24,200	242	10	No	1,962	Yes	3,303	Yes
CR 184/CR 197 (Woodbine Road) to Luther Fowler Road	16,400	164	86	No	14,097	Yes	16,647	Yes
Luther Fowler Road to Ten Mile Road	16,400	164	1,488	Yes	15,189	Yes	17,835	Yes
Ten Mile Road to SR 89/Highway 89	8,400	84	1,488	Yes	2,997	Yes	3,048	Yes
Quintette Road								
Escambia County Line to Myree Road	16,400	164	742	Yes	2,577	Yes	2,820	Yes
Myree Lane to CR 197/CR 197A (Woodbine Road)	16,400	164	749	Yes	2,589	Yes	2,835	Yes
Berryhill Road								
CR 197/ Chumuckla Highway to SR 89/Dogwood Drive	24,200	242	19,207	Yes	32,463	Yes	32,523	Yes
Highway 182								
CR 197/Chumuckla Highway to CR 182	8,400	84	34	No	30	No	48	No
Woodbine Road								
US 90/SR 10 to CR 184/CR 197	25,410	254	2,098	Yes	13,359	Yes	14,721	Yes
Willard Norris Road								
CR 197/ Chumuckla Highway to Martin Road	16,400	164	12,439	Yes	24,648	Yes	25,536	Yes
SR 10/ US 90								
Escambia County Line to CR 197A/Woodbine Road	41,790	418	9,830	Yes	24,639	Yes	26,226	Yes
CR 197A/Woodbine Road to East Spencer Field Road	41,790	418	10,416	Yes	16,986	Yes	17,691	Yes
East Spencer Field Road to Pensacola State College	41,790	418	840	Yes	1,956	Yes	2,202	Yes
Pensacola State College to SR 89/Dogwood Drive	41,790	418	2,431	Yes	14,217	Yes	16,071	Yes
SR 89/Dogwood Drive to SR 87/Stewart Street	34,020	340	0	No	0	No	0	No
SR 87/Stewart Street to Canal Street	16,317	163	444	Yes	1,167	Yes	1,260	Yes
Canal Street to CR 191/Willing Street	15,540	155	86	No	240	Yes	252	Yes
CR 191/Willing Street to Dale Street	14,800	148	1,337	Yes	2,622	Yes	2,694	Yes
Dale Street to North Airport Road	17,700	177	924	Yes	1,722	Yes	1,752	Yes
North Airport Road to East Milton Road	19,514	198	924	Yes	1,722	Yes	1,752	Yes
East Milton Road to Miller Bluff Road	16,400	164	130	No	294	Yes	309	Yes
Miller Bluff Road to Okaloosa County Line	8,400	84	29	No	42	No	42	No
SR 89								
US 90/SR 10 to CR 184A/ Berryhill Road	32,400	324	1,582	Yes	9,585	Yes	10,203	Yes
CR 184A/Berryhill Road to CR 191/Willard Norris Road	34,020	340	732	Yes	5,790	Yes	6,291	Yes
CR 191/Willard Norris Road to SR 87/SR 89	41,790	418	480	Yes	978	Yes	1,032	Yes

Table 4: Impacted Roadway Segments

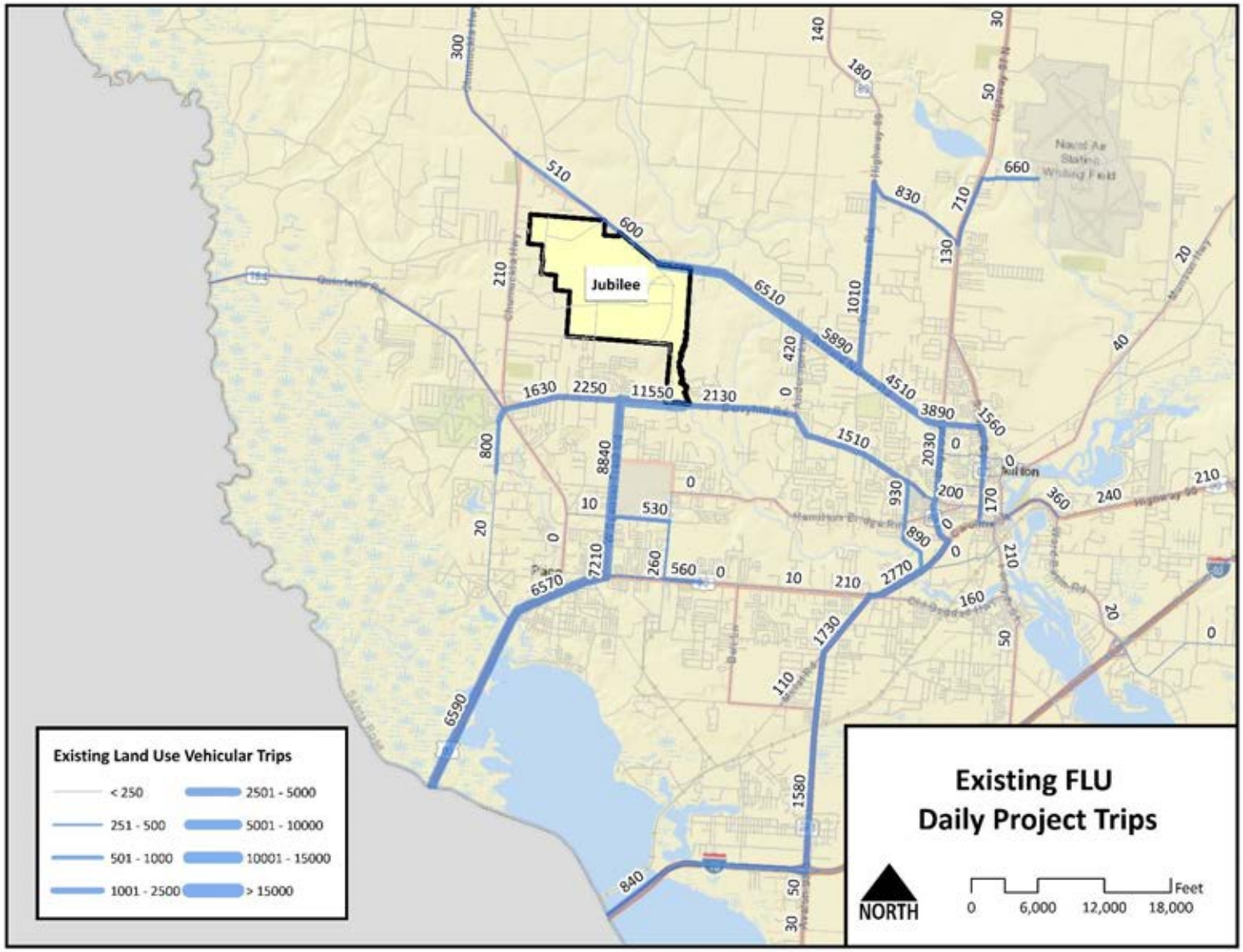
Roadway Segment	Phase I Impact	Phase II Impact	Phase III Full Build-Out Impact
SR 281 (Avalon Boulevard)			
I-10 (SR 8) to CR 281/Cymanamid Road	No	Yes	Yes
CR 281/Cymanamid Road to CR 191/Mulat Road	No	Yes	Yes
CR 191/Mulat Road to Old Bagdad Highway	Yes	Yes	Yes
Old Bagdad Highway to US 90/SR 10	Yes	Yes	Yes
Chumuckla Highway			
US 90/SR 10 to CR 197/CR 197A (Woodbine Road)	No	Yes	Yes
CR 184/CR 197 (Woodbine Road) to Luther Fowler Road	No	Yes	Yes
Luther Fowler Road to Ten Mile Road	Yes	Yes	Yes
Ten Mile Road to SR 89/Highway 89	Yes	Yes	Yes
Quintette Road			
Escambia County Line to Myree Road	Yes	Yes	Yes
Myree Lane to CR 197/CR 197A (Woodbine Road)	Yes	Yes	Yes
Berryhill Road			
CR 197/ Chumuckla Highway to SR 89/Dogwood Drive	Yes	Yes	Yes
Woodbine Road			
US 90/SR 10 to CR 184/CR 197	Yes	Yes	Yes
Willard Norris Road			
CR 197/ Chumuckla Highway to Martin Road	Yes	Yes	Yes
SR 10/ US 90			
Escambia County Line to CR 197A/Woodbine Road	Yes	Yes	Yes
CR 197A/Woodbine Road to East Spencer Field Road	Yes	Yes	Yes
East Spencer Field Road to Pensacola State College	Yes	Yes	Yes
Pensacola State College to SR 89/Dogwood Drive	Yes	Yes	Yes
SR 87/Stewart Street to Canal Street	Yes	Yes	Yes
Canal Street to CR 191/Willing Street	No	Yes	Yes
CR 191/Willing Street to Dale Street	Yes	Yes	Yes
Dale Street to North Airport Road	Yes	Yes	Yes
North Airport Road to East Milton Road	Yes	Yes	Yes
East Milton Road to Miller Bluff Road	No	Yes	Yes
SR 89			
US 90/SR 10 to CR 184A/ Berryhill Road	Yes	Yes	Yes
CR 184A/Berryhill Road to CR 191/Willard Norris Road	Yes	Yes	Yes
CR 191/Willard Norris Road to SR 87/SR 89	Yes	Yes	Yes

2.2.2. Existing Future Land Use

The distribution of trips associated with the existing future land use was conducted using the Cube travel demand model adopted by the Florida-Alabama Transportation Planning Organization (TPO). The 2015 base year model was used, with the addition of a new traffic analysis zone representing the proposed project. The new traffic analysis zone was populated with socioeconomic data assuming 1 dwelling unit per acre (2,718 acres). All dwelling units were assumed to be single family. Other data including zonal attributes (persons per household, % vacancy, etc.) were kept consistent with the adjacent zones. The model was run using select zone analysis, which provides a distribution of only the project trips onto the surrounding model network. The model generated trips entering / exiting the zone were compared against the ITE generated trips and were subsequently factored such that the model estimated volumes were scaled to match the ITE total.

Figure 4 presents the model output with the distribution of daily trips associated with the existing future land use.

Figure 4 – Distribution of Daily Trips: Existing FLU



2.3. Net Project Trips

For the impacted segments from Table 4, the net project trips were calculated by comparing daily project trips from the proposed FLU scenario volumes for each phase to the daily trips from the existing FLU (proposed FLU trips minus existing FLU trips). The results are presented in Table 5.

Table 5: Net Project Trips

Roadway Segment	Existing FLU - Daily Project Trips	Phase I - Proposed FLU		Phase II - Proposed FLU		Full Build - Proposed FLU	
		Daily Project Trips	Net Project Trips	Daily Project Trips	Net Project Trips	Daily Project Trips	Net Project Trips
SR 281 (Avalon Boulevard)							
I-10 (SR 8) to CR 281/Cymanamid Road	1,583	394	-1,189	7,932	6,349	9,288	7,705
CR 281/Cymanamid Road to CR 191/Mulat Road	1,583	394	-1,189	7,932	6,349	9,288	7,705
CR 191/Mulat Road to Old Bagdad Highway	1,892	1,027	-865	9,474	7,582	10,908	9,016
Old Bagdad Highway to US 90/SR 10	1,887	1,027	-860	9,474	7,587	10,908	9,021
Chumuckla Highway							
US 90/SR 10 to CR 197/CR 197A (Woodbine Road)	6	10	4	1,962	1,956	3,303	3,297
CR 184/CR 197 (Woodbine Road) to Luther Fowler Road	57	86	29	14,097	14,040	16,647	16,590
Luther Fowler Road to Ten Mile Road	300	1,488	1,188	15,189	14,889	17,835	17,535
Ten Mile Road to SR 89/Highway 89	300	1,488	1,188	2,997	2,697	3,048	2,748
Quintette Road							
Escambia County Line to Myree Road	453	742	289	2,577	2,124	2,820	2,367
Myree Lane to CR 197/CR 197A (Woodbine Road)	455	749	294	2,589	2,134	2,835	2,380
Berryhill Road							
CR 197/ Chumuckla Highway to SR 89/Dogwood Drive	11,549	19,207	7,658	32,463	20,914	32,523	20,974
Woodbine Road							
US 90/SR 10 to CR 184/CR 197	1,226	2,098	872	13,359	12,133	14,721	13,495
Willard Norris Road							
CR 197/ Chumuckla Highway to Martin Road	6,512	12,439	5,927	24,648	18,136	25,536	19,024
SR 10/ US 90							
Escambia County Line to CR 197A/Woodbine Road	6,587	9,830	3,243	24,639	18,052	26,226	19,639
CR 197A/Woodbine Road to East Spencer Field Road	6,909	10,416	3,507	16,986	10,077	17,691	10,782
East Spencer Field Road to Pensacola State College	564	840	276	1,956	1,392	2,202	1,638
Pensacola State College to SR 89/Dogwood Drive	2,769	2,431	-338	14,217	11,448	16,071	13,302
SR 87/Stewart Street to Canal Street	273	444	171	1,167	894	1,260	987
Canal Street to CR 191/Willing Street	51	86	35	240	189	252	201
CR 191/Willing Street to Dale Street	405	1,337	932	2,622	2,217	2,694	2,289
Dale Street to North Airport Road	240	924	684	1,722	1,482	1,752	1,512
North Airport Road to East Milton Road	240	924	684	1,722	1,482	1,752	1,512
East Milton Road to Miller Bluff Road	54	130	76	294	240	309	255
SR 89							
US 90/SR 10 to CR 184A/ Berryhill Road	2,069	1,582	-487	9,585	7,516	10,203	8,134
CR 184A/Berryhill Road to CR 191/Willard Norris Road	2,034	732	-1,302	5,790	3,756	6,291	4,257
CR 191/Willard Norris Road to SR 87/SR 89	168	480	312	978	810	1,032	864

3. Future Traffic Impact

The impacts to future traffic were tabulated for the years associated with the proposed phasing (2029, 2039, and 2043). The background AADTs for each of these years were extrapolated based on the 2020 CMP AADTs and design growth rates. Given the phasing for the proposed development, the impacted segments from Table 3 vary by year. The number of segments with a positive impact for each phase is as follows:

- Phase I: 19 segments
- Phase II: 26 segments
- Phase III: 26 segments

The maximum daily service volumes were obtained by segment from the 2020 CMP. To determine future year impacts, the net daily project trips were added to the background traffic for each phase corresponding to the phasing year. It should be noted that Phase II trips include Phase I while Phase III includes trips from both Phase I and Phase II. The analysis includes two comparisons related to volumes exceeding the daily MSVs. The first comparison is a determination of whether the background traffic growth results in segment volumes exceeding the MSV. The intent is to highlight segments that will exceed capacity with or without the proposed development. The second comparison includes the addition of the net daily project trips to the background growth to determine segments where the MSV is exceeded. Tables 6, 7, and 8 present the MSV, net daily project trips, AADT, AADT plus net daily project trips, MSV exceeded due to background growth, and MSV exceeded due to project for Phase I, Phase II, and Phase III, respectively.

3.1. Impacts for Phase I (2029)

As presented in Table 6, there are seven (7) segments where the MSVs were exceeded in 2029 using the background growth plus the daily project trips; however, the MSVs were exceeded for five (5) segments when only considering the background growth. The two (2) segments that were solely impacted due to the proposed development for Phase I are as follows:

SR 10 / US 90

- CR 197A / Woodbine Rd to East Spencer Field Road
    - MSV exceeded by around 2,800 vehicles (7%). Background traffic growth is within 2% of the segment MSV.

- North Airport Road to East Milton Road
    - MSV only exceeded by around 250 vehicles (less than 2%). Background traffic within 3% of the MSV.

3.2. Impacts for Phase II (2039)

As presented in Table 7, there are 17 segments where the MSVs were exceeded in 2039 using the background growth plus the daily project trips; however, the MSVs were exceeded for 11 segments when only considering the background growth. The six (6) segments that were impacted soley due to the proposed development for Phase II are as follows:

Chumuckla Highway

- CR 184 / CR 197 (Woodbine Road) to Luther Fowler Road
  - MSV exceeded by 9,500 vehicles (58%)
- Luther Fowler Road to Ten Mile Road
  - MSV exceeded by 10,300 vehicles (63%)

Berryhill Road

- CR 197 / Chumuckla Highway to SR 89 / Dogwood Drive
  - MSV exceeded by 10,300 vehicles (42%)

Willard Norris Road

- CR 197 / Chumuckla Highway to Martin Road
  - MSV exceeded by 11,200 vehicles (68%)

SR 10 / US 90

- East Spencer Field Road to Pensacola State College
  - MSV only exceeded by 1,300 vehicles (3%). Background traffic growth within 1% of MSV.

SR 89

- US 90 / SR 10 to CR 184A / Berryhill Road
  - MSV exceeded by 2,800 vehicles (8%).

3.3. Impacts for Phase III (2043)

As presented in Table 8, there are 18 segments where the MSVs were exceeded in 2043 using the background growth plus the daily project trips; however, the MSVs were exceeded for 12 segments when only considering the background growth. The six (6) segments that were impacted soley due to the proposed development for Phase III are as follows:

Chumuckla Highway

- US 90 / SR 10 to CR 197 (Woodbine Road)
  - MSV exceeded by 2,600 vehicles (11%). Background traffic growth within 3% of MSV.
- CR 184 / CR 197 (Woodbine Road) to Luther Fowler Road
  - MSV exceeded by 12,800 vehicles (78%)
- Luther Fowler Road to Ten Mile Road
  - MSV exceeded by 13,800 vehicles (84%)

Berryhill Road

- CR 197 / Chumuckla Highway to SR 89 / Dogwood Drive
  - MSV exceeded by 10,800 vehicles (45%)

Willard Norris Road

- CR 197 / Chumuckla Highway to Martin Road
  - MSV exceeded by 12,400 vehicles (75%)

SR 89

- US 90 / SR 10 to CR 184A / Berryhill Road
  - MSV exceeded by 4,400 vehicles (13%).

Table 6: Analysis of Future Traffic Impacts – Phase I (Year 2029)

Roadway Segment	Maximum Service Volume (Daily)	Net Daily Project Trips - Phase I	2029 AADT	2029 AADT plus Phase I	MSV Exceeded Due to Background Growth	MSV Exceeded Due to Project
Chumuckla Highway						
US 90/SR 10 to CR 197/CR 197A (Woodbine Road)	24,200	4	17,339	17,343	No	No
CR 184/CR 197 (Woodbine Road) to Luther Fowler Road	16,400	29	9,894	9,923	No	No
Luther Fowler Road to Ten Mile Road	16,400	1,188	9,894	11,082	No	No
Ten Mile Road to SR 89/Highway 89	8,400	1,188	1,124	2,312	No	No
Quintette Road						
Escambia County Line to Myree Road	16,400	289	14,171	14,460	No	No
Myree Lane to CR 197/CR 197A (Woodbine Road)	16,400	294	14,171	14,465	No	No
Berryhill Road						
CR 197/ Chumuckla Highway to SR 89/Dogwood Drive	24,200	7,658	12,322	19,980	No	No
Woodbine Road						
US 90/SR 10 to CR 184/CR 197	25,410	872	22,250	23,122	No	No
Willard Norris Road						
CR 197/ Chumuckla Highway to Martin Road	16,400	5,927	8,585	14,512	No	No
SR 10/ US 90						
Escambia County Line to CR 197A/Woodbine Road	41,790	3,243	45,147	48,390	Yes	Yes
CR 197A/Woodbine Road to East Spencer Field Road	41,790	3,507	41,047	44,554	No	Yes
East Spencer Field Road to Pensacola State College	41,790	276	37,976	38,252	No	No
SR 87/Stewart Street to Canal Street	16,317	171	29,261	29,432	Yes	Yes
Canal Street to CR 191/Willing Street	15,540	35	18,317	18,352	Yes	Yes
CR 191/Willing Street to Dale Street	14,800	932	23,937	24,869	Yes	Yes
Dale Street to North Airport Road	17,700	684	20,788	21,472	Yes	Yes
North Airport Road to East Milton Road	19,514	684	19,093	19,777	No	Yes
East Milton Road to Miller Bluff Road	16,400	76	8,270	8,346	No	No
SR 89						
CR 191/Willard Norris Road to SR 87/SR 89	41,790	312	18,382	18,694	No	No

Table 7: Analysis of Future Traffic Impacts – Phase II (Year 2039)

Roadway Segment	Maximum Service Volume (Daily)	Net Daily Project Trips - Phase II	2039 AADT	2039 AADT plus Phase II	MSV Exceeded Due to Background Growth	MSV Exceeded Due to Project
SR 281 (Avalon Boulevard)						
I-10 (SR 8) to CR 281/Cymanamid Road	41,790	6,349	29,415	35,764	No	No
CR 281/Cymanamid Road to CR 191/Mulat Road	39,800	6,349	23,877	30,226	No	No
CR 191/Mulat Road to Old Bagdad Highway	41,790	7,582	23,421	31,003	No	No
Old Bagdad Highway to US 90/SR 10	41,790	7,587	23,421	31,008	No	No
Chumuckla Highway						
US 90/SR 10 to CR 197/CR 197A (Woodbine Road)	24,200	1,956	21,733	23,689	No	No
CR 184/CR 197 (Woodbine Road) to Luther Fowler Road	16,400	14,040	11,834	25,874	No	Yes
Luther Fowler Road to Ten Mile Road	16,400	14,889	11,834	26,723	No	Yes
Ten Mile Road to SR 89/Highway 89	8,400	2,697	1,366	4,063	No	No
Quintette Road						
Escambia County Line to Myree Road	16,400	2,124	19,883	22,007	Yes	Yes
Myree Lane to CR 197/CR 197A (Woodbine Road)	16,400	2,134	19,883	22,017	Yes	Yes
Berryhill Road						
CR 197/ Chumuckla Highway to SR 89/Dogwood Drive	24,200	20,914	13,542	34,456	No	Yes
Woodbine Road						
US 90/SR 10 to CR 184/CR 197	25,410	12,133	25,754	37,887	Yes	Yes
Willard Norris Road						
CR 197/ Chumuckla Highway to Martin Road	16,400	18,136	9,435	27,571	No	Yes
SR 10/ US 90						
Escambia County Line to CR 197A/Woodbine Road	41,790	18,052	49,617	67,669	Yes	Yes
CR 197A/Woodbine Road to East Spencer Field Road	41,790	10,077	45,513	55,590	Yes	Yes
East Spencer Field Road to Pensacola State College	41,790	1,392	41,736	43,128	No	Yes
Pensacola State College to SR 89/Dogwood Drive	41,790	11,448	45,399	56,847	Yes	Yes
SR 87/Stewart Street to Canal Street	16,317	894	33,869	34,763	Yes	Yes
Canal Street to CR 191/Willing Street	15,540	189	20,489	20,678	Yes	Yes
CR 191/Willing Street to Dale Street	14,800	2,217	26,307	28,524	Yes	Yes
Dale Street to North Airport Road	17,700	1,482	24,664	26,146	Yes	Yes
North Airport Road to East Milton Road	19,514	1,482	23,020	24,502	Yes	Yes
East Milton Road to Miller Bluff Road	16,400	240	9,971	10,211	No	No
SR 89						
US 90/SR 10 to CR 184A/ Berryhill Road	32,400	7,516	27,639	35,155	No	Yes
CR 184A/Berryhill Road to CR 191/Willard Norris Road	34,020	3,756	21,978	25,734	No	No
CR 191/Willard Norris Road to SR 87/SR 89	41,790	810	20,202	21,012	No	No

Table 8: Analysis of Future Traffic Impacts – Phase III (Year 2043)

Roadway Segment	Maximum Service Volume (Daily)	Net Daily Project Trips - Phase III	2043 AADT	2043 AADT plus Phase II	MSV Exceeded Due to Background Growth	MSV Exceeded Due to Project
SR 281 (Avalon Boulevard)						
I-10 (SR 8) to CR 281/Cymanamid Road	41,790	7,705	30,475	38,180	No	No
CR 281/Cymanamid Road to CR 191/Mulat Road	39,800	7,705	24,815	32,520	No	No
CR 191/Mulat Road to Old Bagdad Highway	41,790	9,016	24,265	33,281	No	No
Old Bagdad Highway to US 90/SR 10	41,790	9,021	24,265	33,286	No	No
Chumuckla Highway						
US 90/SR 10 to CR 197/CR 197A (Woodbine Road)	24,200	3,297	23,491	26,788	No	Yes
CR 184/CR 197 (Woodbine Road) to Luther Fowler Road	16,400	16,590	12,610	29,200	No	Yes
Luther Fowler Road to Ten Mile Road	16,400	17,535	12,610	30,145	No	Yes
Ten Mile Road to SR 89/Highway 89	8,400	2,748	1,463	4,211	No	No
Quintette Road						
Escambia County Line to Myree Road	16,400	2,367	22,168	24,535	Yes	Yes
Myree Lane to CR 197/CR 197A (Woodbine Road)	16,400	2,380	22,168	24,548	Yes	Yes
Berryhill Road						
CR 197/ Chumuckla Highway to SR 89/Dogwood Drive	24,200	20,974	14,030	35,004	No	Yes
Woodbine Road						
US 90/SR 10 to CR 184/CR 197	25,410	13,495	27,156	40,651	Yes	Yes
Willard Norris Road						
CR 197/ Chumuckla Highway to Martin Road	16,400	19,024	9,775	28,799	No	Yes
SR 10/ US 90						
Escambia County Line to CR 197A/Woodbine Road	41,790	19,639	51,405	71,044	Yes	Yes
CR 197A/Woodbine Road to East Spencer Field Road	41,790	10,782	47,299	58,081	Yes	Yes
East Spencer Field Road to Pensacola State College	41,790	1,638	43,240	44,878	Yes	Yes
Pensacola State College to SR 89/Dogwood Drive	41,790	13,302	47,035	60,337	Yes	Yes
SR 87/Stewart Street to Canal Street	16,317	987	35,712	36,699	Yes	Yes
Canal Street to CR 191/Willing Street	15,540	201	21,358	21,559	Yes	Yes
CR 191/Willing Street to Dale Street	14,800	2,289	27,255	29,544	Yes	Yes
Dale Street to North Airport Road	17,700	1,512	26,214	27,726	Yes	Yes
North Airport Road to East Milton Road	19,514	1,512	24,591	26,103	Yes	Yes
East Milton Road to Miller Bluff Road	16,400	255	10,652	10,907	No	No
SR 89						
US 90/SR 10 to CR 184A/ Berryhill Road	32,400	8,134	28,635	36,769	No	Yes
CR 184A/Berryhill Road to CR 191/Willard Norris Road	34,020	4,257	22,770	27,027	No	No
CR 191/Willard Norris Road to SR 87/SR 89	41,790	864	20,930	21,794	No	No

3.4 Mitigation

The Florida-Alabama Transportation Planning Organization (TPO) has identified several roadway capacity projects in Santa Rosa County in the vicinity of this proposed project. Listed below are the projects the TPO has identified as cost feasible in the 2045 Long Range Transportation Plan (LRTP). Several of the projects have been prioritized by the Florida-Alabama TPO. That priority is provided in parentheses.

US 90

- Escambia River Bridge to Simpson River Bridge – Widen to 6 lanes (Priority #13)
- Simpson River Bridge to Third Street – Widen to 6 lanes (Priority #14)
- Third Street to Bell Lane – Widen to 6 lanes (Priority #15)
- Bell Lane to Glover Lane – Widen to 6 lanes (Priority #16)

Berryhill Road

- Five Points to West Spencer Field Road – Widen to 4 lanes

Woodbine Road

- US 90 to Five Points – Widen to 4 lanes

Chumuckla Highway

- US 90 to Five Points – Widen to 4 lanes
- I-10
- Avalon Boulevard to SR 87 – Widen to 6 lanes (SIS Priority #9)

Jubliee will allocate 10% of the net proceeds of potential bonds which may be issued by the District to finance offsite improvements such as impacted road segments or stormwater mitigation. The identification of offsite improvements will be determined by the Jubilee CDD Board of Supervisors and in cooperation with Santa Rosa County.

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